George Mason University
University Catalog
1981-1982

Graduate School
College of Arts and Sciences
College of Professional Studies
School of Business Administration
School of Law
Division of Continuing Education
Contents

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Academic Calendar
1981-1982

Fall Semester 1981

Monday, June 1: Last day for filing undergraduate admissions applications for Fall Semester
Saturday, June 13: Graduate Record Examination (GRE)
Monday, June 15: Last day for filing Graduate School admissions applications for Fall 1981
Monday, June 15 through Friday, June 19: Welcoming days: orientation programs and placement testing for undergraduates; early registration for certain newly admitted students (by invitation only)
Wednesday, June 17: Foreign language placement testing for undergraduates
Friday, July 3: Independence Day observed; University closed
Friday, July 10: Test of English as a Foreign Language (TOEFL)
Monday, July 13 through Friday, July 17: Mid-summer welcoming days, orientation program, and early registration for certain newly admitted students (by invitation only)
Wednesday, July 15: Foreign languages placement testing for undergraduates
Wednesday, July 15: Graduate Management Admission Test (GMAT)
Monday, July 20: Start counseling and registration for Fall Extended Studies enrollees
Friday, July 24: Summer master’s theses due in Office of the Graduate Dean
Friday, August 7: Tuition and fees due for early-registered students
Saturday, August 8: Test of English as a Foreign Language (TOEFL)
Monday, August 10: Fall registrations cancelled for early registered students who have not made arrangements for payment with Cashier (cancelled students who do not re-register are assessed a $20 admission fee)
Friday, August 21: BIOL 124-125 examination for nurses and music competency placement tests
Monday and Tuesday, August 24-25: Welcoming days, orientation programs for new faculty and for certain newly admitted students (by invitation only); English composition proficiency examination and mathematics placement testing (Monday only)
Monday, August 24 through Thursday, August 27: Registration (for times and priorities see Schedule of Classes)
Tuesday, August 25: Foreign language placement testing
Thursday, August 27: First schedule adjustment day
Monday, August 31: First day of classes
Monday, September 7: Labor Day; University closed
Tuesday, September 8: Last day for adding new courses (except those meeting only once a week)
Tuesday, September 8: Last day for a full tuition refund (less $20 fee)
Saturday, September 12: Medical College Admissions Test (MCAT)
Tuesday, September 15: Last day for adding those new courses which meet only once a week

April 1

Tuesday, September 15: Last day for a partial tuition refund—second week
Friday, September 18: Last day for filing Winter degree applications (master’s) in office of the Graduate Dean
Friday, September 18: Test of English as a Foreign Language (TOEFL)
Tuesday, September 22: Last day for partial tuition refund—third week
Tuesday, September 22: Last day for dropping a course without incurring a grade of F
Wednesday, September 23: Teacher Education Screening Committee (TESC) math and writing exams
Thursday, October 1: Last day to apply for Acceptance to Junior Standing in the School of Business Administration for Spring 1982
Friday, October 2: Second deferred tuition payment due
Saturday, October 3: Law School Admissions Test (LSAT)
Friday, October 3: Test of English as a Foreign Language (TOEFL)
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 at scheduled times and places: Wednesday classes and laboratories do not meet this week
Saturday, October 17: Foreign languages placement testing for undergraduates
Thursday, October 15: Teacher Education Screening Committee (TESC)
Friday, October 16: Law and writing exams
Saturday, October 17: Last day for filing Spring degree applications (bachelor’s) in Office of the Registrar
Saturday, October 24: Graduate Record Examination (GRE)
Monday, November 1: Graduate Management Admission Test (GMAT)
Sunday, November 1: Last day for filing Graduate School admissions applications for Spring Semester
Monday, November 2: Last day for filing undergraduate admissions applications for Spring Semester for International Students (non-immigrant status)
Monday, November 2: Spring Semester Schedule of Classes (registration calendar) published
Thursday, November 5: Third deferred tuition payment due
Friday, November 13: Last day for financial aid applications for Spring 1982
Friday, November 20: Winter master’s theses due in office of the Graduate Dean
Saturday, November 21: Test of English as a Foreign Language (TOEFL)
Monday, November 23: Challenge Examination, Master of Business Administration (MBA)
Thursday, November 26 through Sunday, November 29: Thanksgiving recess; University closed
Monday, November 30 through Friday, December 4: Early registration (for times and priorities see Schedule of Classes)
Tuesday, December 1: Last day for filing undergraduate admissions applications for Spring Semester (International Student deadline November 2)
Saturday, December 5: Law School Admissions Test (LSAT)
<table>
<thead>
<tr>
<th>Monday, December 7</th>
<th>Start counseling and registration for returning Spring Extended Studies enrollies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, December 11</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Saturday, December 12</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Saturday, December 12</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Monday, December 14</td>
<td>Examinations</td>
</tr>
<tr>
<td>Monday, December 14 through Monday, December 21</td>
<td>Third deferred tuition payment due</td>
</tr>
<tr>
<td>Wednesday, December 16</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Tuesday, December 22</td>
<td>Last day for mail-in and walk-in early registration</td>
</tr>
<tr>
<td>Friday, December 25 and Friday, January 1</td>
<td>Inter-semester break begins</td>
</tr>
<tr>
<td>Friday, December 25 and Friday, January 1</td>
<td>Christmas Day and New Year's Day; University closed. Other closing days to be announced.</td>
</tr>
</tbody>
</table>

### Spring Semester 1982

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, January 6</td>
<td>Tuition and fees due for early-registered students</td>
</tr>
<tr>
<td>Friday, January 8</td>
<td>BIOL 124-125 examinations for nurses; music competency placement tests</td>
</tr>
<tr>
<td>Saturday, January 16</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Monday, January 18</td>
<td>Welcoming day; orientation programs for new undergraduates; English composition proficiency examination and mathematics placement testing</td>
</tr>
<tr>
<td>Monday, January 18 through Thursday, January 21</td>
<td>Registration (for times and priorities see Schedule of Classes)</td>
</tr>
<tr>
<td>Saturday, January 23</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Monday, January 25</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Monday, February 1</td>
<td>Last day to apply for Acceptance to Junior Standing in the School of Business Administration for Fall 1982</td>
</tr>
<tr>
<td>Monday, February 1</td>
<td>Last day for adding new courses (except those meeting only once a week)</td>
</tr>
<tr>
<td>Monday, February 1</td>
<td>Last day for a full tuition refund (less $20 fee)</td>
</tr>
<tr>
<td>Monday, February 1</td>
<td>Last recommended date for filing financial aid applications for Fall 1982</td>
</tr>
<tr>
<td>Friday, February 5</td>
<td>Last day for filing Spring and Summer degree applications (master’s) in office of the Graduate Dean</td>
</tr>
<tr>
<td>Friday, February 5</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Saturday, February 6</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Monday, February 8</td>
<td>Last day for adding those new courses which meet only once a week</td>
</tr>
<tr>
<td>Monday, February 8</td>
<td>Last day for partial tuition refund—second week</td>
</tr>
<tr>
<td>Thursday, February 11</td>
<td>Second deferred tuition payment due</td>
</tr>
<tr>
<td>Monday, February 15</td>
<td>Last day for dropping a course without incurring a grade of F</td>
</tr>
<tr>
<td>Monday, February 15</td>
<td>Last day for a partial tuition refund—third and final week</td>
</tr>
<tr>
<td>Wednesday, February 17</td>
<td>Teacher Education Screening Committee (TESC) math and writing exams</td>
</tr>
<tr>
<td>Friday, February 19</td>
<td>Last day for filing Summer degree applications (bachelor's) in Office of the Registrar</td>
</tr>
<tr>
<td>Saturday, February 20</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Monday, March 1</td>
<td>Last recommended date for filing undergraduate admissions applications for Fall 1982</td>
</tr>
<tr>
<td>Monday, March 1</td>
<td>Last day for filing Graduate School admissions application for Summer Session</td>
</tr>
<tr>
<td>Thursday, March 4</td>
<td>Teacher Education Screening Committee (TESC) math and writing exams</td>
</tr>
<tr>
<td>Wednesday, March 10</td>
<td>Foreign languages placement testing for undergraduates</td>
</tr>
<tr>
<td>Thursday, March 10</td>
<td>Last day for filing Summer degree applications (bachelor's) in Office of the Registrar</td>
</tr>
<tr>
<td>Monday, March 14</td>
<td>Last day for filing Graduate School admissions application for Summer Session</td>
</tr>
<tr>
<td>Monday, March 14</td>
<td>Last day for filing financial aid applications for Fall 1982</td>
</tr>
<tr>
<td>Monday, March 14</td>
<td>Last day for filing International Students (non-immigrant status) for filing undergraduate admissions applications for Fall Semester</td>
</tr>
<tr>
<td>Thursday, April 1</td>
<td>Last day for filing Summer degree application (master's) in the office of the Graduate Dean</td>
</tr>
<tr>
<td>Saturday, April 24</td>
<td>Graduate Record Examination (GRE) and Medical College Admissions Test (MCAT)</td>
</tr>
<tr>
<td>Monday, April 26</td>
<td>Master of Business Administration (MBA) Challenge Examinations</td>
</tr>
<tr>
<td>Saturday, May 1</td>
<td>Last day for filing Graduate School admissions applications for Fall 1982</td>
</tr>
<tr>
<td>Monday, May 3</td>
<td>Last day for International Students (non-immigrant status) for filing undergraduate admissions applications for Fall Semester</td>
</tr>
<tr>
<td>Monday, May 10</td>
<td>Last day for filing Summer degree application (master's) in the office of the Graduate Dean</td>
</tr>
<tr>
<td>Saturday, May 15</td>
<td>Last day for filing Summer degree application (master's) in the office of the Graduate Dean</td>
</tr>
<tr>
<td>Monday, May 15</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Saturday, May 22</td>
<td>Memorial Day observed; University closed</td>
</tr>
<tr>
<td>Monday, May 31</td>
<td>Last day for filing graduate admissions applications for Fall semester (International Student deadline May 3)</td>
</tr>
<tr>
<td>Tuesday, June 1</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Friday, June 4</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
</tr>
<tr>
<td>Saturday, June 12</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Saturday, June 19</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Wednesday, June 23</td>
<td>Graduate Management Admission Test (GMAT) (not at GMU)</td>
</tr>
</tbody>
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Notice
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 is necessarily on a competitive basis. The spaces available in each program are determined largely by the availability of resources to staff course sections. The demand for resources across University programs is also necessarily balanced to meet the institution's many educational responsibilities. As a result, the University engages in qualitative evaluations of students and makes selections based on past performance as well as on evidence of their prospects for success in a program. Acceptance into junior-level courses, in particular, is limited in fields such as business, education, nursing, and social work. (Further information appears under the appropriate catalog sections.) Selection from the pool of applicants to the junior level is on a competitive basis with priority given to those with evidence of the best potential for success in the program. Grades are important, and a necessary but not sufficient condition; however, they may not be the only evidence used by the various selection committees.

Accreditation
University
George Mason University is fully accredited by the Southern Association of Colleges and Schools and is a member of the Council of Graduate Schools in the United States.

Chemistry
BS Degree. This program is accredited by the American Chemical Society.

Education
The following programs have been approved by the Virginia State Department of Education and the National Council for Accreditation of Teacher Education:

Undergraduate
Early Childhood Education—Nursery School through Grade 3
Upper Elementary Education—Grades 4 through 7
Secondary Education—Grades 7 through 12 (Certification only)
Special Certification (Music Education, K-12; Health Education, 7-12; and Physical Education, K-12)

Graduate
Elementary Education
Guidance and Counseling
Reading
School Administration and Supervision
Secondary Education
Special Education

Nursing
BSN and MSN Degrees. These Nursing Programs are accredited by the Virginia State Board of Nursing and by the National League for Nursing.

Social Work
BS Degree. The Social Work Program has been granted full accreditation 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 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 (Finley Building, Room 100; 323-2119). For information related to financial aid programs and developing personal expense budgets, contact the office of the Director of Student Aid (Student Union, Room 354; 323-2176). For information related to graduate academic programs, requirements, and related matters, contact the Office of Graduate Admissions (Robinson Hall, Room 2202; 323-2104), for undergraduate, contact the Office of Admissions (Finley Building, Room 117; 323-2102); for other questions, contact the University switchboard, 323-2000.

Visiting the Campus
Visitors are always welcome at the University, and prospective students are especially encouraged to visit the campus, preferably while the University is in session. Administrative offices are open Monday through Friday, but since hours vary, it is best to make appointments in advance.

George Mason University Catalog
July 1981
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Summer Session
Summer Session consists of several terms, ranging in length from five to eight weeks, during the period June 1 through August 7. Classes are offered during both day and evening hours. For details, consult the Summer Session Catalog which is available mid-March.
PROGRAMS

Degree Programs
More than 150 areas of study leading to these degree programs are identified in a Reference Section at the back of this catalog.

Undergraduate
Accounting BS
American Studies BA
Anthropology BA
Area Studies BA
Art BA
Biology BA, BS
Business Administration BS
Chemistry BA, BS
Computer and Electronics Engineering BS
Computer Science BS
Decision Sciences BS
Early Childhood Education BS Ed
Economics BA, BS
Elementary Education BS Ed
English BA
Finance BS
Fire Administration and Technology BS
French BA
Geography BA
Geology BS
German BA
Government and Politics BA
Health Education BS Ed
History BA
Individualized Study BSIS
International Studies BA
Law Enforcement BS
Management BS
Marketing BS
Mathematics BA, BS
Medical Technology BS
Music BA, BM
Nursing BSN
Philosophy BA
Physical Education BS Ed
Physics BA, BS
Psychology BA, BS
Public Administration BS
Social Work BS
Sociology BA

Graduate
Biology MS
Business Administration MBA
Creative Writing MFA
Economics MA
Education DA Ed
Elementary Education M Ed
English MA
Foreign Languages MA
Geographic and Cartographic Sciences MS
Guidance and Counseling M Ed
History MA, MAT
Mathematics MS
Nursing MSN
Psychology MA
Public Administration MPA, DPA
Reading M Ed
School Administration and Supervision M Ed
Secondary Education M Ed
Special Education M Ed

Professional
Law JD

Certificate Programs
Cartography
Environmental Management
Gerontology
Psychology Technician
Teaching of English as a Second Language

Preprofessional Study
Predental
Predivinity
Pre-law
Premedical
Preveterinary

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Profile of George Mason

The University: Beginnings

George Mason University is the outgrowth of an extension center for higher education established in Northern Virginia in 1948 by the University of Virginia. In 1956 the Board of Visitors of the University of Virginia authorized the establishment of a coeducational two-year branch college to supplement extension offerings in Northern Virginia. This branch opened in September, 1957, in temporary quarters at Bailey’s Crossroads. It had 17 students and was called the University College.

The city of Fairfax purchased 150 acres for a permanent campus and donated it to the University of Virginia in 1959; early in 1960, the campus was named for the Virginia statesman, George Mason, and was given the status of a community college.

In March, 1966, the General Assembly authorized the expansion of George Mason into a four-year degree-granting institution and gave it the long-range mandate to expand into a university of major proportions. The first senior class received degrees in June, 1968. Graduate programs began in September, 1970, and the first graduate degrees were conferred in June, 1971.

In an attempt to meet the state’s long-range mandate, the George Mason College Board of Control, supported by the citizens of Alexandria, Falls Church, Arlington and Fairfax County, worked to acquire 422 additional acres. In January, 1972, the George Mason College Foundation, Inc., purchased the Fairfax City facility now known as the North Campus. By the end of 1977 the University’s Main Campus had reached its current size of over 571 acres.

Having established and fostered the institution through its first 15 years, the Rector and Visitors of the University of Virginia recommended to the Governor that George Mason College be separated from its parent institution. The enabling legislation was passed by the General Assembly, and, upon its being signed by the Governor on April 7, 1972, the former branch of the University of Virginia became an independent institution under the name of George Mason University.

At the end of the decade, two pieces of General Assembly legislation further shaped the University. The first approved the University’s assimilation of a private law school as the George Mason University School of Law, thereby adding in 1979 the first professional degree to the institution. The second authorized the University’s offering in 1980 its first two doctoral degree programs, the Doctor of Public Administration (DPA) and the Doctor of Arts in Education (DA Ed).

The University: Direction

Mission Statement

(Approved by the Board of Visitors, September 10, 1980)

George Mason University will provide superior, traditional education enabling students to develop critical and analytical modes of thought and to make rigorous, honorable decisions. 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 them innovative educational methods and programs; and, it will enhance these programs with undergraduate, graduate, and professional courses of study that are cross-disciplinary.

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

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

The University: Setting

Northern Virginia is a complex setting for a university such as George Mason. The population of the region (over one million) is largely suburban. Development stretches westward from Old Town Alexandria on the Potomac toward Leesburg and Bull Run Mountain, and southward toward Marine Corps Base Quantico and Prince William Forest Park. The Northern Virginian lives and works in an environment combining historical and contemporary significance. Mt. Vernon, Washington’s estate, and Gunston Hall, home of the Virginia statesman, George Mason, exemplify the tradition of an area that now also includes the United States Division Offices of Mobil Corporation, the AT&T Long Lines Division, IBM, the National Technical Information Services, the Central Intelligence Agency, the U.S. Geological Survey, and Wolf Trap Farm Park for the Performing Arts.

In daily life, the Northern Virginian is accustomed to dealing with modern technology, policy matters, and research and development issues; is greatly interested in cultural affairs; and is keenly supportive of intellectual needs, including libraries, research, training and study centers, community colleges, and university education.

Neighboring urban and rural regions supplement Northern Virginia’s diverse suburban character. Nearby Washington, D.C., increases cultural and employment opportunities. Historic Richmond, capital of the Commonwealth, and Charlottesville, site of Thomas Jefferson’s estate, Monticello, lie within a 90-mile radius of Northern Virginia. Annapolis, capital of Maryland and home of the U.S. Naval Academy, is 50 miles away.

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Beyond the cities, the Atlantic Ocean beaches to the east, and the Appalachian Trail and the Blue Ridge and Shenandoah Mountains to the west offer many recreational opportunities. Related closely to Maryland and the District of Columbia, Northern Virginia has become the concentrated northern gateway of a great southern state. Like the Tidewater, it is a Commonwealth portal to the world. Although immersed in history, it is caught up in the contemporary mainstream. The region is surrounded by beauty, yet accessible to urban conveniences. Its population is governed by a Commonwealth with a General Assembly older than the nation, while attuned to the nation today.

The State University in Northern Virginia Today

George Mason University offers professional, graduate, and undergraduate degree programs at three Northern Virginia campuses: Masonian, GMU Main Campus, located south of the City of Fairfax at Route 123 and Braddock Road; the GMU North Campus, situated within the City of Fairfax on Route 50/29/211; and the Metro Campus one block east of the Virginia Square Metro Station. In addition, courses are taught at more than 25 off-campus sites in Northern Virginia.

Through the years, the University's mission and goals have fostered in all degree programs a substantial core from the liberal arts and sciences; this arts and sciences tradition has been actively nurtured. As a result, the University today provides its diverse student population with a well-directed education in the best traditions of higher education.

Presently, the University serves more than 14,000 day and evening students through the Graduate School, the College of Arts and Sciences, the College of Professional Studies, the School of Business Administration, the School of Law, and the Division of Continuing Education. Approximately 6,000 students enroll in Summer Session courses.

An estimated 75 percent of George Mason's students work full- or part-time, about 40 percent are married, and slightly more than half enroll on a part-time basis. Statistics reveal two distinct groups of students almost equally represented. The part-time student body is made up largely of adult undergraduate and graduate students (between ages 25 and 45). The full-time student body includes mostly younger students (age 24 and under) attending at the undergraduate level.

A large majority of George Mason students commute to the campuses from the suburban and metropolitan areas of Northern Virginia, Maryland, and Washington, D.C., but the academic and physical design of the University counters the typical commuter school image.

In the development of the Main Campus, careful attention is paid to the natural areas. The campus center, composed of academic buildings, is surrounded by groves of trees; residence areas are designed to blend into their wooded setting; and parking areas are located on the campus perimeter. On-going construction, including two dormitories, a new academic building, a five-story addition to Fenwick Library, a second Student Union, and a field house, will leave hundreds of wooded acres on the Main Campus.

The North Campus houses the Department of Fine and Performing Arts and Communication. In addition to art, music, dance, and theatre areas, other components of the 16-acre campus are an 800-seat auditorium, a specialized library, a cafeteria, and a cluster of other key University services. Scheduled shuttle buses (CUE buses) operate between the North and Main campuses and key points in Fairfax City.

The University's Metro Campus is a large modern building at the Virginia Square Metro Station (Orange Line) in urban Arlington. The Law School and its library are located at the Metro Campus. The campus is also the site of one of the new venues of the University—the Professional Center. Housed at the campus, the Professional Center features a GMU Information Center, classrooms, offices, and a conference area; course offerings and conferences focus on professional fields such as business, economics, public administration, and psychology.

A revised master physical plan and a ten-year academic plan were approved in 1978 by the University's governing board. Highlights of the physical design through 1988 include facilities to accommodate 16,000 students, with varied on-campus living quarters for about 4,000; the design also indicates major development of athletic, food, and other service facilities by 1981. The academic plan calls for additional doctoral programs, broadening of offerings in the liberal arts and sciences, as well as new professional and master's level programs.

Special Facilities for Study

Libraries

Library services are provided on all three George Mason campuses to all University students, faculty, and personnel. Students enrolled in credit courses offered by member institutions of the Northern Virginia Consortium have borrowing privileges. The libraries are open to all others for reference use. George Mason's libraries contain 340,000 volumes, acquire approximately 20,000 new books each year, and receive over 3,390 periodicals. Fenwick Library, the central collection on the Main Campus, contains over 215,000 book volumes, 312,000 microforms, and subscribes to 2,830 periodicals. The Law Library at the Metro Campus includes over 125,000 book volumes and subscribes to 560 law journals. The specialized library at the North Campus serves students in fine and performing arts and communication. Online computer access to bibliographic and information data bases is available to the University through the libraries. Library materials not available at the University may be borrowed through the interlibrary loan service. For further information on the University's library system, please call the main reference area (323-2392).

The Washington metropolitan area contains one of the richest concentrations of library facilities 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 numerous other university libraries and specialized collections, as well as the libraries of the federal departments of Commerce, Education, Housing and Urban Development, Interior, Labor, and Transportation.

Special Collections

The University Library is building special collections containing primary resource materials to be used by scholars in their research. These collections are located on the fifth floor of Fenwick Library and include rare books, papers of local politicians, paintings, University archives, and a growing number of other unique research materials. Of special importance are the following:

- Federal Theatre Project (FTP) Collection. The FTP collection contains the major playscripts, radio scripts, set and costume designs, and other creative materials produced by the Federal Theatre of the 1930's. Based on more than 250,000 items placed on deposit at George Mason by the Library of Congress, the collection also includes gifts from private individuals and an oral-video history library.

- American Symphony Orchestra League Archives. The collection includes correspondence with member associations of the League, programs of symphony orchestras, financial reports of member organizations, administrative records of...
the League itself, its publicity, publications, and photographs.

- **Ollie Atkins Photograph Collection.** Ollie Atkins spent 22 years as a correspondent and photographer for *The Saturday Evening Post* and was the official White House Photographer from January 1965 until December 1974. The collection consists of over 25,000 of his prints and negatives.

- **William Scott Papers.** William Scott (Virginia) served in Congress from 1966 until 1972 and as a U.S. Senator from 1972 until 1978. Senator Scott has donated his office files, legislative records, and correspondence to George Mason University. (The collection will be available to researchers after processing is completed, some time in 1981.)

- **African Art Collection.** The collection ranges from artifacts and contemporary art to native apparel.

- **C. Harrison Mann Collection.** The collection was started as a memorial to Mr. Mann, a former leader in the General Assembly of Virginia, a long-time supporter of George Mason College, and a member of the Board of Visitors of the University. The collection contains a number of rare historical maps; atlases, geographies, and law books relating to Virginia, all from Mann's private collection.

The Special Collections Division on the fifth floor of Fenwick Library is open from 8:30 a.m. until 4 p.m. daily (weekdays only). Use of the resources can be arranged by contacting the Special Collections Office at 323-2251.

### Metro Campus Professional and Conference Center

The University’s new Professional Center is located in Arlington at the Metro Campus, 3401 North Fairfax Drive, near the Virginia Square station of the Metro Orange Line. On the third floor of the Metro Campus, the Professional Center offers a broad selection of undergraduate and graduate courses, particularly those leading to professional degrees. The University Information Center on the Kirkwood Street side of the building provides information concerning all University programs and activities, including those at the Fairfax campuses.

Most graduate courses offered at the Professional Center are prerequisites for advanced graduate degrees in Business Administration and Public Administration, but each semester there is also a variety of undergraduate courses. Professional Center courses are scheduled in three-hour megablocks from 9:00 a.m. to 9:00 p.m. weekdays.

In addition to classrooms, the third floor of the Campus incorporates the University’s Conference Center. A large area seating 500 and a seminar room seating 100 are used for Community Service programs and for business and professional conferences. For example, the annual “Irish Week” lectures and seminars on Irish history and culture take place in the Conference Center.

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

### Studio Theatre

The Studio Theatre, located in Robinson Hall, is George Mason’s Main-Campus performance facility for theatre, dance, and music. This 530-seat modified proscenium theatre houses experimental dance events, music concerts and recitals, small theatre productions, and major conference events.

### Computer Facilities

Computer facilities are at the disposal of faculty and students for instructional and research purposes. The systems available are a Hewlett-Packard 3000 Series III computer with one and one-half megabytes of memory for academic and administrative use, a Hewlett-Packard 2000 Access computer supporting 32 interactive terminals for academic use, and a Hewlett-Packard 1000 computer for the Mathematical Sciences Department. The HP 1000 is located in Room 119, Thompson Hall. The HP 2000 and HP 3000 are located in the basement of Thompson Hall. George Mason University also has access to an IBM 370/158 located at the College of William and Mary through remote job entry facilities.

Computer terminals, keypunches, and a work area are located in Room 4 of Thompson Hall and in Room 1618 of Robinson Hall. Offices for the consultants are located adjacent to these areas in Room 4 of Thompson Hall and Room 1600 of Robinson Hall.

Various software packages such as SPSS, BMDP, SAS, and ESP are available on several of the computer systems. FORTRAN, COBOL, BASIC, SPSS, and BMDP are available on the HP 3000. Consultants are on duty to assist users in their programming and job control language problems.

The academic computer facilities are open from 7:30 a.m. Monday through midnight Saturday and 10:00 a.m. until 5 p.m. on Sunday.

### Electron Microscope

The Biology Department uses a high resolution electron microscope in the graduate biological ultrastructure courses and for graduate and faculty research. Problems currently under investigation include studies of fine structure of the nerve, endocrine, kidney, and muscle cells in vertebrate and invertebrate animals; cytochemical localization of enzymes of marine fungi; membrane characteristics of yeast cells; and fine structure of nectar secreting organs of ferns.

### Centers, Clinics, Laboratories, Institutes

**The Center for Government, Society, and the Arts.** The Center was established in 1978 to benefit from the University’s location and resources by developing academic and public programs based on the reciprocal relations among government, society, and the arts. Staffed by regular and visiting faculty from various disciplines, the Center has four major goals: 1) to serve as a focal point for appropriate interdisciplinary study on campus; 2) to stimulate innovative applied scholarship on public and social policy and the arts; 3) to help make the cultural resources of the metropolitan Washington, D.C., area available to citizens of the Commonwealth of Virginia; and 4) to develop new cooperative means of assisting artists, arts organizations, and arts audiences throughout Northern Virginia. Ultimately, the Center will work through a number of institutes. The first of these, the Institute of the Federal Theatre Project and New Deal Culture, is based on the major archival collection of Federal Theatre creative materials placed on deposit at George Mason by the Library of Congress in 1974. A second institute on government, society, and the arts in the contemporary United States is now being developed.

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

**The George Mason University Faculty Writing Project (FWP),** a branch of the NVWP, works with University teachers from many disciplines to improve writing instruction for stu-
Academic Structure and Programs

University academic programs and offerings are organized and administered generally under a structure headed by seven deans: Arts and Sciences; Professional Studies; Graduate; Continuing Education; Business Administration; Law; and Summer Session. The catalog briefly describes this structure, details the programs and offerings administered under it, and outlines the regulations, policies, procedures, and support services necessary to their effective functioning.

College of Arts and Sciences (1972)

The College of Arts and Sciences is the largest and most diverse of the academic units of the University. It grew out of what was earlier called College I at George Mason College of the University of Virginia. The College is composed of thirteen departments—Biological, Chemistry, Economics, English, Fine and Performing Arts and Communication, Foreign Languages and Literatures, History, Mathematical Sciences, Philosophy and Religion, Physics, Psychology, Public Affairs, and Sociology.

With more than 335 faculty, the College provides over 1100 courses leading to the BA, BS, and BM degrees in some 30 major fields. In addition to the traditional degrees, the College also administers several interdisciplinary and interdepartmental programs and certificates. The College plans other undergraduate programs through the 1980s to complement the current spectrum of offerings. The broad range of graduate work in the various departments is coordinated by the Graduate School of the University.

Administrative offices of the College are located in Thompson Hall.

College of Professional Studies (1972)

The College of Professional Studies is an evolution of what was originally known as College II of George Mason College of the University of Virginia. The more than 80 faculty in the College enroll students preparing for specific professions, and aim to make them thoughtful, skilled, and informed members of their professions.

Composed of three academic departments—Education, Nursing, and Health and Physical Education—the College offers six undergraduate degree programs leading to the BS Ed or BSN degrees. The wide range of graduate offerings of the three departments is coordinated by the Graduate School of the University.

Administrative offices of the College are located in Robinson Hall.

Graduate School (1972)

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

University faculty are recognized for membership on the Graduate Faculty on the basis of their outstanding scholarship and teaching. The Graduate School admits students to all graduate programs following departmental recommendations, and coordinates the wide variety of master’s and doctoral level offerings of all departments at the University.

The School plans development of significant numbers of new master’s programs through the 1980’s, together with implementation of select doctoral programs.

Administrative offices of the School are located in Robinson Hall.

Division of Continuing Education (1973)

Renamed in 1979, the Division of Continuing Education represents a natural evolution of the original Office of Extended Studies. The Division performs a number of functions generally associated with continuing and adult education, special programs, and lifelong learning.

The Division administers the non-traditional degree Individualized Study (BIS); evening undergraduate programs; the Extended Studies Enrollment procedure; off-campus credit courses; contract courses; undergraduate guest matriculant and senior citizen enrollment; nursing continuing education; and community service and non-credit activities.

Headed by a Dean, the Division provides other University units the mechanism for offering special programs of all types. These special academic programs originate in the appropriate colleges and schools of the University, and remain subject to University regulations and procedures.

Administrative offices of the Division are located in the East Building.

School of Business Administration (1977)

The School of Business Administration, created in 1977, represents the most recent stage of administrative development for programs of study in business at George Mason. Six undergraduate programs of study in the School lead to the BS degree. Graduate study offered by the School (the MBA) is coordinated by the Graduate School of the University.

http://catalog.gmu.edu
A comprehensive school, Business Administration is composed of almost sixty faculty, organized into five administrative units: Accounting, Business Legal Studies; Decision Sciences; Finance/Real Estate and Urban Development; Management; and Marketing.

Administrative offices of the School are located in Robinson Hall.

School of Law (1979)

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

Summer Session

Information concerning the George Mason University Summer Session is presented in a separate catalog available from the Summer Session Office. The Summer Session at George Mason University has markedly increased educational opportunities for students in Northern Virginia. The offering of summer courses is controlled by a funding pattern more restrictive than that for the regular academic semesters. Students who wish to complete graduation requirements for summer commencement should understand that the University does not necessarily offer all required courses in any particular Summer Session.

University Information

Consortium Membership

George Mason University is the host institution of the Consortium for Continuing Higher Education in Northern Virginia. The other members are Marymount College of Virginia, Northern Virginia Community College, the University of Virginia, and Virginia Polytechnic Institute and State University. The Consortium's primary goal is to foster inter-institutional 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, 4210 Roberts Road, Fairfax, VA 22032.

Minority Student Services

The objective of the Office of Minority Student Services is to address the ethnic and cultural diversity and the educational needs of the University community. The office's program is an integrated component of the total program of the University and is designed to affect not only the minority population but every segment of the University in a positive way.

Student services are geared to the recruitment, retention, and development of minority students. An Admissions recruitment officer gives special attention to the recruitment and admissions of minority group students. In the Career Services and Financial Aid Offices, designated staff members give attention to special career and financial problems which students of minority groups encounter. Arrangements for counseling and tutorial assistance are provided for those students who need and desire them. While the Office of Minority Student Services coordinates these services in a unified program, the services are integrated into the administrative units to which they relate.

Services to the faculty, staff, and administration include assistance in carrying out affirmative action mandates, improvement of curriculum, and heightening awareness of minority concerns and issues.

The program also assists the University in improving its relations with, services to, and image in minority communities.

American Minority Cultures

As illustrated by the list below, the University provides specific courses in American minority cultures and general courses in such subjects as American history, sociology, music, literature, and political thought, in which a portion of each course is devoted to the importance of minority groups. Departments seek textbooks that adequately represent the aspirations and contributions of American minorities. The University welcomes students from all minority groups.

ART 330: History of American Art (3)
EDUC 412: Teaching Social Studies in the Elementary School (3)
ENGL 386: Literature of Black America (3)
ENGL 394: Japanese Literature in Translation (3)
ENGL 395: Chinese Literature in Translation (3)
ENGL 580 (480): Applied Linguistics (3)
HIST 101: The Uses of History (3)
HIST 102: Foundations of Western Civilization (3)
HIST 335: The Afro-American Experience in the United States: African Background to 1865 (3)
HIST 336: The Afro-American Experience in the United States: Reconstruction to the Present (3)
HIST 495: Racism in the United States: A Seminar (3)
LAC 151: Latin America (3)
LAC 152: Sub-Saharan Africa (3)
LAC 153: Asia and the Western Pacific (3)
LAC 154: North Africa and the Middle East (3)
SOCI 308: Sociology of Race Relations and Minorities (3)
SOCI 382: Education in Contemporary Society (3)
THR 253: Black Theatre in the United States (3)

Affirmative Action

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

The office takes affirmative steps to increase the representation of all qualified minority groups in order to promote a more diverse and ethnically heterogeneous faculty and staff.

Care and concern are given to this process to ensure that while the employment of qualified minority and female persons is strongly and continuously encouraged, the opportunity for employment or terms and conditions of present employees are maintained equally.

The Office of News and Information Services

News and Information Services located in Room 214 of the Finley Building handles press and publicity for the University and produces GMU Today, a quarterly publication featuring articles about the University and its people. GMU Today is distributed to students, faculty, staff, alumni, and the community. The office also publishes The Mason Gazette, an internal weekly newsletter covering items of general interest to University faculty and staff.

University Catalog 1981-1982
George Mason University

http://catalog.gmu.edu
Design and Publications

Design and Publications, located in Room 227 on North Campus, is responsible for the layout, design, and printing of University publications. The department consults daily with University faculty and staff in producing the visual image for the University, which is displayed through brochures, catalogs, class schedules, posters, newsletters, and other printed items.

Office of Alumni Relations

The Office of Alumni Relations was established by Board of Visitors' action with primary responsibility for initiating and coordinating alumni activities and programs in conjunction with the independent Alumni Association of GMU.

The office, located on the fourth floor of Fenwick Library, is open Monday through Friday from 8:30 a.m. until 5 p.m. The director encourages inquiries on all aspects of alumni relations and has established additional hours for informal meetings on Wednesday from 7 until 10 p.m. and Saturdays from 9 a.m. until 1 p.m. Alumni should confirm evening or Saturday visits by telephone (323-2136) before traveling to the University.

The Office of Alumni Relations maintains address and biographical information on approximately 11,500 alumni; publishes gmu alumnus six times yearly focusing on alumni achievement, academic programs, Alumni Association activities, special on-campus events, and alumni special events such as Homecoming and receptions. As an aid to the University Development Office, the Office of Alumni Relations and the Alumni Association of GMU participate in the advancement program.

General Regulations

Motor Vehicles

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 Campus Police Department. 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 fee of $3.00 is charged for each vehicle registered. Registered vehicles must display in full view the University's vehicular registration decal, affixed immediately upon issuance to the left half of the rear bumper. The decal is valid for the period September 1-August 31 of each year.

Firearms

The unauthorized possession, storage, display, or use of any kind of ammunition, firearms, fireworks, explosives, air rifles, air pistols, or other lethal instruments is prohibited on University property. Any questions regarding this regulation should be directed to the Campus Police (323-2158).

Alcoholic Beverages

The possession or consumption of any alcoholic beverage is prohibited on University grounds unless the University has sanctioned the location and/or conditions for possession or consumption.

Smoking

Smoking is not permitted in classrooms, lecture halls, theaters, or in the University libraries. Lounge areas in the Student Building and other University buildings have been set aside for this purpose.

Drugs

Students at the University using or otherwise involved with drugs may be subject to suspension or expulsion in addition to any action taken by local or state authorities.

Bicycles/Skateboards

Bike racks are provided at various locations on campus for the convenience of students who bike to and from the University. For resident students, storage areas for bikes are located near Buildings 2, 4, and 8. Bikes are to be parked only in these areas.

Bikes and skateboards are not permitted on sidewalks, ramps, foot paths, or grassy areas of campus or inside University buildings.

Pets

No pets are permitted in University buildings at any time. Additionally, pets that are on campus grounds must be on a leash and under supervision at all times.

Solicitors and Salesmen

Solicitors and salesmen, except on official business with the University, are not permitted on the campus without prior approval of the business office.
Student Information

Student Affairs

Student Activities

In the belief that student participation helps shape the character and quality of the institution, George Mason University encourages students to express their talents and interests through student government and student publications, and through participation in academic, social, cultural, religious, and athletic organizations.

While involvement in such activities is a desirable adjunct to classroom learning, participation must be complemented by academic progress. For this reason, only students in good academic standing are eligible to hold elective or appointive office in any organization or activity associated with the University, 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. It is the responsibility of the individual student to notify the organization upon becoming ineligible. The student's academic dean, however, has the authority to remove the restriction on activities, in whole or in part.

Student Union

Most nonacademic activities and programs at the University take place in the Student Union on the Main Campus, and the people coordinating these student affairs are conveniently located in the Union: the offices of the Vice President for Student Affairs, the Associate Vice President for Student Services, the Coordinator of the Student Union, the Coordinator of Services for the Handicapped, and the Director of Minority Student Services; the offices of Student Health Services, Career Services, Cooperative Education, Veterans Affairs, Financial Aid, the Counseling Center, the Campus Ministry, International Programs and Services, and the Academic Advising Center; and the offices of Student Government, Student Organizations, the Student Newspaper, the Student Yearbook, and the Honor Committee.

Recreational facilities and lounge areas occupy a portion of the Union. In addition to an arts and crafts center, there are game, television, music, and card rooms. Banking, bookstore, and drycleaning services are available on the second floor of the Union.

On the North Campus, a study lounge is located in Room 107; and the office of Student Health Services is located in Room 106.

Contract food services are available on all of the University's campuses. On the Main Campus, the lower level of the Student Union houses a deli, a cafeteria, and a rathskeller. Patios on both the north and south sides of the building adjoin the eating areas. Vending machines are also located in various buildings. The Food Service Manager on the Main Campus can provide information concerning catering.

The Student Union also has a variety of meeting facilities. Students may schedule meetings or conferences in the Student Union (or throughout the University) through the Scheduling Clerk in Room 310 of the Student Union, as explained in the following section.

Reserving University Facilities

Individuals, groups of students, or organizations may use the Student Union and other University facilities for nonacademic events. University groups may reserve most facilities free of charge with some exceptions for support costs for special events. All reservations, whether for the Student Union or other University facilities, must be made at least two weeks prior to the date of the event through the Scheduling Clerk in Room 310 of the Student Union (323-2164). Approval is given according to the procedures outlined in the George Mason University Administrative Procedures Manual.

Athletic Activities

The intercollegiate athletic program of 20 men's and women's sports at George Mason University offers competition with universities and colleges in Virginia and other states on the East Coast. Intercollegiate competition for men includes baseball, basketball, cross-country, fencing, golf, soccer, tennis, indoor and outdoor track and field, shooting, and wrestling.

The men's program is a Division I member of the National Collegiate Athletic Association and a member of the Eastern College Athletic Conference. The Patriots also participate in the Capital Collegiate Conference (American, Catholic, Georgetown, George Mason, George Washington, and Howard universities). Additional outside competition is furnished by the University of Virginia, William and Mary, the University of South Carolina, North Carolina State University, and other NCAA Division I opponents.

The intercollegiate athletic program for women is a rapidly growing part of the University. Competitive sports for women are conducted in basketball, cross-country, indoor and outdoor track and field, softball, tennis, shooting, and volleyball. Plans tentatively include expansion of the current number of varsity level sports. Scholarships and financial aid (based on need) are available.

The University is affiliated with the Association of Intercollegiate Athletics for Women (IAAW), the Virginia Association of Intercollegiate Athletics for Women (VIAAW), and the Southern Region II of the IAAW. Tennis and softball teams compete at the Division III level; all other teams participate in Division II.
In 1979, the women's volleyball team won its third Virginia small college championship in four years and went on to represent the state in the Southern Region II Championship. During the off-season, the women's volleyball team competes in United States Volleyball Association (USVBA) tournaments throughout the East Coast and also conducts clinics for area high schools to encourage the development of the sport at all levels of competition.

The 1980 women's softball team captured the Virginia Division III championship and later won the Southern Region, before making its initial appearance in the AIAW Division III national tournament in Grand Rapids, Michigan. In the fall of the same year, the women's cross country team placed fourth in the Region II Tournament, qualifying two individuals for the AIAW Division II national tournament in Seattle, Washington. It was the second straight year the GMU cross country team was represented in the national tournament.

In the fall of 1980, the men's program produced Capital Collegiate Conference championship teams in golf and baseball and the men's cross country team tied Virginia Tech for first place in the Virginia State Championships. The men's fencing team placed 13th in the nation in the 1979-80 season, and in the process produced the University's first All-American. In the spring of 1980, GMU won three state individual track and field championships enroute to a fourth-place finish in team competition.

A growing intramural program enables men and women to participate in a variety of athletic activities of their choice.

### Arts and Communication 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 concerts each year; all students are encouraged to audition. Additionally, guest choreographers and performers are an integral part of the dance program.

Theatre events include four major productions, as well as several student-directed, one-act and experimental plays; students may also attend playwriting classes and work with the theatre majors on presentations of their own works. Auditions for theatre events are open to all George Mason students and are held each semester. Students interested in technical theatre can work in a variety of production crews, including light and sound, costumes, and publicity. Information concerning auditions, crew work, and performance dates may be obtained from the Department of Fine and Performing Arts and Communication (691-7900/7950).

Students interested in music may audition to perform in several musical ensembles: University Chorus; Chamber Orchestra; Symphonic Winds; Jazz Ensemble; Collegium Musicum; and various chamber ensembles. In addition, all members of the University community are invited to attend concerts by these groups, as well as recitals by junior and senior music groups.

George Mason's forensics team, which includes individual events and debate, competes in over 20 tournaments each year in the Midwest, the West, and along the East Coast. During the 1979-80 season, the GMU team became the first team in the nation to win over 500 trophies in a single season. Both the Debate Squad and the Individual Events Squad qualified to compete in the American Forensics Association's National Championship, with the Individual Events Squad placing in the top five schools in the nation for the fifth consecutive year. The combined efforts of both squads led to the George Mason University Forensics Team being named the "National Sweepstakes Champions for 1980." Academic credit is available for participation in forensics. Interested students should contact Dr. Bruce B. Manchester, director of Forensics (691-7954).

### Student Organizations

In addition to intercollegiate and intramural athletics, student publications, student government, and numerous student organizations provide opportunities for students to exercise and develop their talents. Approximately 100 student organizations on campus span a broad range of interests, including political, forensic, dramatic, musical, journalistic, scientific, recreational, business, social, religious, and fellowship. Participation in student organizations is limited to registered students.

All recognized student organizations are members of Student Government's Inter-Club Council. Council membership facilitates development of campus activities and interaction with other groups and provides a University mailing address, access to file and storage space and duplicating equipment, and a channel of communication with University administration regarding activities.

The Student Activities Office, in Room 310 of the Student Union (323-2574), provides updated lists containing names and phone numbers of contact persons in each organization, and a Student Organization Manual, a "how-to" resource handbook for student leaders. The office also consults with students or student organizations planning programs for students; assists new clubs in attracting members and obtaining recognition; and offers leadership training in workshop, retreat, and mini-course formats to organization members and to students not affiliated with a club.

### Student Services

#### Health Services

The Student Health Service, on both the Main and North campuses, treats minor illnesses, administers first aid, dispenses nonprescription medications, provides referral services to outside health resources, offers information and counseling on matters of hygiene, and assists in the administration of a program of health and accident insurance for students. Pregnancy tests, throat cultures, and mono spot tests are performed for a minimal fee; abortion counseling and referrals are also offered.

During the academic year, health service programs emphasize preventive health care. Programs for 1980-81 dealt with areas such as blood pressure checks, Pap testing, and Rubella/Rubeola immunizations.

Staffing consists of a Nurse/Coordinator, two part-time nurses, and a consulting physician. On the Main Campus, the Student Health Service is located in the Student Union, Room 355 (323-2584); on the North Campus, in Room 106 (691-7958).

#### Health Insurance/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, out-patient laboratory fees, and X-ray coverage, as well as the usual provisions for hospital room and board and surgical expenses. At minimal cost to the student, this policy provides for coverage of the person insured 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 bridge work, 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 both North and Main Campus health offices.
Services to Disabled Persons
A wide range of services and assistance is available to disabled students. Students may contact the Coordinator for Services to Disabled Persons for more information.

Housing
On Campus. The University offers on-campus housing for 500 students. The residential complex is composed of nine, three-story structures containing 122 apartments, divided into one-, two-, or three-bedroom units accommodating two, four, or six students. Each apartment unit has its own outside entrance and includes a kitchenette, a bathroom, and a carpeted living room in addition to the bedroom(s). Utilities, with the exception of telephone, are included in the rent. Complete information concerning on-campus housing is available from the Student Housing Office, George Mason University, 4400 University Drive, Fairfax, VA 22030 (703-323-2354/55).

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

Counseling Center
The George Mason University Counseling Center provides counseling services to assist students in their academic, vocational, and personal development. All counseling services are confidential. The Center is staffed by licensed professional counselors and psychologists, including a minority counselor who works primarily with the University’s minority students.

Individual Counseling and Consultation
Services offered include personal counseling for adjustmental and emotional concerns; crisis intervention; educational and vocational problems; reading and study skills assistance; marriage and couples concerns; communication skills; and campus consultation with faculty, staff, and students. Interest, personality, and intelligence tests are also available.

Groups, Seminars, and Workshops
A program of groups and workshops for personal and academic skills development is offered each semester. Brochures listing these services are available at the Counseling Center and are also published in the class schedule.

Self-Help Materials and Referral Information
The Center also has a library of personal self-help books, tapes, and pamphlets. A Referral Resources file is available to students, faculty, and staff interested in seeking referrals to other mental health professionals and agencies.

Peer Counseling Services
Paraprofessional advising/counseling is offered by peer counselors as an integral part of the Center’s services. The following peer services are available:

- Re-entry Student Program. This drop-in service and meeting place enables re-entry students to obtain information, exchange ideas, gain support from other students returning to school, and participate in groups and workshops. (Trailer 112; phone 323-2940)

- Study Skills Service. A staff of trained peer counselors provides individual study skills assistance and conducts workshops in time management, reading, note-taking, exam skills, research paper preparation, and improvement of memory, motivation, and concentration. Printed and taped materials concerning reading and study skills are also available. (Trailer 115; phone 3232018)

- Black Peer Counseling. Trained black undergraduates provide informal assistance for other black students. (Trailer 112; phone 3232940)

- Biofeedback Services. Trained technicians use biofeedback equipment to teach students how to cope with the effects of academic, work, and personal stresses.

- Counseling for Prospective Students. Educational and career planning is available to individuals who want to attend the University but are unsure of what field to enter. Counseling Center services are available at no charge to all University Students. The main office and reception area are located in Room 364 of the Student Union (323-2165). Center offices are open Monday through Friday from 8:30 a.m. until 5 p.m., and Tuesday and Wednesday until 8 p.m.

Career Services
The Office of Career Services provides students and alumni with services that assist in exploring careers, making career decisions, testing career choices, and securing suitable employment through the components of career counseling, career information, experiential learning and job placement. The offices, located in Rooms 365 and 303 of the Student Union, are open Monday through Friday from 8:30 a.m. until 5 p.m., Tuesday until 8 p.m., and Wednesday until 7 p.m. For information call 323-2476 or 323-2535. Major services offered to students include:

- Career Counseling. Through individual career counseling appointments and career group seminars, students learn a career decision-making process that begins with increasing their awareness of needs and includes focusing on interests, values, abilities, and skills; exploring occupational and educational information; evaluating occupational/educational alternatives; choosing the best alternative and developing a plan for reaching the goal; implementing the plan; and periodically reevaluating needs. Career Seminars and Workshops include Orientation to Career Planning, Career Identification, Changing Majors, Mid-Life Career Planning, Applying to Graduate/Professional School, Applying for Government Jobs, Job Hunting Strategies, Resume Writing, Interviewing Skills, Assertion in Job Interviewing. Check Career Services brochure for the listing of workshop days and times. Evening programs are available.

- Career Reference Library. This specialized self-help library contains information on career fields including those related to University majors, graduate and professional school catalogs, government employment information, job directories and guides. Staff assistance is available for locating appropriate materials.

- Cooperative Education. The Cooperative Education Program provides qualified students with the opportunity to integrate classroom theory with curriculum-related, professional work experience in either the public or the private sector. The University recognizes satisfactory performance on work assignments through notation on academic transcripts of participating students. Some academic departments also award academic credit. Students who successfully complete a Cooperative Education work cycle with a federal agency qualify for noncompetitive appointment upon completion of the requirements for a baccalaureate or graduate degree. Satisfactory performance on work assignments is recognized by the University through notation on academic transcripts of participating students. Orientation sessions for the Cooperative Education Program are offered weekly to provide more complete information. Since placements are usually available to sophomores or juniors, students are urged to contact a Cooperative Education coordinator as early as their freshman year.

- Internships. The Federal Summer Intern Program is an annual program offering noncredit, career-related, paid internships in federal agencies. Application must be made in February of each year. Information on other noncredit internships is maintained in the Career Reference Library. For help in developing an internship related to major/career goals, contact the Placement Counselor. For information on
credit-bearing internships in a specific field, check with the appropriate academic department.

- **Part-Time Jobs.** Part-time and summer job notices are posted on a bulletin board outside Room 365, Student Union. Students seeking career-related, part-time employment can register for a job referral service and receive job notices as Career Services learns of available positions.

- **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 filing a Personal Data Sheet and scheduling desired appointments. A schedule of employers is available at the beginning of each semester.

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

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

**Veterans Affairs**

The University's Office of Veterans Affairs assists veterans, service personnel, dependents, and survivors in obtaining authorized educational benefits. The office also provides support to veterans in adjusting to University life. Located in the Student Union Building, the office is open Monday through Friday from 8:30 a.m. until 5 p.m. and two days a week until 7 p.m. during regular semesters. (Late days vary; check with the office.)

A Veterans Coordinator is available to assist University veterans through the Office of Veterans Affairs. Veterans should contact the office (323-2361) as soon as they are sure of the number of hours to be carried in a particular semester or summer session. This is usually shortly after the catalog or the Schedule of Classes is published. For a detailed description of educational benefits available to veterans, service personnel, dependents, and survivors, see the section titled "Financial Assistance" in this catalog.

**Campus Ministry**

The Campus Ministry Association is an ecumenical group of chaplains offering religious, educational, and social counseling to the University community. The organization is sponsored by Catholic, Jewish, and Protestant efforts.

The Campus Ministry office is located in the Student Union, Main Floor, Room 229 (323-2160), and is open daily for discussion and assistance of any kind.

**Office of International Programs and Services**

The Office of International Programs and Services was established in the fall of 1980 to assist George Mason's international students, American students interested in travel or study abroad, as well as faculty members. For newly-accepted students, the office provides pre-arrival information, orientation, and housing assistance. With the assistance of groups such as the GMU Women's Association and the Fairfax Women's Club, a home-hostility-program for newly-arrived students has been established. Other services include personal advising and social and educational activities such as International Week, United Nations Day, coffee hours, and special educational events.

The office maintains relations with the U.S. Immigration and Naturalization Services, with embassies, and with the State Department, as well as with governmental agencies dealing with student exchange. A newsletter from the office keeps students informed on immigration regulations and activities.

The office also coordinates non-degree international programs at the University, provides information on such programs as the Fulbright travel grants, and administers a grant program to encourage faculty and administrators' involvement in international education. In cooperation with the English Department, the Office of International Programs and Services sponsors an English Language Institute for both admitted and non-admitted international students.

**English Language Institute**

International students who want to enroll in the English Language Institute, either full time or part time, must have completed the equivalent of a U.S. high school education (twelve years of schooling) or be at least seventeen years old at the time of enrollment. Students applying for admission to the English Language Institute do not need to take the Test of English as a Foreign Language (TOEFL). Students who are accepted are sent a formal letter of acceptance and a Certificate of Eligibility (Form 1-20) for a student visa if one is required. Admission to courses in the English Language Institute does not imply eligibility for admission to any program or course of study at George Mason University.

Information may be requested by writing or telephoning: English Language Institute, George Mason University, 4400 University Drive, Fairfax, Virginia, 22030, U.S.A. Telephone: (703) 323-2002.

**Student Regulations**

**Conduct**

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

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

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

**Honor System**

George Mason University, once a part of the University of Virginia, shares in the tradition of an Honor System that began in Charlottesville in 1842. Initially, the honor pledge applied only to final written examinations, but was extended over a century of continuous use to all academic work submitted for credit, statements made to faculty, and other declarations of good faith or intent. On May 14, 1972, one month after becoming an independent university, George Mason established its own Honor System. The Honor Code is an integral part of the University: the essence of the code is that a student's word is a declaration of good faith acceptable as truth in all academic matters. Any violation of a student's word is an offense against the Honor Code; therefore, lying, cheating, plagiarism, and stealing are reprehensible.

To maintain an academic community according to these standards, students and faculty must report alleged violations of the Honor Code to the Honor Committee, which is independent of the Student Government and the University's administration. The Honor Committee is a group of students elected from...
the student body whose primary duty is to instill the concepts and spirit of the Honor Code within the student body. 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 to delineate to their classes their own, as well as departmental, policy pertaining to the Honor Code. In addition, the departments have designated liaisons to the Honor Committee who are available to answer most questions. A statement of willingness to conform to and uphold the Honor System is included in the application form for admission to the University.

Honor Code
The Honor Code appears in a Reference Section at the back of this catalog.

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

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

Tuition and fees for early-registered students are due and payable at the Cashier’s office on or before August 7, 1981, and January 6, 1982. Failure to receive a bill does not waive the requirement for payment when due.

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

How To Figure Semester Tuition and Fees Costs
<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (per hour)</td>
<td>$42.00</td>
<td>$78.00</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>In-State</td>
<td>Out-of-State</td>
</tr>
<tr>
<td>2</td>
<td>$84.00</td>
<td>$156.00</td>
</tr>
<tr>
<td>3</td>
<td>$126.00</td>
<td>$234.00</td>
</tr>
<tr>
<td>4</td>
<td>$168.00</td>
<td>$312.00</td>
</tr>
<tr>
<td>5</td>
<td>$210.00</td>
<td>$390.00</td>
</tr>
<tr>
<td>6</td>
<td>$252.00</td>
<td>$468.00</td>
</tr>
<tr>
<td>7</td>
<td>$294.00</td>
<td>$546.00</td>
</tr>
<tr>
<td>8</td>
<td>$336.00</td>
<td>$624.00</td>
</tr>
<tr>
<td>9</td>
<td>$378.00</td>
<td>$702.00</td>
</tr>
<tr>
<td>10</td>
<td>$420.00</td>
<td>$780.00</td>
</tr>
<tr>
<td>11</td>
<td>$462.00</td>
<td>$858.00</td>
</tr>
<tr>
<td>12-17</td>
<td>$504.00</td>
<td>$936.00</td>
</tr>
</tbody>
</table>

For each additional hour over 17, add $42 for In-State and $78 for Out-of-State.

Deferred Payment Plan
A deferred payment plan is available for students whose tuition and fees for the semester exceed $250. There is a $10 administrative fee for this service. Students must pay at least one-third or $250 (whichever is greater) of the tuition and fees as the initial payment, with the remaining tuition and fees payable in two equal payments. Students using the deferred payment plan must come to the Cashier’s office to make the initial payment and sign a deferred payment contract. Bills for installment payments are not prepared. Students are responsible for ensuring payment of installments on or before the due dates published. Contracts are not mailed to students.

Failure to make tuition and fees payment on or before the due date results in a late charge of $10.

Due Dates for Deferred Payments
First Semester: Second and third payments due October 2 and November 2, 1981.

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; paychecks from local business firms payable to students are the exception.

A check returned to the University by a bank results in a $5 penalty fee for the payer. Further, students who fail to make good such checks within five calendar days following notification by the business office are placed on financial suspension without further notice.

Failure to Meet Financial Obligations
Students failing to meet a financial obligation to the University are placed on financial suspension. Fines owed to libraries of institutions and participating public libraries of the Consortium for Continuing Higher Education in Northern Virginia similarly affect students’ status.

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

All academic credit is withheld for students on financial suspension. This means that no transcripts of record are issued, no diplomas are released, and no registrations for a subsequent semester or term are permitted until outstanding obligations, including the reinstatement fee (if necessary) have been paid in full. In those instances where the outstanding financial obligation, which caused the financial suspension, is in excess of $50 dollars, a reinstatement fee of $25 is also imposed.

Refunds

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

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

<table>
<thead>
<tr>
<th>Refund Scale (per hour)</th>
<th>In-State</th>
<th>Out-of-State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>$42.00</td>
<td>$78.00</td>
</tr>
<tr>
<td>Week 2</td>
<td>19.50</td>
<td>43.00</td>
</tr>
<tr>
<td>Week 3</td>
<td>9.75</td>
<td>21.50</td>
</tr>
</tbody>
</table>

Off-Campus

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(es) occur, 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 June 30, 1982.

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 University’s Campus Police Department and pay a fee of $3 for a parking decal. (See Regulations on Motor Vehicles.)

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 reduced tuition charges, a person must have been domiciled in Virginia for a period of at least one year prior to registration for the semester for which a reduced charge 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.

The domicile of an unemancipated minor may be the domicile of either parent, provided, however, that if one parent has custody, the domicile of an unemancipated minor shall be the domicile of the parent having custody.

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. Students who wish additional detailed information on domicile should contact the Domicile Clerk in the Office of Admissions (323-2108).

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 Domicile Clerk 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 which would normally have been charged and shall be subject to appropriate disciplinary action.

State Domicile Legislation

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

Financial Assistance

Financial Aid

The Financial Aid Office provides a variety of services to help students finance their education. These services include financial counseling, referral and information resources, and financial assistance. Student financial assistance consists of grants, loans, and employment; awards are based on financial need. Located in the Student Union Building, Room 354, the office is open Monday through Friday from 8:30 a.m. until 5 p.m., and Tuesday and Wednesday until 7:30 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, allowing at least four weeks time prior to the April 15 deadline. The application deadlines for consideration of federal and most of the state funds are as follows:

- 1981-82 Academic Year
  - Summer 1981: April 15, 1981
  - 1982-83 Academic Year: April 15, 1982

Applications received after April 15 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, 4 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.

Supplemental Educational Opportunity Grant. A limited number of direct grants are available to undergraduate students who are at least half-time, who show financial need, and who require such assistance to attend college.
The College Work-Study Program. Funds to provide part-time work opportunities to help meet college expenses are available to students enrolled at least half-time.

The Basic Educational Opportunity 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 Basic Grants. Students may apply with the Financial Aid Form or to Basic Grants directly.

Law Enforcement Education Program. Law Enforcement Education grants to cover tuition and fees per academic year are offered to students who qualify under the LEEP guidelines. Only students who are currently being funded by LEEP are eligible.

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

Guaranteed Student Loan Program. Students may borrow directly from lenders in order to finance educational expenses. While most of these loans are made by commercial lenders, some states are also lenders. The state lending institution for Virginia residents is the Virginia Education Loan Authority. The loan may amount to as much as $2,500 per year up to a maximum of $12,500 for one undergraduate student. The government pays the interest rate of 9 percent until the repayment period begins six months after the student completes the academic program. Applications for the Guaranteed Student Loan are made directly to the lending agency, and may be made by students who are enrolled at least half-time. Virginia Education Loan Authority applications may be obtained in 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 students.

Virginia Scholarships. These scholarships are for full-time students 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. Full-time undergraduate students who are legal residents of Virginia may apply for CSAP on the Virginia Financial Aid Form (VFAF). The VFAF must be received by the College Scholarship Service in Princeton, New Jersey, prior to April 15.

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. The application deadline for students previously enrolled in a nursing program is March 15 and for new students entering a nursing program, the deadline is June 15. Applications are available in the Student Aid Office.

Emergency Loan Program. Currently enrolled students may borrow up to $75 for legitimate emergencies excluding tuition, fees, books, and supplies. Emergency loans must be repaid within 45 days; overdue payment results in a late charge of $5. Failure to repay the loan within 45 days, without requesting an extension for a reasonable excuse, may result in financial suspension. Students financially suspended for nonpayment of an emergency loan are ineligible for any future emergency loans.

Army ROTC Scholarships

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

Graduate Assistance

University Fellowships. A limited number of unrestricted University Fellowships are awarded competitively to full-time graduate students in all departments. These fellowships, with stipends up to $3500, are funded by the Commonwealth of Virginia and are intended to encourage and promote full-time graduate degree study by superior students.

Applications, available in the Graduate School Office, must be submitted to the Graduate School for major department review. Prospective graduate students must also have filed an application for admission to the Graduate School.

Other Fellowships. Direct fellowship awards are available from a number of foundations. Students may obtain information concerning these fellowships from the Graduate School.

Woodrow Wilson Foundation. The Woodrow Wilson Foundation provides funds for graduate fellowships to students planning college teaching careers in a liberal arts field. Although lack of funds curtailed grants in recent years, seniors interested in applying for such grants as they become available must be nominated by one of their professors in October. Consult the departmental adviser or the local Woodrow Wilson campus representative for further information.

Graduate Assistantships. The Graduate School offers graduate assistantships in the research and instructional programs of all the various graduate departments. Assistantships are available to all graduate students with degree status who carry at least six hours of graduate credit each semester. Application for a graduate assistantship is made to the chairperson of the department involved or to the Dean of the School of Business Administration. Stipends range from $3400 to $3900 for the academic year.

Virginia Graduate Scholarships. Graduate students classified as Virginia residents may receive a Graduate Scholarship to cover tuition and fees. They must be enrolled full time, be formally admitted to the Graduate School, maintain a 3.000 cumulative grade point average, and demonstrate financial need.

Service Training Program for Teachers. Candidates for graduate degrees may establish eligibility to receive state funds for graduate study closely related to their field of work through one of the State's Division Superintendents of Schools. Candidates may use the funds to enroll at the University in previously approved courses.

Other. Additional forms of aid are available to students from a variety of sources. Information about these programs is available in the Career Library located in the Office of Career Services, Room 365 of the Student Union.

Veterans Affairs

Veterans Educational Benefits

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

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

2. Students who have received benefits from another school or who are changing either their type of program or course objective must fill out a 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 VA each school year (each semester, if the students are under half-time or on active duty). Students who want to receive benefits for a summer session must request an additional enrollment certificate.

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

The forms to effect these changes are available at the Veterans Affairs office in Room 354 of the Student Union.

5. Students with complaints regarding late checks (or any check problems), VA office changes, or similar matters should contact the Veterans Administration Regional Office, 941 North Capitol Street, N.W., Washington, D.C. 20421 (telephone 202-872-1151). There is no longer a Veterans Representative on campus. The Office of Veterans Affairs is limited to calls only on hardship cases.

6. VA payments are paid on the following basis:

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

*Courses must be 500 level or above to be considered graduate.

Active duty servicemen and those taking fewer than six undergraduate or four graduate hours are paid either tuition and fees or the rate set for the training time, whichever is less. Books and supplies are not included.

Benefits are not payable for ENGL 101 or 102 when a no-credit grade is received unless the veteran student can supply mitigating circumstances and prove attendance. The Veterans Administration will not pay for an audit course.

Change in Course Hours

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

Veterans Educational Loan

The amount of VA loan which can be approved is determined by the amount the students' educational expenses exceed their available resources. The VA has increased the education loan amount to $327 multiplied by the number of months of remaining entitlement to a maximum of $2,500 per year, with a maximum of $1,250 per semester. Further information can be obtained at the Office of Veterans Affairs.

Tutorial Services for Veterans

The VA will pay $72 per month, not to exceed $869, for needed tutorial services.

Foundations and Associations

George Mason University Foundation, Inc.

President
Walter J. Gander

Executive Vice President
Joan M. Briskin

Vice President
Carrington Williams

Secretary
Open

Treasurer
Richard F. Gibbons

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 from the Foundation are used for faculty enrichment, student scholarships, grants for special research, the library, and cultural and intellectual programs at the University. The Foundation, which qualifies under IRS 501(c)(3) as a nonprofit institution, operates solely on private philanthropies.

Patriot Club

Associate Director of Development for Athletics
Executive Director
Alan K. Srebneck

The Patriot Club is formed for educational, charitable, and social purposes. The club provides the financial support for student athletic scholarships that help 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.

Alumni Association of George Mason University

President
Douglas E. Beaman

President-Elect
John W. Thysen, Esq.

Vice President
Robert C. Melton, II

President-Elect
Frances Batchelder

Secretary
Ronald A. Clark

The Alumni Association realizes the almost limitless opportunities for service and support by alumni to assist George Mason University in becoming a stronger and more dynamic institution. Students and alumni have already made a large investment of time, effort, and money in the University. Association members are the group of organized alumni who work toward keeping this investment current. The active support of alumni will benefit the University and the Northern Virginia community and enhance the value of each alumnus' degree.

Departmental Scholarships

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

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

A number of student awards are given at George Mason for excellence at the University, college, school, and department level. Information on the awards is available at the various offices administering them. The Office of Student Activities (323-2574) coordinates an annual awards ceremony and maintains the most comprehensive listing of the awards.
Undergraduate Policies and Procedures

Admissions Policies and Procedures

Policies

Criteria Governing Admission From High School

Applicants for undergraduate admission are considered individually, in accordance with the following criteria:

1. Evidence of academic achievement and promise with considerable facility in the use of the English Language and with an understanding of fundamental mathematical processes.

2. Complete record from an accredited secondary or preparatory school with graduation based on no fewer than 15 units (see subject matter requirements below).

3. Satisfactory scores on the Scholastic Aptitude Test given by the College Entrance Examination Board or equivalent examination.

4. Senior class rank (should be in the upper 50 percent). These criteria and those which follow are applied flexibly to assure that applicants with unusual qualifications are not denied admission. Applicants with unusual qualifications should seek a personal interview. Otherwise, personal interviews and recommendations are not required unless requested by the Director of Admissions.

For Degree Programs (Except Engineering)

For admission to all undergraduate degree programs, an applicant must take the Scholastic Aptitude Test given by the College Entrance Examination Board and must present not fewer than 15 units of high school work, usually in the following academic fields:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Minimum Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 units</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3 units</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>2 units</td>
</tr>
<tr>
<td>Social Studies</td>
<td>1 unit</td>
</tr>
<tr>
<td>Laboratory Science—Biology, Chemistry, Earth Science (ESCP), or Physics</td>
<td>1 unit</td>
</tr>
<tr>
<td>Electives</td>
<td>4 units</td>
</tr>
<tr>
<td>Minimum Total</td>
<td>15 units</td>
</tr>
</tbody>
</table>

1. Or the College Entrance Examination of the American College Testing Program.
2. These units must be from Algebra I, Algebra II, Geometry, trigonometry, probability, and elementary calculus.
3. These units should be in the same foreign language.

For Engineering

For admission as a student in engineering, an applicant must take the Scholastic Aptitude Test given by the College Entrance Examination Board and must present 16 units from high school, usually in the following fields:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Minimum Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 units</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3 1/2 units</td>
</tr>
<tr>
<td>History</td>
<td>1 unit</td>
</tr>
<tr>
<td>Science</td>
<td>2 units</td>
</tr>
<tr>
<td>Electives</td>
<td>5 1/2 units</td>
</tr>
</tbody>
</table>

1. Or the College Entrance Examination of the American College Testing Program.
2. These units must be from Algebra I, Algebra II, Geometry, trigonometry, solid geometry, or advanced algebra.
3. Chemistry and physics are recommended.
4. Not more than four units of vocational subjects relevant to engineering will be accepted.

Because the experience of the University has shown that certain subjects are more useful to the engineering student, their inclusion in the high school programs of applicants is strongly recommended, although not required. These subjects include: additional mathematics, American and modern European history, English and American literature, physics, chemistry, biology, geography, foreign languages, and mechanical drawing.

From Another College

The University accepts qualified students by transfer from other colleges. An applicant for admission who has attended an institution of collegiate rank for any period of time should request the registrar of each institution attended to send an official transcript of record, including a statement of academic standing, to the Office of Admissions, George Mason University. A complete secondary school record ordinarily is required; however, college transcripts showing transferable work comparable to the basic degree requirements of the intended major may be accepted, in certain cases, in lieu of high school transcripts or SAT scores. Students transferring from vocational programs or nonaccredited institutions normally are expected to meet the University’s requirements governing admission from high school.

Application for admission may be considered if the transfer student:

1. is not presently on social or academic probation at the last institution attended,
2. generally has an average of at least C in the institution from which transferring,
3. has not been suspended or dropped from another institution.

Transfer students should note the requirements shown under the heading "Credits Earned at Other Colleges."
Admission of International Students

George Mason University accepts applications for undergraduate admission from international students. Students should apply directly to the undergraduate admissions office. Such students must meet each of the following conditions:

1. Health insurance is mandatory for all students on non-immigrant visas. Students who do not enroll in the University insurance program must show proof of adequate coverage.

2. Students must present with their application for admission documents certifying their previous educational training and attainments; such documents will show completion of the equivalent of a U.S. high school diploma.

3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained a satisfactory level of English proficiency on both the total and part scores. Information concerning the time and place of the TOEFL can be obtained from George Mason University or from:

   TOEFL
   Education Testing Service
   Princeton, New Jersey 08549

4. After acceptance, the 1-20 will be available upon request to those who wish to secure an F-1 student visa. Such students must enter the United States on a valid student or other visa; visitor or transit visas are not valid for enrollment at George Mason University.

5. International students admitted on F-1 visas to study at George Mason University are required to register for the number of courses each semester (excluding summer sessions) that will qualify them as full-time students (12 credits for undergraduates.)

6. Students must meet and conform to all current regulations of the United States Department of Justice, Immigration and Naturalization Service.

7. Health insurance is mandatory for all students on non-immigrant visas. Students who do not enroll in the University insurance program must show proof of adequate coverage.

8. All students with F-1 visas are required initially to attend the educational institution which issued the Certificate of Eligibility (Form 1-20) used in obtaining the visa. Transfer from one U.S. educational institution to another must be authorized by the United States Immigration and Naturalization Service.

9. Students in the Exchange Visitor visa category (J-1) requesting transfer to the University’s exchange visitor program from another program number must obtain approval from the international student adviser on IAR-66 before admission.

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

Summer Session Enrollment

Enrollment in the Summer Session does not constitute undergraduate admission to a regular (fall-spring) semester.

Extended Studies Enrollment

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

Procedures

Submission of Application

Application for undergraduate admission should be made to the Office of Admissions, George Mason University, on forms provided upon request. A nonrefundable fee of $10 must be attached when the application forms are submitted.

Application Deadlines

To be assured of consideration, undergraduate applications should be submitted no later than June 1 for fall admission and November 1 for spring admission. 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 successful completion of the senior year of high school.

Test Requirements

Freshman candidates for admission are required to take the Scholastic Aptitude Test given by the College Entrance Examination Board, or the College Entrance Examination given by the American College Testing Program. December or January tests are recommended. Applicants must register at least three weeks before the testing date by mailing a registration form and fee to a College Board Office, or through their area high school. The examination is given in test centers throughout the United States and abroad. Both descriptive information about the test and registration blanks are available without cost to applicants. Requests should be addressed to either of the board’s offices.

The addresses of the College Board Offices are: Box 592, Princeton, New Jersey 08540; or, Box 1025, Berkeley, California 94701.

Notice of Acceptance

George Mason complies with the College Board candidate reply date of May 1, but the University encourages students to accept the offer of admission earlier by returning the acceptance card before that date. Prompt acceptance of the offer of admission qualifies students for early registration, and the order in which acceptance cards are received in the office determines priority for advising and course selection. Candidates who are approved for Fall admission must notify the University of their intention. Failure to comply adversely affects the candidate’s 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 Policies and Procedures

Academic policies and procedures applicable to graduate students appear in the Graduate School Policies and Procedures section of this catalog.

Important changes in a number of academic policies and procedures recently took effect at the University. In particular, students should give attention to the following sections: Test of Standard Written English, Add, Drop, Withdrawal from a Semester, Repeating a Course, Grading Policies, Academic Standing, Academic Requirements for Graduation, and Graduation with Distinction.

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

Placement, Proficiency, and Testing

Administered by the Office of Academic Assistance Programs, the Tutorial Service, Academic Assistance, and Academic Testing are co-located on the Main Campus in Trailer 105 (between the Student Union and the West Building).

Academic Assistance

The University has established an office to provide students with non-classroom academic opportunities for learning. The office provides specialized academic assistance to students with self-determined deficiencies. The Tutorial Service provides assistance, free of charge, to students taking courses in the University. Academic Assistance is coordinated with the academic efforts of the Composition Tutorial Center, the Writing Place, and the Counseling Center.

Academic Testing

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 (323-2525) for taking College Level Examination Program (CLEP) tests and the Test of Standard Written English (TSWE) and may obtain application for the Test of English as a Foreign Language (TOEFL), the Graduate Record Examination (GRE), Law School Admission Test (LSAT), Graduate Management Admission Test (GMAT), Medical College Admission Test (MCAT), Dental Admission Test (DAT), Veterinary Aptitude Test (VAT), and the Miller Analogies Test (MAT). Foreign Language Placement Tests are also conducted by Academic Testing.

Test of Standard Written English (TSWE)

Scores from the Test of Standard Written English (TSWE) (a part of the Scholastic Aptitude Test) are normally submitted as part of each student’s admission application, as an indication of probable success in writing at the university level. (This requirement does not affect Extended Studies enrollees unless they seek admission to the University or enrollment in ENGL 101.) 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. Students may take the TSWE through the Office of Academic Testing.

Students with TSWE scores below 36 are required to write a diagnostic essay administered by the Office of Academic Testing. Students are notified of their need to complete this writing sample. If performance on this essay indicates probable difficulty with college writing assignments, students must attend the Composition Tutorial Center (130 Thompson Hall) in conjunction with enrollment in a regular section of ENGL 101 (100). In certain cases students may be required to postpone registration in ENGL 101 (or 100) while attending the Center.

Students in need of the Center program who have already received transfer credit for English 101 (or 100) will attend the Center two hours per week in addition to enrollment in a regular section of ENGL 102. Those students who upon admission have already received transfer credit for ENGL 101 (or 100) and 102, but whose writing samples indicate their need of the Center program, will also attend the Center two hours per week.

Directed and staffed by the Department of English, the Composition Tutorial Center offers students the opportunity to improve writing skills. Students referred to the Center must arrange a tutorial program with the Center staff no later than the second week of classes in their first semester at George Mason, and complete the program within their first 30 hours of coursework.

Advanced Placement Program With Credit

First semester freshmen entering the University who have completed advanced level courses in secondary schools and who have passed College Board Placement Examinations with scores of five, four, or three, may enroll for those higher-level courses for which the department concerned determines them to be qualified. Those who have ratings of five, four, or three may be granted up to a maximum of 30 hours credit (without grade) upon recommendation of the department concerned and with the approval of the dean of the appropriate college, but the total number of hours granted may not in any instance exceed 30. In all instances, advanced credit earned in this manner by entering freshmen will be counted toward or will fulfill any pertinent University or departmental graduation requirement.

Proficiency and Advanced Placement Examinations Credit by Examination

Proficiency examinations are offered in a number of courses normally taken during the first two years. The Department of Biology administers an examination in BIOL 124-125, Human Anatomy and Physiology, each January and August to candidates presenting some evidence of similar training. Application and authorization forms must be obtained from the Department of Nursing. A copy of a transcript indicating past coursework 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 prior to the announced examination date. Four credits are awarded for a grade of C or above. Students who fail to attain this level of proficiency may not repeat the examination.

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

On the basis of examinations administered to candidates presenting some evidence of qualification, regularly enrolled students may be granted up to 30 semester hours of undergraduate credit for courses in the George Mason University curriculum. (The only exceptions to this regulation are registered nurses enrolled in the nursing BS program. See "Department of Nursing" for details.) Credit is recorded for grades of C or above, but does not affect the student’s grade computation. In addition:

1. 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 George Mason University.

2. Students may not earn by examination part of the 30 hours which transfer students are required to complete at George Mason University to earn a degree.

These examinations and 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.

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Foreign Language Placement, Testing, and Credit by Examination

A placement test is mandatory for all students with two or more years of foreign language study in high school who wish (1) to continue their study of that foreign language at the University and/or (2) to fulfill the foreign language area requirement by examination and earn credit in this process. This placement test may be taken only once in each language. The testing dates are listed in the Academic Calendar; the application deadline is generally one month prior to the testing date. It is the student's responsibility to apply for and to take the test prior to initial enrollment. Interested students should contact the Academic Testing office (323-2525). Students who have taken the CEEB achievement test in foreign language must present their score to the Academic Testing Office when applying to take the placement test. Students who elect to enroll in a lower level course after being given advanced placement may not submit the lower-level course for degree credit. Students who have completed advanced-level courses in high school and who passed the Advanced Placement Test(s) with scores of 5, 4, or 3, may enroll in those higher-level courses for which the department determines them to be qualified. Credit will be awarded upon recommendation of the department and with approval of the Dean of the College of Arts and Sciences.

On the basis of examinations administered by the department to candidates presenting evidence of qualification, students may be granted credit for undergraduate courses in foreign languages offered at the University.

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

All students are urged to start or to continue their foreign language studies in their initial year. It is particularly important to complete elementary and intermediate courses in immediate succession, for example: first semester 141 or 151; second semester 142 or 152; third semester 251; or first semester 101, second semester 102, third semester 201, fourth semester 202.

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 Office is a certified CLEP Administration Center. Students interested in CLEP should consult the office (323-2525) regarding fees for this service.

National Teacher Examinations

Persons seeking initial certification as teachers in Virginia are required to submit scores of the National Teacher Examination. Information and applications for taking this examination can be obtained from Academic Testing (323-2525).

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 dean of the college or school in which the student intends to major. It is the responsibility of the student to see that the Office of the Registrar receives an official transcript of work taken elsewhere before the record can be credited.

In general, credits are accepted from institutions that are accredited by the appropriate regional association provided the credits carry a grade of C or better and are of the quality of courses offered at this University. Generally, no more than half of the total required semester hours in a student's George Mason baccalaureate program may be transferred from one or more junior or community colleges. The University has developed a manual to facilitate the orderly transfer of credits for students enrolled in a unit of the Virginia Community Colleges System, and, more particularly, at Northern Virginia Community College. A maximum of six semester hours may be transferred from correspondence courses sponsored by nationally accredited institutions.

Credit Earned at Nonaccredited Colleges

The credits of a student transferring from a nonaccredited college are tentatively evaluated upon admission. The transcript information may be used for purposes of advanced placement, and transfer credit as such is recommended after the performance of the student at George Mason has been established. Transfer credit is not granted for study in non-collegiate institutions, except in the Bachelor of Individualized Study program.

Credit to be Earned at Other Colleges

A student applies for admission to George Mason University to profit from the educational programs of the University and would not normally seek simultaneous credit enrollment at another college. Therefore, a student must obtain written approval in advance from the dean of the appropriate George Mason college or school in order to take a course elsewhere (including the Northern Virginia Consortium) for credit toward a degree at George Mason. Specific catalog numbers and descriptions of courses to be taken elsewhere must be submitted with the request for approval. The purpose of this regulation is to permit a student to enroll elsewhere in a desirable and suitable course which is unavailable at George Mason.

Study Abroad

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

The University does not have programs of its own but advises students to participate in programs which are accredited and which offer diversified cultural and social experiences. Beginning in 1982, the University will participate in the International Student Exchange Program (ISEP). This program coordinates the exchange of students between different universities around the world. The student pays all tuition and living costs at the home institution; the exchange partner does the same.

Students interested in studying abroad should make an appointment with a member of the staff of the Office of International Programs and Services, where a library on opportunities for study abroad is housed. Before departing, students must have their programs approved by the department chairman supervising the major field and by the appropriate dean. All students leaving for a period of study abroad are required to attend a one-day orientation program organized by the Office of International Programs.

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 develops managerial ability, leadership skills, and self confidence. Students receive commissions as second lieutenants upon completion of ROTC and college requirements.

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. The advanced course cadets and all scholarship cadets receive a non-taxable subsistence allowance of $100 per month for up to 10 months of each school year. Uniforms, textbooks, and all required equipment for the Military Science courses are provided by the United States Army.

For more information, contact the Army ROTC instructor at George Mason University or call 625-4087.

Air Force ROTC
Air Force ROTC is available to students at George Mason University through an agreement with the University of Maryland at College Park. Air Force ROTC courses are scheduled so that students from George Mason University may complete all of their AFROTC requirements during one morning per week at the College Park campus. In addition, students at George Mason 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 total tuition at both the University of Maryland and George Mason University, pay for all required books, and provide a $100 per month subsidy.

Upon graduation from George Mason University and completion of the AFROTC curriculum at the University of Maryland, the student will be commissioned a second lieutenant in the Air Force. Students interested in Air Force ROTC can contact Air Force ROTC; Cole Fieldhouse, Second Floor; University of Maryland, College Park, MD 20742. Telephone: 301-454-3242/3243/3245.

ROTC Courses
Although ROTC courses are offered on the George Mason University and Northern Virginia Community College campuses, military science credit is not transferable to George Mason University.

Registering in Courses
Academic Load
Although the University appreciates the need of many students to assume employment in order to meet their living expenses, employment must not take priority over academic responsibilities. Accordingly, a student employed more than 20 hours a week is strongly urged not to attempt a full-time academic load. A student employed more than 40 hours a week should attempt no more than six semester hours. A student 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, a student 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 or the dean's representative.

Although for planning purposes applicants for admission are asked to indicate their preference for full-time or part-time status and for day or evening classes, students 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. No course listed in the Schedule of Classes will be offered for which there is insufficient enrollment. The University reserves the right to change the class schedule and to adjust individual section enrollments as necessary.

Academic Advising
First- and second-semester freshmen, entering transfer students, students on academic probation, and students returning from academic suspension are required to obtain an adviser's signature for registration. The Course Approval 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.

Moreover, students in the departments of Education, Health and Physical Education, Nursing, and Physics are required to obtain an adviser's signature before every registration.

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. 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 5:00 p.m., and some evenings.

The Academic Advising Center also provides information for students interested in law, medical, dental, veterinary, and divinity schools. Some pre-major students, such as pre-nursing and pre-business, are advised in the Center.

Students are urged to walk in, or call the Center for information about general education requirements, programs, policies, and procedures, or for help in the selection of a major or the best use of electives. The Center is currently located in Room 235 of the Student Union Building; telephone (703) 323-2413.

Early Registration
Early registration is conducted near the end of each semester for students currently enrolled who intend to return for the next semester. Newly admitted or readmitted students may also register early.

Registration Procedure
Distributed by the Registrar's office prior to the early registration period, the Schedule of Classes contains written instructions for the registration procedure.

Students are responsible for registering properly. Students should confirm the correctness of their enrollment in classes with their instructors and report any apparent error immediately to the Office of the Registrar. Students must be present at the first meeting of every class (both lecture and laboratory) to claim their registration. Failure to claim a registration may result in loss of the reserved space.

Student Information
Before or during each registration period, students are asked to provide directory and other types of information that are used in preparing the student's education record and numerous statistical reports. Such data 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 chal-
leng the data maintained in those records. Personally identifiable data from a student's education record may only be released to persons described in the Act, including “school officials with a legitimate educational interest.”

The University may release directory information (address, dates of attendance, major, etc.) 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

Students desiring to withhold either or both categories of 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 prevent the Registrar from providing confirmation of enrollment to prospective employers or even residence address to the student’s own family, students who are considering a request to withhold information should consult the Registrar beforehand.

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 or one of his designated assistants.

Student Identity Card
As part of the registration process, each student is issued an identity card which serves as the student's official University identification. It must be presented for borrowing library materials, and may be required for admission to University events or for using University facilities after normal operating hours. The identity card is issued for the student’s use, is not transferable, and must be validated each semester.

Change of Status and Address
Each student is required to notify the Office of the Registrar of any change of home address or telephone number; change of the name or address of parent or guardian; 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 a semester for which they have registered should cancel their registration promptly by written notice to the Office of the Registrar. Early cancellation allows the University to meet the needs of other students wishing to register. Note that students who register and then cancel/withdraw prior to the beginning of classes or during the first week of classes are charged a $20 administrative fee. 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 according to a schedule posted at the Office of the Cashier and published in this catalog. Withdrawal after the last day for dropping a course requires approval by the student’s academic dean and is permitted only for nonacademic reasons that do not allow course completion.

Continuous Registration
Undergraduate students not in continuous registration, summer sessions excluded, should notify the Office of Admissions 60 days in advance of registration for re-enrollment.

Changing Registration (Drop/Add)
Once students have registered, they may change their registration (drop/add) only by using a Schedule Change Request Form, available in departmental offices. Students must obtain the written approval of the department in which the dropped or added course is taken; all required signatures must be obtained on or before the deadlines shown below and in the Academic Calendar. Students should complete the form carefully, double-checking all section numbers. Closed-section announcements should be observed carefully. Sections which are closed at the end of registration will not reopen. Permission to enter a closed section must be obtained in writing from the academic department offering the course on a separate form and attached to the Schedule Change Request.

When completed, the Schedule Change Request Form must be brought to the Office of the Registrar or other announced Schedule Change Station. Schedule changes are made only on the special Schedule Adjustment Day or after classes begin. After the dates listed in the Academic Calendar, add or drop actions require approval by the chairperson of the academic department offering the course and drop approval is granted only for nonacademic reasons. A denied request for late add or drop action may be appealed to the student’s academic dean. Dropping all courses constitutes withdrawal from a semester—see procedure above.

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

Drop
The last day for dropping a course is three calendar weeks after and including the first day of classes.

Withdrawal from a Semester
Upon approval by the dean of the appropriate college or school, a student may withdraw from a semester after the drop period without academic penalty, but only for nonacademic reasons that do not allow completion of the courses. A student who withdraws from a semester after the drop period without the dean’s approval receives F’s in all courses.

Upon withdrawal, the following notation is made on the student’s permanent record: “Withdrew voluntarily for non-academic reasons on ___ (date) in the ___ week of a ___-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 chairman of the department in which the course is offered. A previously audited course may be taken for credit at a later date. A student may also audit a course previously taken and passed. A student may not change from credit to audit status after the drop period. The usual University tuition and fees apply to audit status.
Repeating a Course

A student who has passed a course with a grade of C or better is not permitted to repeat the course. When a course is repeated, the following conditions apply:
1. All hours attempted count toward probation, suspension, or dismissal.
2. The transcript will show 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 persons who are not admitted students to apply to enroll in any on-campus or off-campus course(s) for which they are qualified. 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 back to their home institution, enroll through the Division of Continuing Education. Such students should submit evidence of permission to enroll from the appropriate dean of their home institution to a counselor in the Division.

Guest matriculants who are enrolled in graduate programs at other accredited institutions are urged to contact the Graduate School to make arrangements for taking courses. During the summer terms, however, both undergraduate and graduate guest matriculants should contact the Registrar's office to arrange for coursework.

Senior Citizens Enrollment

The Division of Continuing Education coordinates 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 $5,000 are entitled to enroll, on a space-available basis without payment of tuition and fees, in the University course(s) offered for academic credit. Additionally, the act provides for audit of course(s) offered for academic credit and for enrollment in non-credit course(s) without payment of tuition and fees on a space-available basis. Tuition, however, may be charged for those courses which are designed exclusively for senior citizens groups. Interested senior citizens should contact the Division of Continuing Education (323-2436).

Graduate Course Enrollment by Undergraduates

Undergraduates may enroll in graduate courses only if they have exhausted all the upper-level undergraduate courses relevant to their educational objective and if they can demonstrate a level of maturity required for graduate-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 some graduate courses (those numbered 500-599) and apply the credit earned toward the undergraduate degree. Undergraduate students electing this option must have completed all prerequisite hours and courses for the graduate course in which they wish to enroll.

Students may seek to take graduate courses for reserve graduate credit. Approval to register for reserve graduate credit (earned credit held in reserve to apply later toward a graduate degree) 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 George Mason University or that credit so earned will be accepted at another graduate school. Interested students should consult the Graduate School section of this catalog for details.

Attendance Policies

Students are expected to attend the class periods of the courses for which they register. Absence from several meetings of a course may limit a student's performance and thus result in a lower grade; however, absence from a course per se may not be considered reason for awarding a lower grade than the student's achievement in the course may warrant. Although attendance per se may not be reason for lowering a grade, a student is not relieved of the obligation to fulfill the assignments of the course, including those that only can be fulfilled in class. In particular, a student who misses an exam without an excuse may have the course grade lowered. Likewise, a student who fails 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

With certain exceptions, final examinations are given at the conclusion of all undergraduate courses. In predominantly laboratory courses, an examination may be given in the last regularly scheduled laboratory period. Examinations administered during the scheduled final examination period should not exceed three hours. Except for take-home examinations, deviations in location or time of in-class final examinations from the final examination schedule must be approved by the department chairperson and dean of the college or school in which the course is taught. A professor considering the assignment of a take-home examination should tell the students at the beginning of the semester. Such examinations should be distributed at least by the beginning of the last week of classes so that students can coordinate them with their preparation for other examinations. In no case should the students be required to submit the examinations prior to the date of the regularly scheduled examination for that 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 not taken within ten days, the grade on the course is entered as 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 student and instructor.

Grading Policies

University coursework is measured in terms of quantity and quality.
Semester Hour
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.

A-B-C-D-F
The grade is a measure of quality. The normal grading system for undergraduate credit is A, B, C (satisfactory), D (unsatisfactory, passing), and F (unsatisfactory, failing).

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

S-NC
Each undergraduate student may take up to six credit hours to be graded S, NC. The S grade reflects satisfactory (C or better) work. A student must register for this provision by the end of the add period; the Registrar notifies the instructor of the student’s status. The S grade, but not the NC grade, appears on the transcript. The option may be applied only to electives outside the major field.

IN (Incomplete)
In some instances, for a cause beyond reasonable control, a student otherwise passing a course may be unable to complete the work of the course on schedule. In such a case, the instructor may assign a temporary grade of Incomplete (IN). If the 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, the mark of IN will be changed by the Registrar to F.

It is the student’s responsibility to submit the work to the instructor with sufficient time for its evaluation prior to the deadline. While the mark of IN remains on the transcript, it is treated as an unsatisfactory grade and may contribute to probation, suspension, or dismissal. Removal of IN’s 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 within the time limit prescribed for IN. In other cases, if IP is not changed to a satisfactory grade within the time limit, the course marked IP is deleted from the record.

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 regular examination if the delinquent testing has not been completed. The grade of SP is given by the dean of the appropriate college or designated representative to a student faced with a delinquency because of very special circumstances such as a major illness.

Grade Point Average
Effective September 1979, a grade point average (GPA) will appear only on the transcript of those undergraduate students who have filed degree applications. The GPA will be computed on the basis of those courses which the student will have completed at George Mason University at that time and which are included in the application for graduation. The average will be so identified and the courses annotated.

To compute a grade point average, grade points for each semester hour are assigned on a scale of four for A, three for B, two for C, one 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 the first semester of English (a three-semester-hour course) earns 12 grade points. Dividing the number of grade points earned by the number of semester hours attempted gives the grade point average.

Classification of Students
The classification of undergraduate students is determined as follows: sophomore, 24 semester hours; junior, 54 semester hours; senior, 84 semester hours.

Grade Reports
Copies of a student’s grade report are sent to the student and to the adviser each semester in which the student is registered, including those in which the student withdraws. The report includes all courses for that semester and the grades received, the cumulative hours of satisfactory grades, and the cumulative hours of unsatisfactory grades.

Appeal of Grade
Although it is generally acknowledged that the individual faculty member is the best judge of performance by students in his/her class, there may be instances in which a student feels a grade has been assigned unfairly. In such cases the student should first ask the instructor to reconsider the grade. If the student remains dissatisfied, the matter may be appealed to the departmental chairperson. Upon receiving an appeal, the chairperson 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 chairperson believes that the student may have a legitimate complaint, the chairperson will form 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 will meet separately with the instructor and with the student to explore the full particulars of the case. Every effort will be made to avoid an adversary relationship. After the committee has reviewed the case thoroughly, it will issue to the chairperson (with a copy to the faculty member) a written recommendation including the reasons for its findings. At this time, the faculty member will have an opportunity to take the recommended action, if any. If the matter is not resolved at this point, the chairperson will consider the committee recommendation and forward his/her recommendation to the dean. If the dean decides that a change of grade is appropriate and the faculty member refuses to make the change, then the dean may order the registrar to do so. Chairpersons normally will not accept grade appeals after the end of the semester following that in which the grade is recorded.

In select cases, a student may request a delay of the imposition of academic suspension because of a pending grade appeal which could change the student’s status. The delay would allow the student to register. The grade appeal could have one of two results:
(1) If the grade appeal is successful, the official transcript is corrected and the student continues in classes as a student in good academic standing.

(2) If the grade appeal is not successful, the student is required to stop attending all classes immediately, all record of registration for the academic period is removed from the files, and there is no refund of tuition. (If the date of the decision is within the period in which a partial refund is given, the student receives the appropriate refund available as of that date.)

Academic Standing

Honors—The Dean’s List
An undergraduate student 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 will merit placement on the Dean’s List.

Satisfactory Performance
An undergraduate student 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.

| total hours       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------------------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| more than 2/3     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

Academic Warning
An undergraduate student 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 student who receives two warnings during any four consecutive academic periods of enrollment will be 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 immediately 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 by a student during the period of suspension from George Mason are not accepted for the degree program.

A student suspended for the first time may not enroll in the subsequent academic period. A student suspended for the second time is not considered for re-enrollment until two calendar years have elapsed. A third suspension results in dismissal.

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

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

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

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

The Undergraduate Major

Academic Advising
Each undergraduate student 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. The Center also provides information for students interested in law, medical, dental, veterinary, and divinity schools. Some pre-major students, such as pre-nursing and pre-business, are advised in the Center.

Selection of a Major
To plan a sound academic program, the undergraduate student should select a major as soon as practical, and this selection should be made no later than four weeks before the end of the sophomore year. For the declaration of a major, the student should confer with the appropriate department chairperson and/or faculty adviser and file the necessary form.

Change of Major
A student who wishes to make a change of major should first see a faculty adviser or the Academic Advising Center. The departmental section of the University Catalog should be consulted for specific requirements for acceptance into the new major program. The student not meeting the requirements may appeal to the department chairperson for an exception.

Forms for accomplishing the change of major are available in the Office of the Registrar.

Credit for More Than One Undergraduate Major
A student who desires to graduate from the University with a Bachelor of Arts degree or a Bachelor of Science degree in two or more subjects having established degree programs must meet departmental requirements for admission to the major in each field.
The applicant should present to the chairpersons of the departments involved a program showing in detail the curriculum to be pursued to graduation. This program must be approved by the department chairpersons involved and by the dean(s) of the appropriate college(s) or school(s). The department chairpersons and dean(s) must also approve all changes made thereafter.

In order to graduate with more than one major, a student must complete all departmental requirements for each major program. The student may begin the program at any time that permits its completion prior to the date of the student's contemplated graduation.

The Baccalaureate Degree

Literacy

Literacy—the ability to read, write, and understand complex ideas in prose—is the cornerstone of a liberal education; and everyone involved in university training of 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 English Composition Requirement

Because the ability to write well is so important to success in the University and in professional careers, George Mason requires that students complete two semesters of English composition as soon as possible after their admission. Students must enroll in ENGL 101 (or 100) upon their admission, unless they have received credit for this course through transfer or proficiency examination. Students must enroll in ENGL 102 in the semester following their successful completion of ENGL 101 (or 100). Except to fulfill this requirement, no admitted student may enroll for a fourth semester at George Mason without having successfully completed ENGL 101 (or 100) and 102.

Core Requirements

In order to guarantee a substantial core from the arts and sciences, each undergraduate degree program requires credit for 24 semester hours in the three general areas listed below. Six semester hours must be in ENGL 101 (or 100), 102; except to fulfill this requirement, no student may enroll for a fourth semester at George Mason without having successfully completed ENGL 101 (or 100) and 102. Of the remaining 18 hours, six must be in each of the following three areas:

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<tr>
<td>Speech</td>
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<td>Regional Cultures</td>
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Graduation

Catalog Requirements

A candidate for a bachelor's degree 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.) Any 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 admission or the requirements of the catalog in effect at the time the student graduates.

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 (fifth floor archives) has a copy of each year of the University's previous catalogs for use by staff and students. Copies may not be checked out but may be photocopied. Students may walk in between 8:30 a.m. and 4:00 p.m. weekdays, or make an appointment to use the catalogs after 4:00 p.m. by calling 323-2251.

Residence Requirements

At least one-fourth of the total semester hours presented on the degree application must be completed at George Mason University and must include at least 12 semester hours of advanced level courses in the major program.

Effective with the 1981-82 academic year, a new policy affects students seeking to graduate from George Mason University with a bachelor's degree. Students must apply for no fewer than 45 hours of upper-division coursework towards meeting graduation requirements. To permit a reasonable transition in implementation of this policy, the following phase-in will occur:

- Students choosing to graduate in January, June, or August 1982 under terms of the 1981-82 catalog must apply no fewer than 24 upper-division hours;
- Students choosing to graduate in January, June, or August 1983 under terms of the 1981-82 or 1982-83 catalogs must apply no fewer than 36 upper-division hours;
- Students choosing to graduate after August 1983 under terms of the 1981-82 or later catalogs must apply no fewer than 45 upper-division hours.

It is expected that the student's final one-fourth of college study will be completed at George Mason 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 dean of the appropriate college or school 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 only granted in special circumstances, such as the student's 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 bachelor's degree if certain conditions are met. In this context a professional school is defined as a school of medicine, osteopathy, veterinary medicine, optometry, dentistry, or law. Before leaving George Mason University, the student must obtain certification signed by the department chairperson and the dean of the appropriate college or school that the residence requirement and all general education and major requirements for the degree have been met. The student must also 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. To fulfill stated requirements for a specific degree, an undergraduate student 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, to fulfill the academic degree requirements 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 BIS individualized core of study.

The 12 hours of $D$ grades may be exceeded by an undergraduate student who has grades of $D$ from before Fall 1979 provided that

1. all the hours of $D$ were earned prior to Fall 1979; and that
2. the student achieves a cumulative grade point average of 2.00 at or after the beginning of Fall 1979.

For the purpose of computing the cumulative grade point average, all coursework attempted at George Mason University must be included except as provided under "Semester Excluded from GPA" in the 1978-79 catalog. An undergraduate student may petition to exclude from the calculations of the GPA only a semester which occurred prior to Fall 1979.

A Graduation Appeals Committee in each college or school considers written appeals from students short of meeting degree requirements and from students who have failed to meet 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 the student submits the Application for Degree; fee payment is required each time a new application for graduation is submitted.

Any person who is undertaking any form of academic study with the University including supervised research must be registered as a student and must pay the prescribed charges.

Any student not in attendance at the University who is preparing a thesis under the active supervision of a member of the faculty, 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 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 George Mason University not presented toward the first degree.

**Graduation with Distinction**

A student graduates with distinction from George Mason University when

1. at least 60 semester hours earned at the University are applied toward graduation,
2. all grades applied toward graduation are satisfactory,
3. more than two-thirds of the normally-graded semester hours earned at the University toward graduation are graded A, and
4. 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 BIS student presents a petition for graduation with distinction to the BIS Advisory Committee for evaluation rather than to the department of the faculty adviser.

Commencing with Fall Semester 1981, the Registrar will compile, 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 member of the faculty 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 BIS student attempting this recognition is evaluated by the department of the permanent adviser.

Commencing with Fall Semester 1981, the Registrar will compile, by department, percentages of students graduating with distinction and recognition since Fall Semester 1979.

**Comprehensive Examinations**

Undergraduate students 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 must notify the Office of the Registrar at least 24 hours prior to the date and time of the ceremony.
Graduate Policies and Procedures

Graduate School

History

Graduate study was initiated at George Mason College in 1970 with the introduction of master's programs in biology, mathematics, and elementary education. In 1971, additional master's programs were introduced in secondary education, school administration, school supervision, and history. In 1972, shortly after George Mason University became an independent state university, the Graduate School came into formal existence. Graduate work was extended at that time to include master's programs in business administration, guidance and counseling, and psychology. Master's programs in economics, English, and reading were added in 1973. These have since been joined by master's programs in foreign languages, special education, and public administration; and, in 1979, by master's programs in geographic and cartographic sciences and in nursing. In 1979 the University was advanced to doctoral status and authorized by the Commonwealth to offer two doctoral programs: doctoral degree work began in public administration and education in 1980-81. New master's and doctoral degree programs are being planned.

Organization

The Graduate Faculty, operating under bylaws adopted in 1975, is the body in which the governance of all academic policies and procedures of the Graduate School is vested. The Graduate Faculty approves all new graduate programs; authorizes all graduate coursework, policies, and degrees conferred by the University; and sets standards for admission to and graduation from graduate programs.

The Graduate Council is the executive and policymaking body of the Graduate Faculty. It consists of one graduate faculty member elected from each department offering graduate work, three at-large members elected from the Graduate Faculty, as well as the Dean of the Graduate School. It meets approximately nine times a year to conduct regular business. Special meetings may also be called as the need arises.

The Graduate Council has five standing committees: the Academic Policies and Procedures Committee, the Curricula Committee, the Graduate Scholarship and Appeals Committee, the Publications Committee, and the Interdepartmental Graduate Degree Committee.

Administration

John C. Evans, Acting Dean
Alice C. Andrews, Assistant Dean
G. Harry Stopp, Assistant Dean

Graduate Council Members 1980-81

Alice C. Andrews
Thomasina Borkman
Peter Brunette
Rita Carty
Carol Erdwins
Gloria Fauth
Klaus Fischer
James Fonseca
Mark G. Goldin
John Hysom
Edward J. Machuga
William McFarlane

John Miller
Robert Pasnak
Iris Prager-Decker
Larry L. Rockwood
Mary Silva
Mark Spikell
Frank MacD. Spindler
Anita Taylor
Zita Tyer (Ex Officio)
Karen Vaughn
Peter C. Wang
Thomas R. Williams,
Chairperson

Academic Policies and Procedures Committee

Thomasina Borkman
Rita Carty

William McFarlane, Chairperson
Iris Prager-Decker

Graduate Curricula Committee

Peter Brunette
James Fonseca
Jane Flinn
Mary Silva

John Miller, Chairperson
Anita Taylor
Frank MacD. Spindler,
Chairperson
Karen Vaughn, Economics

Graduate Publications Committee

Mark Goldin, Chairperson
Edward J. Machuga

Larry Rockwood
Peter C. Wang

Scholarship and Student Appeals Committee

Nature and Purpose of Graduate Study

Graduate education is not simply an extension of undergraduate education; one goal is to provide the opportunity for each student to participate in an individualized program of advanced study under the direction of an active and learned faculty. To promote this goal, which seeks excellence in scholarship, the Graduate School encourages research, inquiry, and learning at the highest levels from both students and Graduate Faculty.

Graduate study at George Mason University means advanced, intensive, purposeful study. Accordingly, in order for a learning experience to be valid and creditable as graduate education, either as an entity unto itself, or as a component of a graduate degree program, it should display these minimum characteristics:

1. Valid learning experience
2. Eflective instruction
3. Research-based learning
4. Critical thinking
5. Active learning
6. Learning from diversity
7. Learning for life
1. Graduate course subject matter and coursework should be at a level that directly reflects and builds upon the knowledge and intellectual maturity a student acquires during the undergraduate years.

2. The graduate experience should demand that students inquire searchingly and apply themselves fully in their scholarly activities.

3. Students should be in close and frequent contact with experienced scholar-teachers.

4. The graduate experience should be of such duration that there is time for reflection, absorption, and the emergence of intellectual independence and scholarly self-confidence.

5. Graduate teaching resources and educational environments should be sufficient to promote advanced learning and meet graduate-level educational objectives.

6. Provisions should exist within the Graduate School for regular evaluation of student performance to an extent that both students and their graduate teachers can be secure in the worth of their intellectual accomplishments.

Graduate study at George Mason University involves a commitment to understanding and activity unlike that ordinarily called for in undergraduate degree programs. Graduate students, both full- and part-time, are expected to meet requirements and standards of study in courses and graduate degree programs that regularly exceed those expected in undergraduate courses or programs. The Graduate Faculty seeks to attain the highest standards of achievement in teaching and learning. Graduate students are asked to join the Graduate Faculty in the attainment of the goal of excellence in advanced study.

Fields of Study

The Graduate School of George Mason University offers a wide variety of degree programs and courses. Most graduate courses are scheduled in the late afternoon and early evening hours. Programs and coursework at the doctoral level began in two doctoral degree programs in 1980: the Doctor of Arts in Education and the Doctor of Public Administration.

Degree programs are offered in the following fields:

**Master of Arts**
- Economics
- English
- Foreign Languages
- History
- Psychology

**Master of Science**
- Biology
- Geographic and Cartographic Sciences
- Mathematics

**Master of Arts in Teaching**
- History

**Master of Business Administration**
- Master of Education
  - Elementary Education
  - Guidance and Counseling
  - Reading
  - School Administration and Supervision
  - Secondary Education
  - Special Education

**Master of Public Administration**
- Master of Science in Nursing
- Doctor of Public Administration
- Doctor of Arts in Education

In addition to the degree programs listed above, a number of departments without graduate degree programs offer graduate-level courses for elective credit and for personal or professional enrichment. Undergraduate courses approved for graduate credit also are offered by a number of departments.

In Fall 1980, approximately 1,700 admitted graduate students were enrolled at George Mason, and more than 1,200 postbaccalaureate students were taking courses through Extended Studies Enrollment.

Graduate Degree Programs

Requirements for specific graduate degree programs can be found in the departmental sections of the catalog. The graduate departments appear in alphabetical order within the college or school of which they are part.

Graduate Courses

See the Course Dictionary in this catalog for descriptions of all graduate courses. Graduate courses are numbered 500 and above. The graduate course numbering system is discussed in detail at the beginning of the Course Dictionary. Please note that graduate courses have been renumbered in the 1980-81 year in many departments.

Graduate School Admissions Policies and Procedures

Admission Categories

The Graduate School uses the admission categories of degree and provisional for those applicants with degree objectives. A graduate student registered in another graduate school may be given permission to register on a temporary basis as a guest matriculant. For applicants with no immediate degree objectives, the non-degree category of admission is available.

Admission With a Degree Objective

Applicants who wish to obtain a graduate degree may be offered admission in either degree or provisional status depending upon their ability to meet the admission requirements for degree-seeking applicants. These include general requirements for admission to the Graduate School and specific requirements of the individual departments in which the graduate program is offered.

The general University admission requirements for degree status are:

1. an earned baccalaureate degree from an accredited institution of higher education;
2. a 2.750 grade-point average (on a 4.000 scale) or better in the last two years of undergraduate study;
3. undergraduate preparation for the chosen field of graduate study;
4. submission of official transcripts and all other documents required by the Graduate School.

Departmental entrance requirements for a degree student are listed in this catalog under the relevant discipline. Some departments require letters of recommendation, scores on a standardized national examination, or teacher certification.

Provisional admission may be offered to a degree-seeking applicant, in appropriate instances, even though all requirements for degree status have not been met, if there is sufficient evidence to suggest a capacity to pursue graduate work. Students on provisional status must have as their initial objective the removal of any deficiencies and their advancement to degree status. After completing not less than 6 nor more than 12 hours of graduate work with a B average or higher and meeting any other academic requirements, the student may request degree status.

The provisional student's admission is terminated if, upon completion of 12 hours, a B average has not been achieved. Graduate credits earned as a provisional student may be applied toward a graduate degree with the approval of the department concerned and the Graduate Dean. Graduate credit is not granted for courses taken to remove deficiencies.

A graduate student admitted to another graduate school may be given permission to register on a temporary basis as a guest matriculant. This admission as a visiting student is for one semester. A guest matriculant must have been officially admitted as a graduate student at another recognized university and certified by the dean as being in good standing. An application form for requesting guest matriculant status may be obtained from the Graduate School Admissions Office. This form must be completed and filed in the Graduate School prior to registration for any term.
Application Policies and Procedures

Submission of Application

Initial correspondence concerning application for admission to the Graduate School should be addressed to the Graduate School Admissions Office, George Mason University, 4400 University Drive, Fairfax, VA 22030; telephone (703) 323-2104. Applicants seeking admission as degree students to the Graduate School must submit the following:
1. Application form.
2. Transcripts (two official copies) from each institution attended, including George Mason University (undergraduate or Extended Studies Enrollment).
3. $10 application fee (non-refundable).
4. Virginia Domicile Classification Form.
5. Records of examinations (GRE, GMAT, etc.) as required by certain departments (see application instructions).
6. Letters of recommendation as required by certain departments (see Entrance Requirements under the appropriate program).
7. Supplementary Application Form for Foreign Students (non-U.S. citizens only).
8. Other forms and documents as may be required by individual departments (see application instructions).

It is the responsibility of applicants to make sure that all documents are received for inclusion in their admission files. The University cannot assume any obligation to inform applicants about missing documents or credentials. All documents and credentials submitted in support of applications for admission become the property of George Mason University, and will not be returned or duplicated for any purpose.

Applicants who no longer wish to be considered for admission should notify in writing the Graduate School Admissions Office. Applicants for admission to the Graduate School should not seek Extended Studies Enrollment.

Application Deadlines

Applications and all supporting documents for the admission category sought must be received by the Graduate School Admissions Office by no later than November 1 for Spring Semester 1982; March 1 for Summer Session 1982; and May 1 for Fall Semester 1982.

Admission Without a Degree Objective

Applicants who are not interested in pursuing a graduate degree program but wish to take one or more graduate courses should request non-degree status in the Graduate School. Although the primary mission of the Graduate School is to conduct programs of instruction leading to graduate degrees, qualified students who have no immediate degree objectives are welcome to the extent that available University and Graduate School resources allow. An applicant requesting non-degree status must submit a transcript showing that a baccalaureate degree has been earned at an accredited college or university. Non-degree students are not eligible to hold appointments as graduate assistants or fellows. All other services for non-degree students are the same as those accorded to degree-seeking graduate students.

Although admission to non-degree status is not intended to be used as means to qualify for subsequent admission to a degree program, a non-degree student who later wishes to pursue a graduate degree may supply all admission credentials to the Graduate School Admissions Office and request to be considered for degree status. A student cannot be assured that all courses taken as a non-degree student will be credited toward a degree. With Graduate School approval, a student may apply to a master's degree a maximum of 12 hours of graduate credit earned prior to acceptance in degree status. See Graduate School Degree Requirements.

Submission of Transcripts

Two official copies of transcripts from each college or university attended must be received in support of an application for admission as a degree student. Applicants should instruct their institution(s) to send their transcripts directly to the Graduate School Admissions Office and not to departments. George Mason students and graduates (including Extended Studies Enrollees) who apply for admission to the Graduate School should request the University Registrar to send transcripts directly to the Graduate School Admissions Office.

After admission, graduate students at George Mason University who are given permission to take courses elsewhere for possible transfer credit must have official transcripts of this work, upon its completion, sent to the Graduate School Admissions Office.

Graduate Admission Examinations (GRE and GMAT)

Although a number of graduate programs do not require the Graduate Record Examination (GRE), almost all will use such test scores as an additional measurement of an applicant's qualifications. The GRE may be taken in either or both of two forms: 1) the Aptitude Test and 2) the Advanced Test. Some departments require scores for both the Aptitude and the Advanced Tests. During 1981-82, the Graduate Record Examination will be administered locally and nationally on the following dates:

<table>
<thead>
<tr>
<th>Date</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>October 17, 1981</td>
<td>April 24, 1982</td>
</tr>
<tr>
<td>December 12, 1981</td>
<td>June 12, 1982</td>
</tr>
<tr>
<td>February 6, 1982</td>
<td>(For registered candidates only. No standby tests.)</td>
</tr>
</tbody>
</table>

The Graduate Management Admission Test (GMAT), formerly known as the ATSGB, is required of all applicants seeking a degree in business administration. During 1981-82, the GMAT will be administered locally and nationally on the following dates:

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>October 24, 1981</td>
<td>March 20, 1982</td>
</tr>
<tr>
<td>January 23, 1982</td>
<td>July 23, 1982</td>
</tr>
</tbody>
</table>

The Office of Academic Assistance Programs administers all academic examinations, including the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT). Information concerning the examinations and test applications may be obtained from the Office of Academic Testing, Trailer 105, George Mason University, 4400 University Drive, Fairfax, VA 22030. Telephone (703) 323-2525. Applicants may also write directly to Graduate Record Examination, Box 955; or Graduate Management Admission Test, Box 966; Educational Testing Service, Princeton, NJ 08540. A local telephone number in the Washington, DC area for ETS is (202) 659-0616.

Graduate School Foreign Language Tests

Certain departments require graduate students who have not already completed 12 hours of undergraduate credit in a foreign language to satisfy a foreign language requirement. This may be accomplished by taking the necessary hours or demonstrating the equivalent proficiency by passing an examination. Information concerning the Graduate School Foreign Language Tests (GSFLT) may be obtained by calling Academic Testing (323-2525).

Financial Assistance and Graduate Assistantships

George Mason University offers financial assistance to graduate students through a variety of programs, including fellowships, assistantships, work-study plans, and loans. For further information, see the section of this catalog entitled "Financial Assistance."
Admission of International Students

George Mason University accepts applications for graduate admission from international students. Such students should apply directly to the Graduate School and must meet each of the following conditions:

1. Students must meet all requirements and regulations of the University and their school or department.
2. Students must present with their application for admission documents certifying their previous educational training and attainments. Graduate student applicants' documents will show the award of either a bachelor's degree, or equivalent, or a graduate degree. Personal student papers, photostats, or attested copies are not accepted for evaluation purposes.
3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained the minimum scores set by George Mason University academic departments for graduate student applicants. Graduate student applicants may obtain from the Office of the Dean of the Graduate School the minimum scores required on the TOEFL test by different academic departments. Foreign student applicants with degrees from accredited universities in which the language of instruction is English are automatically exempted from this requirement.

Information concerning the time and place of the TOEFL can be obtained from George Mason University or from: TOEFL Education Testing Service Princeton, New Jersey 08549

4. All international students and non-native speakers of English are required to take an English placement test at the University before their first registration. International students whose command of English is insufficient to follow the program in which they wish to enroll are required to take special courses in English as a second language.
5. After acceptance, the I-20 will be available upon request to those who wish to secure an F-1 student visa. Such students must enter the United States on a valid student or other visa; visitor or transit visas are not valid for enrollment at George Mason University.

Admission of Graduate Degree Holders

An applicant holding a master's degree may earn a second master's degree in another discipline. For admission to a second master's degree program, the applicant should submit an application, transcripts, and other documents required.

Course credits used to satisfy the degree requirements for the first master's degree may not be used to satisfy the degree requirements of the second master's degree at George Mason University.

Offer of Admission to the Graduate School

A written offer of admission is made by the Dean of the Graduate School to an applicant who meets all admission requirements and has been recommended for admission by the appropriate department. The offer specifies the effective date of admission (which normally coincides with the semester requested in the application), the category of admission being offered, and the name of the faculty adviser assigned to the applicant. This offer of admission is good for one year provided the student does not take courses elsewhere. An individual whose offer of admission has lapsed must submit a new application and fee to be reconsidered for admission at a later date.

Reactivation of Deferred Applications

A student is notified when action on an application has been deferred pending completion of prerequisite courses for graduate study in a chosen field. Such a student is encouraged to notify the Graduate School Admissions Office in writing as soon as the prerequisites have been met. It is the responsibility of the applicant to furnish transcripts confirming that the prerequisite courses have been satisfactorily completed. No admission decision can be made until these grades are received.

Records Maintenance and Disposal

All graduate admission documents, including academic records sent from other institutions, become part of the official University file and can neither be returned nor duplicated for any purpose. A student should maintain copies of official credentials for other personal requirements.

Admission credentials are retained for 24 months only and subsequently destroyed for applicants who (1) do not register for courses within the time period for which the offer of admission is valid, or (2) have been denied admission, or (3) do not respond to requests for additional information, or (4) fail to submit complete applications with respect to the receipt of all transcripts or test results.

Readmission to the Graduate School

A graduate student whose study at the University is interrupted for any reason after a period of two semesters or more (exclusive of summer sessions) must apply for readmission. Readmission forms are available through the Graduate School Admissions Office. Since the department chairperson and the Dean of the Graduate School must approve all readmissions, students are encouraged to complete the forms and return them to the Graduate School Admissions Office no later than one month prior to the anticipated date of registration. A $10 nonrefundable fee must accompany the readmission form. If such readmission is approved, the student is subject to the regulations governing nonimmigrant student status. International students must meet and conform to all current regulations of the U.S. Immigration and Naturalization Service.

Change in Field of Graduate Study

Admission to graduate study is contingent upon approval by the department in which the student proposes to concentrate. Therefore, a student is not free to change graduate programs at will. A student who wishes to change from one program to another in a new field of study must submit a new application and fee for admission. Previous acceptance into one program does not guarantee acceptance into another.

Termination of Admission to Graduate Study

A student may submit an application to more than one graduate program. However, a student may be admitted to only one graduate program at any one time. Acceptance of an offer of admission in a second graduate program automatically terminates admission to the first program. Admission also terminates when time limits have been exceeded or when other conditions for the continuation of admission have not been met.

Extended Studies Enrollment

Administered by the Division of Continuing Education, the Extended Studies Enrollment procedure allows persons who may not meet regular graduate admissions criteria, or for whom these criteria are not appropriate, to request enrollment in courses for which they are qualified without seeking admis-
sion to the University. Credits earned by students as Extended Studies Enroliees are recorded on regular transcripts.

Extended Studies Enrollees, who wish to apply for graduate admission to the University, may do so at any time providing that they follow the regular graduate admission procedures.

If a student applies for admission to the Graduate School and is accepted into a degree program, a maximum of 12 hours of graduate credit earned through Extended Studies Enrollment may be applied toward a master's degree program with approval of the Graduate Dean. It is the responsibility of the student, after admission to the Graduate School and upon initial registration as a degree student, to initiate such a request on a Transfer of Credit/Application of Extended Studies Credit Form. If the student also has transferable credit from another institution, the amount of applicable credit earned through Extended Studies Enrollment is reduced accordingly.

Graduate Study during Summer Session

Applicants wishing to begin graduate work in summer must complete a Graduate School application before submitting a Summer Session enrollment form. There is a $10 nonrefundable charge for each form.

Students who wish to complete graduation requirements during Summer Session enrollment should understand that the University does not necessarily offer all required courses in any particular Summer Session.

Graduate School Academic Policies and Procedures

Permission to Register as a Graduate Student

Registration in the Graduate School is permitted only after the student has been notified of admission by the dean of the Graduate School. At course registration, admitted students are given preference over non-admitted students if the number of applicants exceeds the enrollment limits. Dual registration, e.g., as a graduate student and as an Extended Studies Enrollee, is not permitted.

The responsibility for being properly registered rests with the graduate student, who should be aware of all regulations and procedures required by a program of study. Regulations are not waived nor are exceptions granted because of ignorance of University, Graduate School, or departmental regulations.

Academic Advising for Graduate Students

At the time of admission to graduate study, the student is assigned a faculty adviser by the department responsible for the student's program of study. Registration for newly admitted graduate students, as well as continuing students, begins with a visit to the student's academic adviser. There the student can obtain information about specific courses and degree requirements and develop an individual program of study. Progress in an approved program of study is a shared personal responsibility of the student and the adviser. The graduate student is responsible for compliance with the rules and procedures of the Graduate School, and all applicable departmental requirements which govern the individual program of study. The student should consult with the adviser before registration each semester.

Schedule of Classes and Course Approval Form

In developing a program of study with the adviser, the graduate student will need to consult the Schedule of Classes, distributed well in advance of each registration period by the Registrar's office. It provides information about the times, dates, locations of classes; the names of course instructors; final examination schedule; and procedures for paying tuition and fees, dropping or adding a course, or making other changes in registration. The Schedule of Classes is mailed only to newly admitted graduate students. Continuing students will find schedules in their departments, at the information desk in the Student Union, at the information desk in Finley Building, as well as at the Registrar's office in the East Building. No course listed in the Schedule of Classes will be offered for which there is insufficient enrollment. The University reserves the right to change the class schedule and to adjust individual section enrollments as necessary.

The Schedule of Classes also contains the Course Approval Form to be used at the time of registration. For each registration the student, in consultation with the adviser, prepares a schedule of courses appropriate to departmental requirements and individual needs. This schedule is then entered on the Course Approval Form. For entering graduate students, the schedule of courses should be approved by the faculty adviser prior to registration.

Registration Procedures and Information

The Schedule of Classes contains detailed instructions for registering. Any graduate student who fails to appear within the period specified for registration will not be permitted to register unless the delay can be explained to the satisfaction of the Graduate Dean.

As an integral part of the registration process, each student is issued an official University identification card. It must be presented to borrow library materials and may be required for admission to University events or when using University facilities after normal operating hours. This card is issued for the student's use, is not transferable, and must be validated at registration each semester.

Each student is required to notify the Office of the Registrar of any change of home address, telephone number, or change of legal name.

Student Information

Before or during each registration period, all students are asked to provide directory and other types of information which are used in preparing the student's education record and numerous statistical reports. Such data are 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 only be released to persons described in the Act, including "school officials with a legitimate educational interest."

The University may release directory information (address, dates of attendance, major, etc.) 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 dates 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
- and other similar information

Students desiring to withhold either or both categories of 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, students who are considering a request to withhold information should consult the Registrar personally beforehand.

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 or one of his designated assistants.

Academic Load
Graduate students are urged to register each semester for only that number of hours which they can successfully complete. The minimum full-time academic load is nine hours per semester during the regular academic year. A normal full-time academic load is twelve semester hours. During the summer, a normal full-time academic load is nine semester hours for the entire session. Permission of the department chairperson and Graduate Dean required to exceed the normal load.

Graduate students are expected to attend all of the class periods of courses for which they are registered. Graduate students also are expected to meet all course requirements set by graduate faculty as these are scheduled for a class or seminar.

Completion of Undergraduate Prerequisite Courses
Graduate students are expected to complete all undergraduate prerequisite or preparatory courses before acceptance into a graduate program. Normally, a maximum of one such undergraduate course may be taken as a graduate student, but only during the student's first semester in the graduate program.

Undergraduates Registering for Reserve Graduate Credit
A student may seek to take a graduate course either for undergraduate credit or for reserve graduate credit.

Approval to register for reserve graduate credit (earned credit held in reserve to apply later toward a graduate degree) is normally given only to George Mason seniors who are within 15 hours of completion of undergraduate study. In addition, this privilege is normally extended only to seniors who have completed a minimum of 12 semester hours at George Mason University, have a cumulative grade point average of 3.00 or better, have successfully completed all prerequisite courses, and have a major in the department in which the courses are offered. Permission must be obtained in writing prior to registration. Forms for this purpose are available in the Graduate School Office. It is the student's responsibility to obtain all signatures required and to submit a current transcript with the request.

Approval for reserve graduate credit does not imply approval for admission into a graduate program at George Mason University or that credit so earned will be accepted at another graduate school. Credit for the same course is not given toward both graduate and undergraduate degrees.

Graduate Course Enrollment by Undergraduates
Undergraduates may enroll in graduate courses only if they have exhausted all the upper-level undergraduate courses relevant to their educational objective and if they can demonstrate a level of maturity required for graduate-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 some graduate courses (those numbered 500-599) and apply the credit earned toward the undergraduate degree. Undergraduate students electing this option must have completed all prerequisite hours and courses for the graduate course in which they wish to enroll.

Adding and Dropping Courses
In order to drop or add a course, a graduate student must obtain written permission from the chairperson of the department in which the course is taught. Forms for this purpose may be obtained from the department.

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

The last day for dropping a course is three calendar weeks after and including the first day of classes.

Withdrawal From a Semester
A graduate student who is enrolled in one or more courses is considered in attendance until formally withdrawn by submitting an official withdrawal form. A graduate student who drops all courses in any semester must also submit an official withdrawal form.

Upon approval by the Dean of the Graduate School, a graduate student may withdraw from a semester after the drop period without academic penalty, but only for nonacademic reasons which do not allow completion of the courses. A graduate student who withdraws from a semester after the drop period without the dean's approval receives F's in all courses.

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

A graduate student withdrawing before the final examinations in any semester or summer session forfeits credit for work done in that term.

The Graduate School may impose enforced withdrawal as a penalty for any fault which prevents the graduate student from fulfilling the purposes of enrollment.

Repeating a Course
A graduate student who has passed a course with a grade of B or better is not permitted to repeat the course. A graduate student may repeat a course in which a grade of C or below has been earned. Permission for repeating the course must be obtained from the department offering the course. Each department establishes procedures for granting permission for repeating a course.

When a course is repeated, the following conditions apply:
1. All hours attempted count toward probation or dismissal.
2. The transcript will show both the original and repeat grades.
3. Only one grade per course may be presented on the degree application.

Auditing a Course
Auditing a course requires the permission of the chairperson of the department in which the course is offered. A previously audited course may be taken for credit at a later date. A graduate student may also audit a course previously taken and passed. A graduate student may not change from credit to audit status after the drop period. The usual University tuition and fees apply to audit status.

Final Examinations Policy for Graduate Courses
Written examinations are held at the end of each semester. No changes may be made in the announced examination
schedule unless approved in writing by the chairperson of the department in which the course is offered.

In certain graduate courses the assessment of student performance may be more closely related to written and/or oral papers, and because of the more intensive and continuous demands which should be placed upon students, it would appear appropriate to provide a degree of flexibility in connection with graduate examinations. Therefore, after consultation with the department chairperson, the individual faculty member may exercise judgment regarding the use of a formal examination at the end of the course.

Absence from examination is not excused except for sickness on the day of the examination, or for other cause approved by the Graduate Dean. If such absence is unexcused or the examination not taken within ten days, the grade on the course is entered as F. A student whose absence from an examination is excused may take a special examination within the ten-day period on a date to be arranged between the student and the instructor in charge of the examination. A request to take an examination late should be made on a Student Request Form and submitted by the graduate professor to the Graduate School Office.

Grading System

The grading system for graduate credit is A, B (satisfactory) and C, F (unsatisfactory). The mark of IN (Incomplete) may be given when all course requirements have been completed except for assigned papers or reports which the student has been compelled to postpone for reasons beyond control. Regulations concerning Incomplete marks may be found under the following section, "Change of Grade."

To compute a grade point average, grade points for each semester hour are assigned on a scale of four for A, three for B, two for C, 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 earned by the number of semester hours attempted gives the grade point average.

A grade point average does not appear on the transcripts of graduate students.

Each faculty member is responsible for preparing course examinations and determining grades. Policies concerning the weight given to examinations in computing final grades and the kinds of examinations used may differ according to the preferences of individual instructors.

Copies of a student’s grade report are sent to the student and to the adviser each semester in which the student is registered, including those in which the student withdraws. The report includes all courses for that semester and the grades received, the cumulative hours of satisfactory grades, and the cumulative hours of unsatisfactory grades.

Change of Grade

Final grades in courses for graduate credit may be changed only on the basis of the following two circumstances and procedures.

Change from Incomplete to Letter Grade. In some instances, for a cause beyond reasonable control, a student otherwise passing a course may be unable to complete the work of the course on schedule. In such cases, the instructor may assign a temporary grade of Incomplete (IN). If the 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, the mark of IN will be changed by the Registrar to F.

It is the student's responsibility to submit the work to the instructor with sufficient time for its evaluation prior to the deadline.

While the mark of IN remains on the transcript, it is treated as an unsatisfactory grade and may contribute to probation or dismissal. Removal of IN's from the transcript may result in retroactive elimination of probation or dismissal. When a thesis 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, nor is it subject to the time limit prescribed for IN.

Change of Final Grade. Once a final grade in a course has been recorded by the Registrar, it can be changed only in cases of computational error or other justifiable cause approved by the Graduate Dean. (Refer to "Change of Grade" procedure below.) All changes of final grades must be initiated, approved, and recorded prior to the last day of classes of the next regular semester (exclusive of Summer Session).

Challenge of Grade

Although, except in extraordinary circumstances, the individual faculty member must be the best judge of student performance, there may be instances in which a graduate student believes a grade has been assigned unfairly. In such cases the student should first ask the professor to reconsider the grade. If the student is not satisfied, an appeal may be made to the chairperson, who should then initiate procedures established by the department. No challenge of grade is considered after the end of the drop period of the next regular session (exclusive of Summer Session).

Academic Probation and Dismissal

A graduate student performs satisfactorily during any academic period (semester or summer session) in which the student received satisfactory grades in more than two-thirds of the credit hours undertaken during that period. A graduate student is dismissed upon accumulating 12 hours of unsatisfactory grades in graduate-level courses. The notation of academic dismissal is affixed to a graduate student's official record.

\[
\text{total hours} = 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 15 \\
\text{more than 2/3} = 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11
\]

Change from Provisional or Non-Degree to Degree Status

In order for a change from provisional or non-degree status to be considered, a graduate student must submit a written request for change of status. Forms for this purpose are available in each department. It is the responsibility of the student to supply an up-to-date George Mason University transcript in support of the request. Appropriate documentation, such as transcripts, letters of recommendation, or test scores needed to support the request for change of status, must be submitted to the Graduate School Admissions Office.

Credits earned in the provisional or non-degree status may be used subsequently in meeting degree requirements if recommended by the faculty adviser and department chairperson, and approved by the Dean of the Graduate School. However, a maximum of 12 graduate credits earned in provisional or non-degree status may be applied toward a master’s degree. Students admitted in these categories are therefore strongly urged to obtain faculty guidance before beginning coursework. Credits cannot be applied toward a master’s degree unless they are specifically approved for that purpose.

Transfer of Credit

With the approval of the appropriate department, a graduate student may transfer up to six semester hours of graduate credit earned at other accredited institutions prior to acceptance and enrollment in the George Mason University Graduate School. Undergraduate courses taken at other institutions are not transferable for credit to graduate programs within George Mason University. All graduate work offered as transfer credit
must be applicable to the degree program the student is pursuing at George Mason University.

Credit is normally considered for transfer, upon the request of the student, at the time of initial registration as a degree student. The student receives written confirmation from the Dean of the Graduate School of all credits approved for transfer.

After enrollment as a degree student and with the prior approval of the department chairperson and the Graduate Dean, a student may, when need exists, earn up to six additional hours of transfer credit for graduate courses taken at other institutions. Forms for requesting permission to take courses elsewhere are available in the Graduate School Office. Permission is not ordinarily given for a student to take a course elsewhere for transfer credit during the semester in which the degree is to be awarded.

Criteria for Transferable Credit

In all cases of courses accepted for transfer of credit, including those taken within the Consortium for Continuing Higher Education in Northern Virginia, a minimum grade of B must have been earned, and the courses involved must be applicable toward a comparable degree at the institution offering the course. Extension and inservice courses which are not intended by the institution offering the courses to be part of a degree program are not acceptable for transfer to the University. It is the student’s responsibility to furnish evidence that any courses presented for transfer of credit would be applicable to a comparable degree at the institution where earned. If this information is not on the official transcript, it must be obtained in writing from the appropriate dean at that institution.

The decision as to the acceptability of work taken elsewhere and presented for transfer credit to a graduate program at George Mason University is the responsibility of the Graduate Dean.

Permission to Take a Course Elsewhere

When a graduate student is already enrolled at the University, permission to take a course elsewhere must be secured from the Graduate Dean prior to registering at the other institution. Forms for this purpose are available from department chairpersons. It is the student’s responsibility to request transfer credit for such courses after their completion and to have an official transcript submitted to the Graduate School Admissions Office at the University for evaluation of possible transfer of credit. Permission is not ordinarily given for a student to take a course elsewhere for transfer credit during the semester in which the degree is to be awarded.

Student Requests and Appeals

A graduate student who wishes to request an exception to published academic regulations or to appeal decisions involving the application of academic regulations to a program of study may do so by submitting a petition to the Dean of the Graduate School. Such a request should be initiated by a graduate student and must be restricted to those matters directly affecting academic progress. The petition must include the signature and recommendation of the graduate advisor and the department chairperson. Student Request Forms for such purposes are available from department offices or the Graduate School Office. It is the responsibility of the graduate student to present relevant information or documents in support of a request. If the request or appeal is to be decided by the Graduate Council Scholarship and Student Appeals Committee, the student will be notified of the time and place of the meeting. It is the decision of the graduate student whether or not to attend the Committee meeting to present written or verbal information.

A graduate student who wishes to present a personal grievance involving his or her study may send a written petition to the Graduate Dean who direct it to chairperson of the Graduate Council Student Appeals Subcommittee. A petition should present the essentials of the appeal and should be dated and signed by the student submitting it. The Graduate Council Student Appeals Subcommittee may arrange a meeting to consider the student petition; the student may be asked to attend. While such meetings are academic, collegial meetings and not legal hearings, a student is welcome to present relevant supporting documents. No appeal can be made from the decision of the Committee.

Graduate students should be aware that most graduate departments provide a means for student grade appeals to be heard within the department. Submission of a grade appeal to a departmental hearing may solve a problem; if not, then students should submit a petition to the Graduate Council Student Appeals Subcommittee for a hearing and decision.

Requirements Applicable to All Graduate Degrees

Degree Requirements

To qualify for a degree, a candidate must satisfy all Graduate School degree requirements and all requirements set by the department in which the graduate program is offered. Specific departmental degree requirements are listed under the respective graduate programs in this catalog.

In order to meet the degree requirements applicable to all degrees, a candidate must:

1. acquire a minimum of 30 semester hours of master’s degree graduate credit, or 90 hours for a doctoral degree;
2. present only courses in which satisfactory grades have been received, except that a master’s degree graduate student may apply up to six hours of C grades in graduate-level courses.
3. complete at least 18 semester hours after having been admitted to degree status, for master’s degree study;
4. complete at least 24 semester hours at George Mason University of which (for a master’s degree only):
   a. a maximum of two courses or six semester hours may be upper-level undergraduate courses approved for graduate credit;
   b. no more than 12 semester hours may have been earned through enrollment in non-degree status or through Extended Studies Enrollment prior to acceptance in a degree program;
   c. no more than six semester hours may be transfer credit with the amount of applicable credit earned in non-degree status or through Extended Studies Enrollment reduced accordingly (exceptions are noted under “Transfer of Credit” and individual degree programs);
5. complete all courses submitted for the degree within a period of six years.

The maximum hours (6) of C or D (unsatisfactory) grades may be exceeded by a master’s degree graduate student who has unsatisfactory grades from before Fall 1979 provided that

1. all the hours of unsatisfactory grades were earned prior to Fall 1979; and
2. the graduate student presents a cumulative grade point average of 3.000 at graduation.

For the purpose of computing the cumulative grade point average, all work attempted at George Mason University for graduate credit must be included.

Degree candidates are subject to those degree requirements in force at the time of their initial registration in degree or provisional status following admission. Degree candidates who
have been readmitted following voluntary withdrawal for more than one semester are subject to those degree requirements in force at the time of their initial registration following readmission. All degree candidates have the option of graduating under the degree requirements in force at the time the degree is to be awarded.

Residence
Normally, at least 24 semester hours must be completed at George Mason University. A completed master’s degree program must include a minimum of 18 semester hours of coursework taken by the candidate at George Mason University as a degree student. Exceptions are noted under Transfer of Credit and under individual degree programs.

Time Limit
A student must complete all degree requirements for the desired master’s degree within six years from the date of initial registration as a graduate student. A graduate student who terminates enrollment and subsequently is readmitted to the Graduate School in the same department may not count the six-year time limit as beginning on the date of readmission.

Thesis and Non-Thesis Options for Master’s Students
Requirements regarding a thesis vary with the degree program. A number of master’s programs provide for either a thesis or non-thesis option. The quality of the work expected of the student electing the non-thesis option is identical to that of the thesis option. For further information, consult the section on degree requirements under each degree program.

Master’s Thesis
When a thesis proposal has been approved by the appropriate department, the chairperson of the department sends to the Dean of the Graduate School a copy of the thesis proposal, including the names of the members of the thesis committee. The student may then enroll in the thesis research course at the beginning of the next semester.

The thesis committee is named by the chairperson of the candidate’s department, who designates the committee chairperson. The committee will be appointed after consultation with the candidate and the adviser, and it normally will consist of three persons, one of whom may be chosen initially, or at a later date, from outside the department.

The chairperson of the thesis committee is primarily responsible for directing and guiding the candidate’s research and writing activities. It is the responsibility of the student to keep all members of the committee informed of the scope, plan, and progress of both the research and the thesis.

Any student wishing to elect the thesis option should consult the “Guide for Preparing the Master’s Thesis and the Doctoral Dissertation” in the Reference Section of this catalog. The student will be permitted to register in the Thesis course only after a thesis proposal has been submitted and approved as prescribed in the guide.

Doctoral Dissertation
The general procedures for writing a doctoral dissertation are similar to those for writing the master’s thesis outlined above and in the Reference Section of this catalog. A student proposing to write a dissertation will (1) prepare a prospectus for the dissertation, (2) submit the prospectus for approval by the student’s dissertation committee, (3) submit the prospectus, as approved, to the Graduate School. Once these steps are completed successfully, a doctoral student may register for dissertation credit hours and proceed with the research for and writing of a dissertation, following the direction of the dissertation committee and its chairperson. The option of writing and presenting a dissertation depends upon degree requirements in a doctoral program. At present, Doctor of Public Administration students are required to prepare a dissertation, while the Doctor of Arts in Education degree program provides for other demonstrations of intellectual competency and personal abilities.

Degree Application
Graduate students who expect to complete graduation degree requirements must secure a degree application from the Office of the Registrar and return it completed to the Graduate School office by the date designated in the Academic Calendar. There is a $15 graduation fee, which is payable at the time the student submits the degree application. Any student who fails to complete degree requirements in that semester for which the degree application was filed must submit a new degree application by the next appropriate deadline.

Commencement
Commencement exercises provide an opportunity for students and their families to share in the experience of the conferral of academic degrees. Degree candidates who do not desire to participate in the formal graduation ceremonies must notify the Office of the Registrar at least 24 hours prior to the date and time of the ceremony.
Academic Units and Programs

College of Arts and Sciences

The College of Arts and Sciences is the largest and most diverse of the academic units of the University, with programs that encompass both tradition and innovation: tradition of the liberal arts and sciences and innovation in the flexible interdisciplinary offerings. Taught by a faculty of academic excellence and national training and experience, the coursework offered by the College prepares the undergraduate for dealing with the complexities and changes of modern society.

The disciplines of the 13 departments of the College of Arts and Sciences represent the core curricula of the modern University. The disciplines cover a wide range, and the programs feature significant flexibility of design. Through its programs, the College exposes students to high standards and principles for sound reasoning and judgment, while providing the background and skills necessary for understanding and using information. The College strives to develop within students a process of self-education, which will extend life long, in addition to imparting the knowledge needed to deal with the world of today and that of tomorrow.

Within the College offerings there are ample opportunities for double majors, which can be tailored to student needs, to combine intellectual pursuits with preparation for employment. Planning in this direction, the College has also developed faculty advisory committees to assist the undergraduate interested in careers such as medicine, dentistry, veterinary medicine, law, and the ministry.

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. Such insights enable persons to fill more effectively various roles in our society and provide a foundation for continued learning and personal development.

Through general education, students gain knowledge of the basic disciplines, skill in relating materials within a discipline and between disciplines, and some understanding of human civilization as a whole. All courses fulfilling general education requirements should combine such knowledge, skill, and understanding. Thus, in a course in any discipline, students should gain basic knowledge of that discipline, skill in the methods which produced that knowledge, and understanding of that discipline's common attitudes and of its place within human thought and activity.

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

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Communication</td>
<td>21</td>
</tr>
<tr>
<td>A. Written</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 101, 102. Nonnative speakers of English with limited proficiency in the language may substitute ENGL 100 for ENGL 101. A student may attain a minimum grade of C in order to have ENGL 101, 102 fulfill degree requirements. This rule also applies to ENGL 100.</td>
<td></td>
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<tr>
<td>B. Oral</td>
<td>3</td>
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<tr>
<td>COMM 100, 110, 120, or 130</td>
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<tr>
<td>C. Foreign Language</td>
<td>12</td>
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<tr>
<td>The student must demonstrate proficiency in one foreign language through the intermediate level, either by examination or by completion of coursework.</td>
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<tr>
<td>II. Analytical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Logic (PHIL 173 or 273) or mathematics</td>
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</tr>
<tr>
<td>III. Humanities</td>
<td>12</td>
</tr>
<tr>
<td>A. Literature</td>
<td>6</td>
</tr>
<tr>
<td>Any course in literature at the 200 level or above in foreign languages and literatures.</td>
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</tr>
<tr>
<td>B. Fine Arts</td>
<td>3</td>
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<tr>
<td>Art, dance, film, music, or theatre (lecture or studio)</td>
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<tr>
<td>C. Philosophy or religion</td>
<td>3</td>
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<tr>
<td>A logic course does not satisfy this requirement.</td>
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<tr>
<td>IV. Social Science</td>
<td>12</td>
</tr>
<tr>
<td>A. Economics, geography, government, history</td>
<td>6</td>
</tr>
<tr>
<td>B. Anthropology, psychology, sociology</td>
<td>6</td>
</tr>
<tr>
<td>V. Natural Science</td>
<td>8</td>
</tr>
<tr>
<td>A two-semester laboratory science sequence in astronomy, biology, chemistry, geology, or physics.</td>
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<tr>
<td>VI. Non-Western Culture</td>
<td>6</td>
</tr>
<tr>
<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:</td>
<td></td>
</tr>
<tr>
<td>A. ANTH 114: Introduction to Cultural Anthropology</td>
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<tr>
<td>ANTH 201: Native North Americans</td>
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<tr>
<td>ANTH 204: People of the Pacific</td>
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</tbody>
</table>

Administration

F. Donald Eckelmann, Dean
Elaine C. Joyce, Assistant Dean
Randolph H. Lytton, Assistant Dean

http://catalog.gmu.edu
ANTH 206: Peoples and Cultures of Island Asia
ANTH 207: Ethnology of the Middle East
ANTH 208: Ethnology of Sub-Saharan Africa
ANTH 313: Anthropological Approaches to Religion
ANTH 332: Cultures in Comparative Perspective
B. ART 114: History of African Art
ART 220: Survey of Far Eastern Art
ART 319, 320: Near Eastern Art
C. ENGL 393: Selections From the Literature of the Indian Subcontinent
ENGL 394: Japanese Literature in Translation
ENGL 395: Chinese Literature in Translation
D. GOVT 332: Government and Politics of the Middle East and North Africa
GOVT 333: Government and Politics in Asia
E. HIST 251, 252: A Survey of East Asian Civilization
HIST 261, 262: Survey of African Civilization
HIST 271: Latin-American History: The Colonial Era
HIST 281, 282: Survey of Middle Eastern Civilization
HIST 328: Rise of Russia
HIST 329: Modern Russia and the Soviet Union
HIST 353: History of Traditional China
HIST 354: Modern China
HIST 356: Modern Japan
HIST 463: Ancient India and Pakistan
HIST 464: Modern India and Pakistan
F. LAC 152: Sub-Saharan Africa
LAC 153: Asia and the Western Pacific
LAC 154: North Africa and the Middle East
G. MUSI 103: Folk and Traditional Music of the World
H. RELI 211: Religions of the Near East
RELI 212: Religions of the Orient
RELI 213: Hindu Religion and Philosophy
RELI 336: Religion and Art of Asia
I. RUSS 353: Russian Civilization
RUSS 354: Contemporary Soviet Life
J. THR 251: Theatre of India and Southeast Asia
THR 252: Theatre of East Asia
THR 327: Asian Theatre Techniques

III. At least 12 semester hours of English and literature 12
A. English Composition
ENGL 101, 102. Nonnative speakers of English with limited proficiency in the language may substitute ENGL 100 for 101. A student must attain a minimum grade of C in order to have ENGL 101, 102 fulfill requirements. This rule also applies to ENGL 100.
B. Literature
This requirement is met by taking two courses in literature at the 200 level or above in English or at the 200 level or above in foreign languages and literatures.
IV. Total minimum semester hours 120

Bachelor of Music Degree Requirements
I. General Education 32
A. ENGL 101 and 102 6
B. Literature 6
This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures or from among the following specified 200-level courses in foreign literatures: CLAS 250, FREN 255, GERM 254, RUSS 254, SPAN 256, 257, or 258.
C. Natural Sciences/mathematics/computer science 6
Astronomy, biology, chemistry, computer science, geology, mathematics, physics.
D. Social Sciences 6
Anthropology, economics, geography, government, history, linguistics, psychology, sociology.
E. Additional Non-Music Courses 8
II. Basic Musicianship 58
III. Music Electives 18
IV. Free Electives 22
V. Total minimum semester hours 130
(For details, see the music section under Department of Fine and Performing Arts and Communication.)

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.

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

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

American Studies
Faculty
Johannes D. Bergmann, Faculty Chairman (English), Barry K. Beyer (Education), Lorraine Brown (English), Ernest Cas-sara (History), Martin B. Cohen (History), Jan Cohn (English), William H. Cohn (History), Mary Sayer Hammond (Fine and Performing Arts and Communication), Lorna Irvine (English),

Bachelor of Science Degree Requirements
I. Fulfillment of the requirements for the major as listed under the respective departments: biology, chemistry, economics, mathematical sciences, physics, psychology, public administration, and sociology. A Bachelor of Science degree is also offered in law enforcement.
II. At least 12 semester hours of coursework outside the area of specialization 12
A. 12 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. 12 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, mathematics, and sociology.
C. 12 hours outside the fields of anthropology, psychology, or social work if the degree is in one of these fields; six of these hours must be chosen from these fields: astronomy, biology, chemistry, computer science, geology, mathematics, and physics.

VII. Major 30-42
See appropriate departmental sections of the catalog for required credits. At least 12 hours of work in the major field at the 300 level or above must be completed at George Mason University.
VIII. Total minimum semester hours 120

GEORGE MASON UNIVERSITY
American Studies Coursework

The American Studies Faculty offers all coursework designated AMST in the Course Dictionary of this catalog, including the following graduate course offered in support of other graduate programs:

AMST 502: Problems in American Culture

Requirements for the Major

The interdisciplinary program culminates in the conferral of the degree of Bachelor of Arts with a major in American studies and requires a minimum of 120 semester hours of coursework. All participants must satisfy the requirements for the Bachelor of Arts degree at George Mason University and the requirements for a major in American studies. The American studies major requires the presentation of 42 hours in American studies divided as follows:

1. Twelve semester hours in interdisciplinary seminars:
   - AMST 302: Introduction to American Studies (3, 3)
   - AMST 401: Themes in American Civilization (3)
   - AMST 402: Readings in American Studies (3)
   It is strongly recommended that students take AMST 301 and 302 in their junior and AMST 401 and 402 in their senior year.

2. A six-semester-hour survey of American history:
   - HIST 121: Formation of the American Republic (3)
   - HIST 122: Development of Modern America (3)
   Students should normally take HIST 121-122 in their freshman or sophomore years; if not, this requirement must be fulfilled in the junior year.

3. Eighteen semester hours: Two nine-hour concentrations selected from two of the following sets of courses approved for American studies credit:

   A. Economics
      - ECON 150: The Urban Economy (3)
      - ECON 310: Money and Banking (3)
      - ECON 320: Labor Problems (3)
      - ECON 365: Topics in Economic History (3)

   B. Fine and Performing Arts
      - ART 115: American Architecture (3)
      - ART 330: History of American Art (3)
      - ART 498: Twentieth-Century American Painting (3)
      - MUSI 104: Music in the United States (3)
      - MUSI 107: Development of Jazz (3)
      - THR 353 (253): Black Theatre in the United States (3)
      - THR 352: Survey of the History of the Theatre (in America) (3)

   C. Geography
      - GEOG 215: Geography of the United States and Canada (3)
      - GEOG 301: Political Geography (3)
      - GEOG 304: Urban Geography (3)
      - GEOG 306: Urban Geography (3)

   D. Government
      - GOVT 103: Introduction to Democratic Government (3)
      - GOVT 204: American State and Local Government (3)
      - GOVT 241: Introduction to Public Administration (3)
      - GOVT 302: Political Parties and Interest Groups (3)
      - GOVT 303: Contemporary Constitutional Issues (3)
      - GOVT 305: Contemporary American Federalism (3)

   E. History
      - HIST 333: Westward Movement in the United States (3)
      - HIST 335: The Afro-American Experience in the U.S.: African Background to 1865 (3)
      - HIST 336: The Afro-American Experience in the U.S.: Reconstruction to the Present (3)
      - HIST 341: History of U.S. Constitutional Law to 1865 (3)
      - HIST 342: History of U.S. Constitutional Law from Reconstruction to the Present (3)
      - HIST 345: From Colony to World Power: A History of American Foreign Relations (3)
      - HIST 351: History of the Old South (3)
      - HIST 352: The South since 1865 (3)
      - HIST 390: Topics in History (3) (in semesters when topics deal with American history)
      - HIST 391: History of Virginia to 1860 (3)
      - HIST 392: History of Virginia since 1860 (3)
      - HIST 401: Colonial America (3)
      - HIST 403: Early National Period in American History, 1783-1820 (3)
      - HIST 404: Jacksonian Democracy, 1820-1848 (3)
      - HIST 406: Civil War and Reconstruction (3)
      - HIST 409: Between the Wars: The United States, 1919-1941 (3)
      - HIST 410: The United States Since World War II: Nation and Empire (3)
      - HIST 411: Cultural and Intellectual History of the U.S.: 1600-1865 (3)
      - HIST 412: Cultural and Intellectual History of the U.S. Since 1865 (3)
      - HIST 413, 414: War and the Military in American Life (3, 3)
      - HIST 415: U.S. Urban History: Colonial Origins to Civil War (3)
      - HIST 416: U.S. Urban History: Civil War to the Present (3)
      - HIST 420: Topics in Twentieth-Century U.S. Diplomacy (3)
      - HIST 495: Racism in the United States (3) (Open only to American studies and history majors)

   F. Literature
      - ENGL 253: Survey of American Literature (3)
      - ENGL 330: American Folklore (3)
      - ENGL 331: Literary Approaches to Popular Culture (3)
      - ENGL 380: Recent American Fiction (3)
      - ENGL 381: Colonial and Federalist American Literature (3)
      - ENGL 382: Literature of the American Renaissance (3)
      - ENGL 383: American Jewish Writers (3)
      - ENGL 384: Literature of the Modern South: 1920 to the Present (3)
      - ENGL 385: American Poetry of the Twentieth Century (3)
      - ENGL 386: Literature of Black America (3)
      - ENGL 387: Development of the American Novel to 1914 (3)
      - ENGL 388: Development of the American Novel since 1914 (3)
      - ENGL 389: American Drama of the Twentieth Century (3)
      - ENGL 390: Recent American Poetry (3)
      - ENGL 441, 442: Studies in English and American Literary Topics, Periods, or Genres (3, 3)
      - ENGL 444, 446: Selected Writers (3, 3) (in semesters when selections deal with American literature)

   G. Philosophy and Religion
      - PHIL 331: Philosophy in the United States (3)
RELI 231: Religion in America (3)  
RELI 330: Bible Belt Religion in America (3)  
RELI 331: Civil Religion in America: The Americanization of God (3)  
RELI 332: American Religion in Social Thought and Action (3)  
RELI 333: Contemporary Religion in America: Diversity and Dissent (3)  

H. Sociology  
SOCI 152: Modern Social Problems (3)  
SOCI 206: Personal Worth and Collective Identity: The Socialization Process (3)  
SOCI 301: Criminology (3)  
SOCI 302: Sociology of Delinquency (3)  
SOCI 304: Sociology of Work (3)  
SOCI 308: Sociology of Race Relations and Minorities (3)  
SOCI 332: Sociology of Urban Communities (3)  
SOCI 350: The Sociology of the Life Cycle (3)  
SOCI 373: The Community (3)  
SOCI 382: Education in Contemporary Society (3)  
SOCI 401: Social Stratification: The Study of Inequality (3)  
SOCI 402: Sociology of Punishment and Corrections (3)  

4. Six semester hours from one of the following categories:  
A. Additional AMST approved courses:  
AMST 201, 202: Studies in Popular Culture (3, 3)  
AMST 403: Independent Study (1-3)  
ANTH 201: Native North Americans (3)  
COMM 460: American Public Address (3)  
B. Other related courses selected by the student in consultation with the AMST chairperson:  
C. The following courses selected by the student in consultation with the American Studies chairperson:  
CS 261: Computers and Their Uses (3)  
DESC 202: Applied Statistical Analysis (3)  
DESC 301: Business Decision Models (3)  
ECON 345: Introduction to Econometrics (3)  
ENGL 310: Technical and Report Writing (3)  
ENGL 503: Theory and Practice of Editing (3)  
ENGL 467: Advanced Expository Writing (3)  
GOVT 309: Critical Thinking and the Liberal Arts (3)  
GOVT 355: Public Personnel Administration (3)  
GOVT 401: Public Policy Making (3)  
GOVT 451: Administrative Management and Behavior (3)  
GOVT 452: Administrative Law and Procedures (3)  
INF 201: Computer Information Systems (3)  
*MATH 252: Introductory Statistics (2)  
*MATH 254: Applications of Statistics in Health Care (1)  
*MATH 255: Applications of Statistics in Public Administration (3)  
*SOCI 221: Statistics for the Behavioral Sciences (4)  
*SOCI 410: Social Surveys and Attitudes and Opinion Measurements (3)  

Courses in a modern foreign language on the 300 level or above taught in that language.  

American Studies in a Double Major  
Many students elect to double major in American studies and another discipline. Students majoring in economics, English, geography, government, history, philosophy, psychology, public administration, and sociology can usually also fulfill the requirements for a second major in American studies with the minimum 120 semester hours required for all degrees awarded by the College of Arts and Sciences. Three sample schedules for double majors are presented below. Students wishing to design a double major should discuss their plans with their department advisers and with the chairperson of the American Studies Program.  

<table>
<thead>
<tr>
<th>Sample Schedule for a Double Major in American Studies and English</th>
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<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
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<tr>
<td>HIST 121</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 101</td>
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<tr>
<td>Natural science</td>
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<table>
<thead>
<tr>
<th><strong>Third Semester</strong></th>
<th><strong>Fourth Semester</strong></th>
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</thead>
<tbody>
<tr>
<td>ENGL 205</td>
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</tr>
<tr>
<td>RELI 231</td>
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<td>SOCI 308</td>
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<td>PHIL 173</td>
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<table>
<thead>
<tr>
<th><strong>Fifth Semester</strong></th>
<th><strong>Sixth Semester</strong></th>
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<tbody>
<tr>
<td>ART 330</td>
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<tr>
<td>ENGL 381</td>
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<td>PHIL 331</td>
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<td>HIST 411</td>
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<table>
<thead>
<tr>
<th><strong>Seventh Semester</strong></th>
<th><strong>Eighth Semester</strong></th>
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<tbody>
<tr>
<td>AMST 401</td>
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<tr>
<td>ENGL 385</td>
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<td>ENGL 387</td>
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<tr>
<td>ENGL 332</td>
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<tr>
<th><strong>First Semester</strong></th>
<th><strong>Second Semester</strong></th>
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<td>ENGL 101</td>
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<td>HIST 121</td>
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<td>Foreign language</td>
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<td>PHIL 100</td>
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<tr>
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<td>AMST 201</td>
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<tbody>
<tr>
<td>ENGL 382</td>
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<td>HIST 300</td>
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<tr>
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</tr>
<tr>
<td>HIST 272</td>
<td>3</td>
</tr>
<tr>
<td>HIST 435</td>
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<tr>
<td>MUSI 105</td>
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Area Studies

During the 1970s, George Mason University offered two area studies degrees: the Bachelor of Arts (BA) degree with a major in European studies, and the Bachelor of Arts (BA) degree with a major in Latin American studies.

Curriculum reviews during the 1978-79 academic year led to a change in this pattern. One degree rather than two is now offered—the Bachelor of Arts (BA) degree with a major in area studies.

The student selecting this program for 1980 and thereafter is able to pursue a bachelor's degree in area studies by focusing on either European Studies, Latin American Studies, or Russian Studies. European Studies is supervised by a faculty chaired by Dr. Amelia Rutledge of the Department of English; Latin American Studies by a faculty co-chaired by Dr. Robert P. Clark of the Department of Public Affairs and Dr. Martha P. Franciscato of the Department of Foreign Languages and Literatures; and Russian Studies by a faculty chaired by Dr. Leo Hecht of the Department of Foreign Languages and Literatures.

European Studies Coursework

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

Bachelor of Arts Degree Requirements with a Major in Area Studies

European Studies

The student must present a minimum of 120 semester hours of coursework for graduation, including satisfaction of general requirements for the Bachelor of Arts degree and completion of 45 semester hours of coursework in European studies as follows:

1. 12 semester hours in interdisciplinary seminars:
   - EUST 300: Foundations of European Civilization (3)
   - EUST 350: Classicism and Romanticism (3)
   - EUST 400: The Arts in Modern European Culture (3)
   - EUST 450: The Twentieth Century in Europe (3)

2. 3 semester hours of European geography: GEOG 220

3. 30 semester 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

Departmental Courses Approved for European Studies

Department of Economics

- ECON 380: Comparative Economic Systems (3)
- ECON 390: International Economics (3)
- ECON 481: Development of Economic Thought (3)

Department of English

- ENGL 203, 204: Western Literary Masterworks (3, 3)
- ENGL 251, 252: Survey of English Literature (3, 3)
- ENGL 300: Introduction to Film (3) (by permission, when the content is predominantly European)
- ENGL 301: Special Topics in Film (3) (by permission, when the content is predominantly European)
- ENGL 313: Critical Approaches to Literature (3)
- ENGL 320: Myth and Symbol in Western Literature (3)
- ENGL 341: Chaucer (3)
- ENGL 342: Literature of the Middle Ages (3)
- ENGL 345: English Poetry and Prose of the Sixteenth Century (3)
- ENGL 346: Spenser (3)
- ENGL 351, 352: Shakespeare (3, 3)
- ENGL 353: English Renaissance Drama (3)
- ENGL 354: English Poetry and Prose of the Seventeenth Century (3)
- ENGL 355: Milton (3)
- ENGL 356: Restoration and Eighteenth-Century Drama (3)
- ENGL 357: The Augustan Age (3)
- ENGL 361: English Poetry of the Romantic Period (3)
- ENGL 362: English Poetry of the Victorian Period (3)
- ENGL 365: English Poetry of the Twentieth Century (3)
- ENGL 370: English Novel of the Eighteenth Century (3)
- ENGL 371: English Novel of the Nineteenth Century (3)
- ENGL 372: English Novel of the Twentieth Century (3)
- ENGL 373: Literary Modes (3)
ENGL 374: English and Irish Drama of the Twentieth Century (3)
ENGL 375, 376: Contemporary Drama (3, 3)
ENGL 377, 378: Selected Continental Novels in Translation (3, 3)
ENGL 392: History of the English Language (3)
ENGL 421: Film History and Theory (3)
ENGL 431: Medieval Intellectual Topics (3)
ENGL 551: Literary Criticism (3)

Department of Fine and Performing Arts and Communication

ART 221, 222: Survey of Western Art (3, 3)
ART 227: History of Design (3)
ART 321: Greek Art (3)
ART 322: Roman Art (3)
ART 331: History of Nineteenth-Century Art (3)
ART 332: History of Twentieth-Century Art (3)
ART 335 (225): History of Modern Architecture (3)
ART 350 (325): Medieval Art (3)
ART 353 (326): Early Renaissance Art in Italy (3)
ART 354: Northern Renaissance Art (3)
ART 355 (327): High Renaissance Art in Italy, France, and Spain (3)
ART 356 (328): Baroque Art in Italy, France, and Spain (3)
ART 357: Northern Baroque Art (3)
ART 497: Greek Sculpture (3)

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CLAS 300: Private Instruction

CLAS 300: Private Instruction

LATN 101: Elementary Latin (3)

LATN 101: Elementary Latin (3)

LATN 102: Intermediate Latin: The Golden and Silver Ages (3)

LATN 321, 322: Latin Tutorial (3, 3)

PORT 151, 152: Elementary Portuguese (4, 4)

PORT 251: Intermediate Portuguese (4)

PORT 251: Intermediate Portuguese (4)

PORT 251: Intermediate Portuguese (4)

RUSS 151, 152: Elementary Russian (4, 4)

RUSS 251: Intermediate Russian (4)

RUSS 252: Russian Conversation and Composition (3)

RUSS 254: Readings in Russian Literature (3)

RUSS 311: Contemporary Soviet Short Fiction (3)

RUSS 353: Russian Civilization (offered in English) (3)

RUSS 354: Contemporary Soviet Life (offered in English) (3)

SPAN 151, 152: Elementary Spanish (4, 4)

SPAN 153: Review of Elementary Spanish (4)

SPAN 251: Intermediate Spanish (4)

SPAN 252: Spanish Conversation and Composition (3)

SPAN 303: Advanced Conversation (3)

SPAN 304: Advanced Composition (3)

SPAN 325: Major Hispanic Writers (in English translation) (3)

SPAN 331: Literature of the Golden Age (3)

SPAN 333: Spanish Literature of the Nineteenth Century (3)

SPAN 361: Spanish Civilization and Culture (3)

SPAN 431: Readings in Medieval Spanish Literature (3)

SPAN 432: Cervantes (3)

SPAN 433: Contemporary Spanish Literature (3)

Department of History

HIST 101: Foundations of Western Civilization (3)

HIST 102: Development of Western Civilization (3)

HIST 301: Classical Greece (3)

HIST 302: Classical Rome (3)

HIST 303: Western Europe in the Middle Ages (3)

HIST 305: The Renaissance (3)

HIST 306: The Reformation (4, 4)

HIST 308: Nineteenth-Century Europe (3)

HIST 309: Contemporary Europe (3)

HIST 314: History of Germany (3)

HIST 320: Anglo-Saxon and Medieval England (3)

HIST 321: Tudor and Stuart England (3)

HIST 322: Modern Britain from the Georgian Age to the Welfare State (3)

HIST 328: Rise of Russia (3)

HIST 329: Modern Russia and the Soviet Union (3)

HIST 390: Topics in History (3) (by permission, when the content is predominantly European)

HIST 431: Medieval Intellectual Topics (3)

HIST 435: Social Transformation and Culture in Seventeenth- and Eighteenth-Century Europe (3)

HIST 436: European Society and Culture: Nineteenth and Twentieth Century (3)

HIST 440: France 1610-1789: Absolutism and Revolution (3)

HIST 441: France Since the Revolution (3)

HIST 443: History of Spain and Portugal (3)

HIST 480: Alexander the Great and Persia (3)

Department of Philosophy and Religion

PHIL 301 (231): History of Western Philosophy: Ancient (3)

PHIL 302 (234): History of Western Philosophy: Medieval (3)

PHIL 303 (232): History of Western Philosophy: Modern (3)

PHIL 313: Philosophy of Religion (3)

PHIL 315: Philosophy of History (3)

PHIL 332: Twentieth-Century Analytic Philosophy (3)
PHIL 336, 337: Contemporary Continental Thought: Existentialism and Phenomenology (3, 3)
PHIL 351, 352: Ethics and Contemporary Political Thought I, II (3, 3)
PHIL 356: Philosophy of Art (3)
PHIL 375: Metaphysics (3)
PHIL 421, 422, 423, 424: Seminar (by permission) (3, 3, 3, 3)
RELI 251: Biblical Studies: The Old Testament (3)

**Department of Public Affairs**
- GEOG 220: Geography of Europe (3)
- GEOG 230: Geography of the Soviet Union (3)
- GOVT 132: Introduction to International Politics (3)
- GOVT 320: Political Values (3)
- GOVT 321: Contemporary Political Ideologies (3)
- GOVT 334: Government and Politics of Western Europe (3)
- GOVT 430: Comparative Political Leadership (3)
- GOVT 447: Foreign Policy and Analysis (3)

**Department of Sociology**
- SOCI 311: Classical Sociological Theory (3)
- SOCI 340: Power in Society: Introduction to Political Sociology (3) (by permission, when the content is predominantly European)

**Sample Schedule for a BA in Area Studies**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
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<th>Third Semester</th>
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<tr>
<td>GERM 251</td>
<td>SOCI 101</td>
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<tr>
<td>PSYC 100</td>
<td>MATH 106</td>
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<td>ART 221</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>EUST 300</td>
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<tr>
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<td>Non-Western Culture</td>
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<td>COMM 120 or 130</td>
<td>PHIL 232</td>
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<td>THR 160</td>
<td>ART 328</td>
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<tr>
<td>ART 327</td>
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<tr>
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<thead>
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<th>Seventh Semester</th>
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<td>GEOG 220</td>
<td>MUSI 381</td>
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<td>MUSI 381</td>
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</tr>
</tbody>
</table>

**Latin American Studies Course**

**Latin American Studies**

**Faculty**

Robert P. Clark, Faculty Co-Chairperson (Public Affairs), Martha P. Francescato, Faculty Co-Chairperson (Foreign Languages and Literatures), Rita L. Ailinger (Nursing), Ted R. Bradley (Biology), James W. Fonseca (Public Affairs), Lydia D. Hazera (Foreign Languages and Literatures), Donald P. Kelso (Biology), Stephen R. Ruth (Decision Sciences), William B. Shear (Economics), John P. Soder, Jr. (History), Frank MacD. Spindler (History), John G. Veenastra (Library)

**Requirements for the BA with a Major in Area Studies**

**Latin American Studies**

The student must present a minimum of 120 semester hours of coursework for graduation, including satisfaction of general requirements for the Bachelor of Arts degree. In addition, the student must present 36 semester hours of coursework divided to include:

1. 18 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; and
2. 18 semester hours of Latin American-oriented courses other than the core discipline, including the interdisciplinary seminar on contemporary Latin America (LAS 491). A list of courses meeting requirement above is provided below. Proficiency in Spanish or Portuguese must be demonstrated either by examination or by completion of the requisite 251 foreign language courses. Students are encouraged to take the following six hours of language study: SPAN 252, 366.

**Latin American Studies Course**

LAS 491 Contemporary Latin America (3)

Required of senior majors in Latin American studies. Open to other students 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 requirement (b) above. Students are advised to consult the Course Dictionary in this catalog for prerequisites for these courses.

**Department of Economics**
- ECON 360: Economics of Developing Areas (3)
- ECON 361: Economic Development of Latin America (3)

**Department of Fine and Performing Arts and Communication**
- MUSI 106: Latin American Music (3)

**Department of Foreign Languages and Literatures**
- PORT 251: Intermediate Portuguese (4)
- SPAN 251: Intermediate Spanish (4)

**Sample Schedule for a BA in Area Studies**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
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<tr>
<td>FREN 151</td>
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<th>Third Semester</th>
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<tbody>
<tr>
<td>GOVT 132</td>
<td>GEOG 220</td>
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<td>GOVT 320</td>
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<td>PHIL 231</td>
<td>PHIL 232</td>
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<tr>
<td>COMM 130</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
SPAN 252: Spanish Conversation and Composition (3)
SPAN 303: Advanced Conversation (3)
SPAN 304: Advanced Conversation and Composition (3)
SPAN 317: The Literature of Spain (3)
SPAN 318: The Literature of Spanish America (3)
SPAN 325: Major Hispanic Writers (3)
SPAN 331: Literature of the Golden Age (3)
SPAN 333: Spanish Literature of the Nineteenth Century (3)
SPAN 341: Spanish American Short Story (3)
SPAN 353: Commercial Spanish (3)
SPAN 359: Translation of Texts in Specialized Fields (3)
SPAN 361: Spanish Civilization and Culture (3)
SPAN 366: Latin American Civilization and Culture (3)
SPAN 420: Studies in Spanish Linguistics (3)
SPAN 432: Cervantes (3)
SPAN 433: Contemporary Spanish Literature (3)
SPAN 441: Spanish American Poetry (3)
SPAN 443: Spanish American Novel (3)

Department of History
HIST 271: Latin American History: The Colonial Era (3)
HIST 272: Latin American History: The Modern Era (3)
HIST 345: From Colony to World Power: A History of American Foreign Relations (3)
HIST 363: The History of Argentina, Brazil, and Chile (3)
HIST 420: Topics in Twentieth-Century U.S. Diplomacy (3)
HIST 443: History of Spain and Portugal (3)
HIST 470: Diplomacy and War in Latin America (3)
HIST 475: History of Mexico (3)
HIST 478: Spanish Borderlands (3)
LAC 151: Latin America (3)

Department of Philosophy and Religion
PHIL 301 (231): History of Western Philosophy: Ancient (3)
PHIL 302 (234): History of Western Philosophy: Medieval (3)
PHIL 303 (222): History of Western Philosophy: Modern (3)
PHIL 334: Latin American Thought (3)

Department of Public Affairs
GEOG 102: Physical Geography (3)
GEOG 201: Geography of Latin America (3)
GOVT 132: Introduction to International Politics (3)
GOVT 331: Government and Politics of Latin America (3)
GOVT 336: Political Development and Change (3)
GOVT 340: Advanced International Relations (3)
GOVT 430: Comparative Political Leadership (3)

Department of Sociology
ANTH 202: Indigenous Populations of Mesoamerica (3)
SOCI 308: Sociology of Race Relations and Minorities (3)
SOCI 332: Sociology of Urban Communities (3)
SOCI 420: Regional and Societal Development (3)

Sample Schedule for a BA in Area Studies
Latin American Studies
First Semester
ENGL 101 3
PORT or SPAN 151 4
Natural science 4
Oral communication 3
Total 14
Second Semester
ENGL 102 3
PORT or SPAN 152 4
Natural science 4
Logic or math 3
Total 14
Third Semester
Literature 3
PORT or SPAN 251 4
MUSI 106 3
Core discipline prereq. 3
HIST 271 3
Total 16
Fourth Semester
Literature 3
HIST 272 3
Spanish elective* 3
GEOG 201* 3
Core discipline prereq. 3
Total 15
Fifth Semester
Core discipline (300) 3
Core discipline (300) 3
Philosophy or religion 3
Non-Western culture 3
Elective 3
Total 15
Sixth Semester
Core discipline (300) 3
Core discipline (300) 3
Philosophy or religion 3
Non-Western culture 3
Elective 3
Total 15
Seventh Semester
Core discipline (400) 3
Anth., psych., or soc. 3
Electives 10
Total 15
Eighth Semester
Core discipline (400) 3
Anth., psych., or soc. 3
Electives 9
Total 15

* Suggested courses. Students electing these courses will fulfill the requirement for 16 hours of Latin American-oriented courses, the general BA requirements for fine arts and social science, and partially fulfill the non-Western culture requirement.

Sample Schedule for a BA in Area Studies
Latin American Studies and History
First Semester
ENGL 101 3
HIST 271 3
PORT or SPAN 151 4
Anthr., psych., or soc. 3
Total 16
Second Semester
ENGL 102 3
HIST 272 3
PORT or SPAN 152 4
Anthr., psych., or soc. 3
Total 16
Third Semester
Literature 3
HIST 363 3
PORT or SPAN 251 4
Natural science 4
Total 17
Fourth Semester
Literature 3
HIST 443 3
Spanish 3
Natural science 4
Electives 6
Total 15
Fifth Semester
HIST 300 3
HIST 470 3
Logic or math 3
Oral communication 3
GEOG 201 3
Total 15
Sixth Semester
HIST 499 or hist. elect. 3
MUSI 106 3
Non-Western culture 3
LAS 491 or elective 3
Total 15

Sample Schedule for a BA in Area Studies
Latin American Studies and Spanish
First Semester
SPAN 151 4
ENGL 101 3
Natural science 4
Anthr., psych., or soc. 3
Total 14
Second Semester
SPAN 152 4
ENGL 102 3
Natural science 4
Latin Amer.-oriented elect. 3
Total 14
Third Semester
SPAN 251 4
HIST 271 3
Logic or math 3
Philosophy or religion 3
MUSI 106 3
Total 16
Fourth Semester
SPAN 252 4
HIST 272 3
SPAN 255 (257) 3
SPAN 325 3
GEOG 201 3
Total 16
Fifth Semester
Anthr., psych., or soc. 3
Oral communication 3
SPAN 303 3
SPAN 307 3
SPAN 300-400 3
Total 15
Sixth Semester
Latin Amer.-oriented elect. 3
Non-Western culture 3
SPAN 304 3
SPAN 308 3
SPAN 401 3
Total 15
Seventh Semester
SPAN 407 3
SPAN 300-400 3
Electives 9
Total 15
Eighth Semester
SPAN 408 3
Latin Amer.-oriented elect. 3
Electives 6
Total 15

48 GEORGE MASON UNIVERSITY
Russian Studies

Faculty
Leo Hecht, Faculty Chairman (Foreign Languages and Literatures), Alice C. Andrews (Public Affairs), Tatiana G. Berl (Foreign Languages and Literatures), Ronald J. Jensen (History)

Russian Studies
Two principal directions are possible within this degree program:
1. Area (Russian) studies as one element of a double major: Within this option the student must fulfill all the requirements of the Area (Russian) studies program as noted in b, below. In addition, the student must fulfill the 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 and industry.
2. Area (Russian) studies as a single degree program: This option is recommended primarily for students who intend to continue towards graduate work in Russian, or who are studying for self-enrichment. For this degree the student must present a minimum of 120 semester hours of coursework for graduation, to include satisfaction of the general requirements for the Bachelor of Arts degree, and the following:
   a. Russian language through the intermediate level through coursework or testing.
   b. Three upper-division courses taught in the Russian language, e.g., RUSS 303, 311, 401, 402, 410.
   c. RUSS 353, 354.
   d. HIST 328: Rise of Russia (3) HIST 329: Modern Russia and the Soviet Union (3)
   e. GEOG 230: Geography of the Soviet Union (3)
   f. A Senior Seminar (RUSS 498 or 499)
   g. Two courses in Russian literature (may be used to satisfy the general requirement in literature for the BA degree).

NOTE: Arrangements will be made for those students who are financially able to spend six weeks in the summer at the Pushkin Language Institutes in Moscow and Leningrad for accelerated coursework in intermediate and advanced Russian. Credit will be given for these courses. A professor from GMU will be with the group throughout the period.

Courses

Department of Foreign Languages and Literatures
RUSS 151, 152: Elementary Russian (4, 4)(Single major with a Concentration in Language and Literature)
RUSS 251: Intermediate Russian (4)(Single major with a Concentration in Language and Literature)
RUSS 252: Russian Conversation and Composition (3)
RUSS 254: Readings in Russian Literature (3)
RUSS 300: Field Study in Russian Culture (1, 2, 3)
RUSS 303: Russian Advanced Conversation (3)
RUSS 311: Contemporary Soviet Short Fiction (3)
RUSS 325: Major Russian Writers (3)
RUSS 326, 327: A Survey of Russian Literature (3, 3)
RUSS 353: Russian Civilization (3)
RUSS 354: Contemporary Soviet Life (3)
RUSS 401: Readings in the Social Sciences (3)
RUSS 402: Scientific Russian (3)
RUSS 407: Russian Theater and Drama (3)
RUSS 410: Russian Poetry (3)
RUSS 415: The Slavs: A Cultural Survey (3)
RUSS 498, 499: Senior Seminar (3, 3)

Department of History
HIST 328: Rise of Russia (3)
HIST 329: Modern Russia and the Soviet Union (3)

Department of Public Affairs
GEOG 230: Geography of the Soviet Union (3)

Cognate Courses
ANTH 114: Introduction to Cultural Anthropology (3)
ART 331: History of Nineteenth-Century Art (3)
ART 332: History of Twentieth-Century Art (3)
BUAD 307: Introduction to International Business (3)
ECON 380: Comparative Economic Systems (3)
EDUC 435: Student Teaching in Secondary Schools (9, 12)
ENGL 300: Introduction to Film (3)
ENGL 377, 378: Selected Continental Novels in Translation (3, 3)
ENGL 391: General Linguistics (3)
EUST 300: Foundations of European Civilization (3)
EUST 350: Classicism and Romanticism (3)
EUST 400: The Arts in Modern European Culture (3)
EUST 450: The Twentieth Century in Europe (3)
FRLN 450: Methodology of Foreign Language Teaching (3)
GEOG 103: Cultural Geography (3)
GOVT 132: Introduction to International Politics (3)
HIST 545: The Russian Revolution and the Origins of the Soviet State (3)
THR 351, 352: Survey of Theatre History (3, 3)

Sample Schedule for a BA in Area Studies

Russian Studies

First Semester
ENGL 101 3
RUSS 151 4
ART 101 3
SOCI 101 3

Second Semester
ENGL 102 3
RUSS 152 4
PHIL 111 3
PSYC 100 3
MATH 106 3

Third Semester
RUSS 251 4
BIOL 104 4
GEOG 230 3
RUSS 252 3
GEOG 230 3

Fourth Semester
RUSS 253 3
RUSS 254 3
ENGL 309 3
ENGL 313 3
GOVT 351 3

Fifth Semester
RUSS 353 3
RUSS 354 3
ENGL 309 3
ENGL 313 3
HIST 328 3
HIST 329 3

Sixth Semester
RUSS 351 3
MUSI 103 3
THRI 160 3

Seventh Semester
THR 270 3
RUSS 401 3
RUSS 402 3
RUSS 407 3
RUSS 498 3

Eighth Semester
RUSS 357 3
RUSS 358 3
RUSS 499 3
RUSS 500 3

Sample Schedule for a BA with Double Major

Area (Russian) Studies and Geography

First Semester
ENGL 101 3
RUSS 151 4
COMM 100 3
GEOG 102 3
ANTH 114 3

Second Semester
ENGL 102 3
RUSS 152 4
SOC1 101 3
RUSS 152 4
PHIL 111 3
GEOG 103 3

Third Semester
RUSS 251 4
GEOL 101 3
MATH 252 2
GEOG 102 3
GEOG 230 3
ART 101 3

Fourth Semester
RUSS 252 3
GEOL 102 3
GEOL 206 3
GEOG 230 3
MATH 256 1

http://catalog.gmu.edu
Requirements for the Degrees

Undergraduate

BA 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: Biological Science; BIOL 301: Cell Biology; BIOL 311: General Genetics; and BIOL 307: Ecology. In addition, candidates must complete CHEM 211-212 and two semesters of mathematics. This last requirement may be satisfied by any of the following combinations: MATH 113-114; 113-110; 110-113; 110-111. Students expecting to enter graduate or professional school are strongly urged to complete MATH 113 and 114. Organic chemistry and introductory college physics are recommended.

BS Degree with a Major in Biology

In addition to the college requirements, candidates are required to submit 33 hours in sciences and mathematics exclusive of biology. These 33 hours must include CHEM 211-212, 313-314, 315 and 316 or 320 plus at least eight hours from Group I and nine hours from Group II. The nine hours in Group II must include two (* courses, and a course in computer science is required.

<table>
<thead>
<tr>
<th>Group I</th>
<th>Group II</th>
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<tbody>
<tr>
<td>BIOL 206</td>
<td>MATH 110*, 111*</td>
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<tr>
<td>PHYS 341-342</td>
<td>MATH 113*, 114*</td>
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<td>ASTR 103</td>
<td>MATH 213, 304</td>
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<tr>
<td>BIOL 311</td>
<td>PHYS 137</td>
</tr>
<tr>
<td>CHEM 222</td>
<td>CHEM 311 (263)</td>
</tr>
<tr>
<td>CHEM 331</td>
<td>BIOL 321</td>
</tr>
<tr>
<td>CHEM 332</td>
<td>3</td>
</tr>
</tbody>
</table>

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

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

In addition to the above requirements, the BS degree in biology calls for at least 44 hours of biological sciences, including BIOL 113, 114: Biological Science; BIOL 301: Cell Biology; BIOL 311: General Genetics; and BIOL 307: Ecology. In addition, each student must present at least one course from category A and one course from category B below.

**Category A**

Comparative Chordate Anatomy
Vertebrate Zoology Insect Biology
Phylogeny Plant Morphology
Microbiology Taxonomy of Flowering

**Category B**

Animal Physiology Plant Physiology
Patterns of Animal Development Introductory Animal Behavior
Development Immunology

Department of Biology Coursework

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

**Biology**

Faculty

Professors: Tombes* (Chairman), Emsley, C. Ernst, Stanley, Taub, Wall**

Associate Professors: Andrykovitch, Auclair, Bradley, Hart, Joyce, Kaplan, Kelso, Rockwood (Acting Chairman), Shaffer, J. Skog, Wilson

Assistant Professors: Adamkewicz, Brown, Egghart, Jones, Kowalski, Lawrey, O'Melia, Royt, Sherald, Torzilli

Adjunct Professors: Cook, Kleiman, Read, L. Skog, Johnson

Instructors: E. Ernst, Dunkle, Everly

Lecturers: Audilet, Phips, Chambers, Ascione, David, Killos


(Italics indicate graduate faculty.)

Sample Schedule for BA with Major in Biology

First Semester | Second Semester
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Written communication</td>
<td>Written communication</td>
</tr>
<tr>
<td>MATH 110 (103) or 113</td>
<td>MATH 111 (104) or 114</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>BIOL 113</td>
<td>BIOL 114</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>
### Third Semester
- **Literature**: 3
- **Foreign language**: 4
- **Biology elective**: 4
- **Biology elective**: 4
- **Total**: 15

### Fourth Semester
- **Literature**: 3
- **Foreign language**: 4
- **Biological elective**: 3
- **Biological elective**: 4
- **Total**: 14

### Fifth Semester
- **BIOL 307 or 311**: 4
- **Foreign language**: 4
- **Soc. sci. or non-West elect.**: 3
- **Biol. elect., 300 or 400 level**: 4
- **Total**: 15

### Sixth Semester
- **BIOL 307 or 311**: 4
- **Foreign language**: 4
- **Soc. sci. or non-West elect.**: 3
- **Biol. elect., 300 or 400 level**: 4
- **Total**: 14

### Seventh Semester
- **Soc. sci. or non-West elect.**: 3
- **Soc. sci. or non-West elect.**: 3
- **Humanities elective**: 3
- **Elective**: 3-4
- **Total**: 15-16

### Eighth Semester
- **Soc. sci. or non-West elect.**: 3
- **Soc. sci. or non-West elect.**: 3
- **Elective**: 3-4
- **Elective**: 3-4
- **Total**: 15-17

### Sample Schedule for BS with Major in Biology

#### First Semester
- **BIOL 113**: 4
- **CHEM 211**: 4
- **ENGL 101**: 3
- **MATH 110 (103) or 113**: 3-4
- **Total**: 14-15

#### Second Semester
- **BIOL 114**: 4
- **CHEM 212**: 4
- **ENGL 102**: 3
- **MATH 111 (104) or 114**: 3-4
- **Total**: 14-15

#### Third Semester
- **Biol. elective**: 4
- **CHEM 313 and CHEM 315**: 5
- **Literature**: 3
- **Nonsci. elective<sup>1</sup>**: 4
- **Total**: 16

#### Fourth Semester
- **Biol. elect. or BIOL 301**: 4
- **CHEM 314 and CHEM 318 or 320**: 5
- **Literature**: 3
- **Nonsci. elective<sup>1</sup>**: 4
- **Total**: 16

#### Fifth Semester
- **Biol. group A or Biol. elect.<sup>2</sup>**: 4
- **BIOL 307 or Biol. elect.<sup>2</sup>**: 4
- **Nonsci. elective**: 3
- **PHYS 341**: 4
- **Total**: 15

#### Sixth Semester
- **Biol. group B or Biol. elect.<sup>2</sup>**: 4
- **BIOL 307 or Biol. elect.<sup>2</sup>**: 4
- **Nonsci. elective**: 3
- **PHYS 342**: 4
- **Total**: 15

#### Seventh Semester
- **Biol. elect. or BIOL 311**: 3-4
- **Biol. elect. or Biol. group B**: 3-4
- **Elective<sup>3</sup>**: 3-4
- **Elective**: 3-4
- **Elective**: 0-2
- **Total**: 14-16

#### Eighth Semester
- **Biol. elect. or Biol. group A**: 3-4
- **Biol. elect. or BIOL 307**: 3-4
- **Elective**: 3-4
- **Elective**: 3-4
- **Elective**: 0-3
- **Total**: 14-17

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

<sup>1</sup>Foreign Language (German, Russian, or French)

<sup>2</sup>Biostatistics

<sup>3</sup>Biochemistry or Physical Chemistry.

### Courses Approved for Undergraduate Biology Major Credit
- GEOL 202: Invertebrate Paleontology (3)
- CHEM 461, 462: Biochemistry (3, 3); 463, 464: Biochemistry Laboratory (2, 2)

### 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 George Mason University.

### Premedical, Predential, and Preveterinary Students

Students planning to enter medical, dental, or veterinary schools may choose to major in biology. The specific requirements for admission to these schools vary considerably and frequently may be met by either a BA or BS degree. Most programs, however, do require that applicants 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 before the application for admission. A member of the Department of Biology Health Sciences Committee may be contacted for additional information.

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

### 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. Grades of C or better in biology courses are required for student teaching in biology. Similarly, grades of C or better are required in all science courses for student teaching in general science.

### Biology for Nonmajors

Students in the College of Arts and Sciences 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 BS in Psychology, who must take BIOL 113, 114. Students in the College of Professional Studies normally fulfill their biology requirements as follows: Elementary Education Majors: BIOL 151; Physical Education Majors: BIOL 124-125; Health Education Majors: BIOL 103, 104, 124-125, and 185; Nursing Majors: BIOL 124-125, and 185. Students who decide to major in biology after completing one or more of the above courses should consult the undergraduate coordinator of the Department of Biology when planning their academic program. The department offers a variety of general interest non-major courses for those seeking additional elective credit. Students who have completed one year of non-major biology also qualify for a number of advanced biology courses.

### BS Degree with a Major in Medical Technology

This program requires the equivalent of three years of full-time professional 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 thereto 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 consult regularly with their faculty advisers. All medical technology majors and prospective majors are urged to present their applications to medical technology schools 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 off campus necessitates special interpretation of the following University policies: Transfer students must present at least 16 hours of the required courses in 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 BS 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, 301, 361, 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 6 hours. (MATH 252 and 254 recommended, 101 and 106 not applicable.)

Students are encouraged to elect additional basic science courses during their preprofessional years. Recommended are: PHYS 341-342, CHEM 461, 462; CS 261; BIOL 311.

The professional study during the senior year requires 30 semester hours of coursework, 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.

### Departmental Degree Requirements

In addition to fulfilling the entrance requirements of the Graduate School, candidates for admission as degree students must:

1. Complete at least 30 semester hours of graduate work. These hours may include two approved undergraduate courses.
2. Petition the graduate coordinator to appoint for them a graduate committee consisting of three faculty members. Candidates meeting with their committee before the end of their first semester of degree status to hear recommendations for remedy of any academic deficiencies and to plan an academic program. Students may be required to remedy deficiencies by taking courses without graduate credit. Evidence that academic deficiencies have been remedied may be by satisfactory grades in committee-recommended courses or by comprehensive examination as the committee sees fit.
3. Satisfy the departmental examiners in a comprehensive examination to be taken at the conclusion of all coursework, or defend a thesis.

a. Students who do NOT enroll in BIOL 799: Thesis, must pass an oral and a written comprehensive examination to demonstrate that they are competent in their field of

### Professional Phase

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

### Graduate

**Master of Science in Biology**

The objective of the Biology Graduate Program is to serve the needs of:

1. Persons with recent baccalaureate degrees who need advanced training in biology to qualify for employment at private and public institutions that hire professional biologists.
2. Persons presently employed, including established teachers and other professionals, who wish to further their careers.
3. Research-oriented persons who expect to qualify for employment on the strength of the Master of Science degree or who hope to proceed to the Doctor of Philosophy degree at another institution.

Students may specialize in Environmental Biology; Systematic, Evolutionary, and Population Biology; Molecular, Cellular, and Organismal Biology; or Interpretive Biology; or may pursue a General Biology Program. In the General Biology Program, students, under the guidance of their academic adviser and graduate committee, may pursue an organized course of study adapted to their interests or needs. Students in the General Biology Program are normally required to complete a thesis.

### Departmental Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants for admission as degree students are expected to:

1. Hold a baccalaureate degree in biology, or the equivalent, with a grade point average of 3.000 (B) or better in all biology courses taken;
2. Provide three letters of recommendation;
3. Submit scores on the Graduate Record Examination including the verbal and quantitative sections as well as the Advanced Test in Biology.

To qualify as degree students applicants must score in the 50th percentile or better overall and the 40th percentile or better on each subarea of the Advanced Test in Biology. Applicants who do not meet all of these requirements or who are judged academically deficient may be offered provisional or non-degree admission.

### Sample Schedule for a BS with a Major in Medical Technology

<table>
<thead>
<tr>
<th>Preprofessional Phase</th>
<th>Medical Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
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<tr>
<td>CHEM 211</td>
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</tr>
<tr>
<td>BIOL 113</td>
<td>4</td>
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<tr>
<td>MATH 110 or 113</td>
<td>3-4</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
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<td><strong>Total</strong></td>
<td>14-15</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CHEM 212</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 114</td>
<td>4</td>
</tr>
<tr>
<td>MATH 252 and 254</td>
<td>3</td>
</tr>
<tr>
<td>MTCH 200</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CHEM 313 and 315</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 301</td>
<td>4</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Nonscience elective*</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Fourth Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CHEM 311 and 318 or 320</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 361</td>
<td>4</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Nonscience elective*</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CHEM 321</td>
<td>4</td>
</tr>
<tr>
<td>Nonscience elective*</td>
<td>3-6</td>
</tr>
<tr>
<td>MATH 252 and 254</td>
<td>3</td>
</tr>
<tr>
<td>Science elective**</td>
<td>3-5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13-19</td>
</tr>
</tbody>
</table>

* Anthropology, economics, geography, government, history, linguistics, psychology, or sociology
** CS 261, BIOL 311, CHEM 461, 462, PHYS 341-342.
Specializations

In each of the four specializations described below students may substitute electives not shown in the tables. Such substitutions may be made only after consultation with the student's graduate committee and with approval of the graduate coordinator in the Department of Biology. Students pursuing the General Biology Program need not select courses from any one specialization.

Specialization in Environmental Biology. Students electing the Environmental Biology specialization must take BIOL 640 (540); Environmental Biology I (3), and BIOL 641 (541); Environmental Biology II (3), as well as the minimum of two semester hours of credit in seminar including at least one hour of BIOL 691 (591): Current Topics in Biology and one hour of BIOL 692 (592): Seminar in Environmental Biology. The balance of the program will then be chosen from one of the following areas:

- Pollution Assessment and Management
- Natural Ecosystem Management
- Environmental Planning

Courses available within each of these elective areas appear in the table below. A double asterisk (**) indicates a required course and a single asterisk (*) indicates an elective course.

Estuarine and Coastal Ecology may be substituted for the Freshwater Ecology requirement in the first two elective areas. Up to six semester hours of credit in BIOL 793 (593): Research in Biology (1-3) and/or BIOL 799 (599): Thesis (3-6) may be submitted for electives in any of the three areas. No more than two courses may be taken from the supporting courses allowed outside the Department of Biology.

### Graduate Courses in Biology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 513</td>
<td>Food, Energy and Insects (3)</td>
</tr>
<tr>
<td>BIOL 643 (447)</td>
<td>Microbial Ecology (4)</td>
</tr>
<tr>
<td>BIOL 644 (558)</td>
<td>Tropical Ecosystems (4)</td>
</tr>
<tr>
<td>BIOL 645 (545)</td>
<td>Freshwater Ecology (4)</td>
</tr>
<tr>
<td>BIOL 646 (546)</td>
<td>Estuarine and Coastal Ecology (4)</td>
</tr>
<tr>
<td>BIOL 647 (547)</td>
<td>Analysis of Terrestrial Ecosystems (4)</td>
</tr>
<tr>
<td>BIOL 648 (548)</td>
<td>Population Ecology (3)</td>
</tr>
<tr>
<td>BIOL 649 (549)</td>
<td>Biological Resource Management (3)</td>
</tr>
<tr>
<td>BIOL 655 (565)</td>
<td>Environmental Hazards to Human Health (3)</td>
</tr>
<tr>
<td>BIOL 680 (512)</td>
<td>Experimental Design and Analysis for the Life Sciences (3)</td>
</tr>
</tbody>
</table>

### Supporting Courses in Other Departments

- BUAD 630: Computer Systems for Management (3)
- BUAD 641: Quantitative Methods of Managerial Analysis (3)
- ECON 552: Urban and Regional Economics (3)
- ECON 555: Resource Economics (3)
- ECON 575: Economics of Urban Transportation Planning (3)

### Specialization in Systematic, Evolutionary, and Population Biology

Students electing the Systematic, Evolutionary, and Population Biology specialization must have previously passed a course in basic evolutionary theory equivalent to BIOL 471: Evolution. Students are required to take BIOL 680 (512): Experimental Design and Analysis for the Life Sciences (3); BIOL 648 (548): Population Ecology (3); and BIOL 727 (527): Current Problems in Evolutionary Theory (3); and two semester hours of seminar. At least one of these seminars must be BIOL 691 (591): Current Topics in Biology (1). Students in this specialization are also encouraged to complete three hours in BIOL 793 (593): Research in Biology, or three to six hours of BIOL 799 (599): Thesis. The balance of the semester hours needed to complete the 30 hours required for the MS degree are selected—with the approval of the student's graduate committee—from the following approved graduate courses:

- BIOL 519 (521): Origin of Cultivated Plants and Their Impact on Man and Society (3)
- BIOL 520 (544): Systematics in Complex Angiosperm Families (3)
- BIOL 529 (484): Vertebrate Paleontology (4)
- BIOL 533 (555): Selected Topics in Plant Biology (3)
- BIOL 534: Speciation and Field Studies in Flowering Plants (3)
- BIOL 535 (444): Paleobotany (4)
- BIOL 536 (486): Ichthyology (4)
- BIOL 537 (482): Ornithology (4)
- BIOL 538 (483): Mammalogy (4)
- BIOL 539 (485): Herpetology (4)
- BIOL 560: Biology Ultrastructure (4)
- BIOL 622 (552): Methods and Principles of Animal Taxonomy (3)
- BIOL 623 (523): Reproductive Strategies (3)
- BIOL 624 (524): Coevolution of Plants and Animals (3)
- BIOL 625 (525): Animal Navigation (3)
- BIOL 626 (526): Paleoecology (4)
- BIOL 632 (532): Animal Behavior (3)
- BIOL 643 (447): Microbial Ecology (4)
- BIOL 644 (558): Tropical Ecosystems (4)
- BIOL 645 (545): Freshwater Ecology (4)
- BIOL 646 (546): Estuarine and Coastal Ecology (4)
- BIOL 647 (547): Analysis of Terrestrial Ecosystems (4)
- BIOL 649 (549): Biological Resource Management (3)
- BIOL 662 (562): Cellular Aspects of Development (3)
- BIOL 693, 694: Directed Studies in Biology (1-8)
- BIOL 793 (593): Research in Biology (1-3)
- BIOL 799 (599): Thesis (3-6)

### Specialization in Molecular, Cellular, and Organismal Biology

Students electing the Molecular, Cellular, and Organismal Biology specialization must have an undergraduate training adequate for them to concentrate in one of four areas:

- Genetics
- Microbiology
- Molecular Biology
- Physiology

In some cases, candidates may be required to enroll in certain undergraduate courses without receiving graduate credit. Students are required to take one hour of BIOL 691 (591): Current Topics in Biology and three hours of BIOL 695 (595): Seminar in Molecular, Cellular, and Organismal Biology. Additional hours to complete the 30 semester hours of graduate credit required for the Master of Science are normally selected—with the approval of the student's graduate committee—from the following list of courses. All students must write and successfully defend a thesis based on experimental research in one of the four areas mentioned above.

### Graduate Courses

- BIOL 560: Biological Ultrastructure (4)
- BIOL 561: Comparative Animal Physiology (3)
- BIOL 572 (511): Human Genetics (3)
- BIOL 573 (517): Development Genetics (3)
- BIOL 574 (415): Population Genetics (3)
- BIOL 623 (523): Reproductive Strategies (3)
- BIOL 643 (447): Microbial Ecology (4)
- BIOL 662 (562): Cellular Aspects of Development (3)
- BIOL 665 (565): Environmental Hazards to Human Health (3)
- BIOL 667 (567): Molecular Genetics (3)
- BIOL 668 (568): Advanced Techniques in Molecular Biology (4)
- BIOL 669 (586): Pathogenic Microbiology (3)
Department of Chemistry Coursework

This department offers all coursework designated CHEM and GEOL in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Chemistry

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

BS Degree with a Major in Chemistry

This program is accredited by the American Chemical Society; students completing the program are certified to the Society. Students planning professional careers in chemistry should choose the BS program.

Minimum course requirements are as follows:

Chemistry ........................................ 49
English ........................................... 12
Mathematics ...................................... 14
Physics ............................................ 8 or 12
Electives and computer science ............. 37 or 33
Total .............................................. 120

Required courses in chemistry must include those indicated for the BA degree plus CHEM 422, 441, and 445. Mathematics must include MATH 113, 114, 213, 304. Physics must include either PHYS 341-342 or PHYS 250, 350, 351, 352, 353. In addition, CS 161, CS 111, or ENGR 110 is required.

Sample Schedule for BA 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>ENGL 102</td>
</tr>
<tr>
<td>Elective (e.g., BIOL 113)</td>
<td>Elective (e.g., BIOL 114)</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></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>MATH 320</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>PHYS 341</td>
<td>PHYS 342</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></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 337</td>
</tr>
<tr>
<td>CHEM 336</td>
<td>Literature</td>
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<tr>
<td>Foreign language</td>
<td>Electives</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>CHEM 461</td>
<td>CHEM 462</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
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<td></td>
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</tr>
</tbody>
</table>

Graduate Courses

BIOL 601 (501): Advanced General Biology: Classical Principles and Modern Views I (3)
BIOL 602 (502): Advanced General Biology: Classical Principles and Modern Views II (3)
BIOL 603 (503): Field Studies for Interpreters (3)
ASTR 505: Fundamentals of Astronomy (3)
CHEM 500: Selected Topics in Modern Chemistry (3)
CHEM 501: Laboratory Demonstration Techniques in Undergraduate Chemistry (3)
CHEM 611 (501): Introduction to Computers (3)
EDCI 573 (673): Teaching Science in the Secondary School (3)
EDCI 663: Teaching Science in the Elementary School (3)
EDUC 591: Educational Statistics (3)
ENGL 503: Theory and Practice of Editing (3)
ENGL 616: The Writing of Nonfiction (3)
GEOG 502: Geography for Teachers (3)
GEOL 500: Selected Topics in Modern Geology (3)
GEOL 501: Selected Topics in Modern Geology (3)
HIST 401: Colonial America (3)
HIST 403: Early National Period in American History, 1783-1820 (3)
HIST 406: Civil War and Reconstruction (3)
HIST 478: Spanish Borders (3)
HIST 500: The Study and Writing of History (3)
PHED 610: Advanced Exercise Physiology (3)
PHYS 500: Physics for High School Teachers (3)
PHYS 501: Physics Laboratory Techniques for High School Teachers (3)

*Note: Students may take no more than two 400-level courses.

Chemistry

Faculty

Professors: Walter (Chairman), Cozzens, Mushrush
Associate Professors: Davies, Deanhardt, Mose (Geology), Roth, Stalick
Assistant Professors: Blackburn, Chen, Davis, Dieciochio (Geology), Kimmel (Geology), Machuga, Nakadomari, Neece, Sladney, Turner (Geology)
Lecturers: Greer, Nohr, O’Brien, Palmer, Talebian, Trzaskoma, Zarur

(italics indicate graduate faculty.)
Premedical, Predental, and Preveterinary Students

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

Requirements for Nursing Program

The laboratory science requirement for the BA and the chemistry requirement for nursing are satisfied by CHEM 103-104.

Requirement for Elementary Education Major

The laboratory science requirement for elementary education majors can be satisfied by CHEM 106.

Courses in Support of Graduate Programs

Although a graduate degree is not offered by the Department of Chemistry, the department does offer graduate courses in support of graduate programs: CHEM 500, 501, 561, and GEOL 500, 501. In addition, the following undergraduate chemistry courses have been approved for graduate credit: CHEM 331, 332, 413, 422, 431, 432, 441, 445, 461, 462. Course descriptions appear in the Course Dictionary of this catalog.

BS 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 45 semester hours in geology. Required geology courses are: GEOL 101, 102, 201, 202, 301, 303, 302 or 304, and 401. GEOL 104, 310, 311, and a six-to-eight-week approved summer field camp course are strongly recommended for all geology majors. Up to 12 semester hours of credit for geography courses and up to 12 semester hours of credit for biology courses approved by the geology coordinator may be counted in the required 45 semester hours in geology.

The geology major is required to complete CHEM 211-212 and at least 25 additional semester hours in mathematics and science (astronomy, biology, chemistry, computer science, geography, or physics) approved by a geology staff adviser. One year each of calculus, computer science, biology, and physics, and two years of French, German, or Russian are strongly recommended for majors who contemplate graduate study in geology.

Minimum course requirements are as follows:

- Geology: 45
- English and Literature: 12
- Chemistry 211-212: 8
- Other Sciences and Math: 25
- Electives: 30

Total: 120

Sample Schedule for BS in Geology

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<thead>
<tr>
<th>Semester</th>
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<th>Second Semester</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>CHEM 211</td>
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Sample Schedule for BS in Geology

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<td>Seventh</td>
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Economics

Faculty

Professors: Snavely (Chairman), Bennett. Bloch, Phillips, W. Williams (Visiting)

Associate Professors: Chung*, Holden, M. Johnson**, Vaughn, West

Assistant Professors: Alford, Lareau, Orzechowski, Pupp, Pennington

Acting Assistant Professors: Carpenter, Fink, Hainer, Kariotis, Manage, Mattes, Shear, G. Williams


* On leave of absence Spring-Fall, 1981
** Spring, 1981, only (Italics indicate graduate faculty.)

Department of Economics Coursework

This department offers all coursework designated ECON in the Course Dictionary of this catalog. Individual courses taken for credit under their former numbers may not be taken again for credit under their present numbers.

COLLEGE OF ARTS AND SCIENCES 55

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Requirements for the Degrees

Undergraduate

BA Degree with a Major in Economics
Students majoring in economics must satisfy general requirements set for the Bachelor of Arts degree at George Mason University. In addition they must present 33 hours of work in economics, to include ECON 306 and 311, and six hours of statistics.

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

BS Degree with a Major in Economics
In addition to general requirements for a Bachelor of Science degree listed in the catalog, the BS with a major in economics requires 39 hours of credit in economics, to include ECON 306, 311, and 345. In addition to the 39 hours of credit in economics, students must also complete ACCT 201; MATH 109 and DESC 202; MATH 113, 114, and CS 261 or 111 (263); 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. Please refer to the catalog section under the Department of Education, Secondary School Education.

Graduate

Master of Arts in Economics
This program is designed to provide students with the fundamentals of economic analysis and with specialized knowledge of the various fields offered. The program is designed to serve:
1. Students with recent baccalaureate degrees who wish to become qualified for employment with the numerous public and private institutions that hire economists in the metropolitan area and elsewhere.
2. Individuals presently employed in business and government who desire to further their professional careers through graduate training in economics.
3. Students who intend to continue their advanced education toward a PhD in economics.

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, the applicant will normally be expected to hold a baccalaureate degree in economics. Students with an undergraduate major in a field other than economics may be admitted to the program if their record demonstrates sufficient background in economics and allied fields. MATH 108 or its equivalent is required for admission to degree status. The department requires that undergraduate deficiencies be made up by completion of appropriate remedial work—to include intermediate macro and microeconomic analysis—taken without graduate credit. Before admission to degree status, students must submit satisfactory Graduate Record Examination scores or hold a graduate degree in another field, or complete six to twelve hours of graduate coursework in non-degree status or Extended Studies enrollment with a grade point average of at least 3.00.

Departmental Degree Requirements
Students must meet all the degree requirements of the Graduate School. In addition, the master’s program in economics requires 30 semester hours of graduate credit, with a thesis option for which up to six semester hours of credit may be granted. All students are required to take ECON 501 and 513, or their equivalent. Those selecting the non-thesis option are required to take ECON 544: Econometrics I. In special circumstances, students may be permitted to apply toward the required 30 credits up to six semester hours of graduate credit taken in closely related fields. The required comprehensive examination in micro and macroeconomic analysis is offered on the third Saturday of each semester.

Sample Schedule for BA with a Major in Economics

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<th>Semester</th>
<th>Courses</th>
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<tr>
<td>First Semester</td>
<td>Communication, Group A (ECON 103 or 104)</td>
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<tr>
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<td>Communication, Group C</td>
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<tr>
<td></td>
<td>Natural science</td>
</tr>
<tr>
<td></td>
<td>Social science</td>
</tr>
<tr>
<td></td>
<td>Humanities, Group A</td>
</tr>
<tr>
<td></td>
<td>Communication, Group B</td>
</tr>
<tr>
<td>Second Semester</td>
<td>Communication, Group A</td>
</tr>
<tr>
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<td>Communication, Group C</td>
</tr>
<tr>
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<td>Natural science</td>
</tr>
<tr>
<td></td>
<td>Social science</td>
</tr>
<tr>
<td></td>
<td>Humanities, Group A</td>
</tr>
<tr>
<td></td>
<td>Communication, Group B</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Humanities, Group A</td>
</tr>
<tr>
<td></td>
<td>Communication, Group C</td>
</tr>
<tr>
<td></td>
<td>Analytical Reasoning (MATH 108)</td>
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<td></td>
<td>ECON 311</td>
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<td>Communication, Group B</td>
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<td>Fourth Semester</td>
<td>Humanities, Group A</td>
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<td>Communication, Group C</td>
</tr>
<tr>
<td></td>
<td>ECON 306</td>
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<td>Fifth Semester</td>
<td>Economics electives</td>
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<td>DESC 202</td>
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<td>Social science, Group B</td>
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<td>Non-Western culture</td>
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<tr>
<td></td>
<td>Economics electives</td>
</tr>
<tr>
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<td>Economics electives</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
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<td></td>
<td>Electives</td>
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<td>Sixth Semester</td>
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<td>Social science</td>
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<td>Electives</td>
</tr>
<tr>
<td>Seventh Semester</td>
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</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
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<tr>
<td></td>
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Sample Schedule for BS with Major in Economics

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<tr>
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<th>Courses</th>
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<tr>
<td>First Semester</td>
<td>ECON 103 or 104</td>
</tr>
<tr>
<td></td>
<td>English composition</td>
</tr>
<tr>
<td></td>
<td>MATH 113</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td>Second Semester</td>
<td>ECON 104 or 103</td>
</tr>
<tr>
<td></td>
<td>English composition</td>
</tr>
<tr>
<td></td>
<td>MATH 114</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
</tbody>
</table>

55  GEORGE MASON UNIVERSITY

http://catalog.gmu.edu
English

Faculty

Professors: Cohn (Chairman), Baxter, L. Brown, S. Brown, Garson, Gras***, Jackson, Kelley, Molin, Sundell

Visiting Professor: Edmund White**

Associate Professors: Bergmann***, Brunette, Comito, Foreman, Gallehr, Goodwin*, Karlson, Keaney, Kuebrich, Lewis, Nadeau, O'Connor, Palmieri, Radner, Rutledge, Shreve, Story***, Tsukui

Assistant Professors: Acharya, Adamson, Bausch, Davis, Eisner, Grossberg**, Hammond, Irvine, Kaplan***, KlapPERT***, Mohr, Owens, Snow, Sypher, Thaiss, Walowit, Yocon

Visiting Assistant Professor: Ai****

Instructors: Kauer, Peters

Lecturers: Adkinson, Argoff, Avila, Bausch, Berg, Brent, Chell, Clements, Fawcett, Goldsmith, Harris, Hodges, Holisky, Jacobs, Johnson, Kunde, Lindstrom, McLeod, Nicholas, O'Connell, Pancost, Parsons, Richards, Schiffman, Tadros, Truebell, Watson, Wells, Williams, Wilson, Wotring

*On leave of absence Fall, 1980; **Fall, 1980; ***on leave of absence 1980-81; ****Leave of absence, Spring, 1981; *****Spring, 1981

(italics indicate graduate faculty.)

Department of English Coursework

This department offers all coursework designated ENGL in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in English

The English department offers two major programs: the Literature Program and the Writing Program. The requirements for the Literature Program took effect with the Fall 1975 semester, and the requirements for the Writing Program took effect in Fall 1977; see "Catalog Requirements for Graduation."

The Literature Program. In addition to general requirements for a Bachelor of Arts degree, students who wish to receive the traditional BA in English Literature must complete 30 hours of coursework beyond sophomore English with the following distribution:

1. One three-semester hour course from the following: ENGL 391, 392, 397, 398, 467, 469, 485, 555, and 580 to increase their understanding of the English language, either through an analysis of language (391, 392, 485, 555, and 580), or through a making of language (397, 398, 467, and 469), and consequently to appreciate better how language functions in literature.

2. Nine hours in English or American Literature prior to 1900. This requirement may be met by courses listed in this catalog numbered ENGL 341 through ENGL 362; ENGL 370, 371, 381, 382, 387, 444, and 557, and sometimes ENGL 441 and 442; when these courses focus on subjects prior to 1900. This requirement gives students the opportunity to study literature written in the English language in a period significantly different from their own, and by contrasting the past and the present to increase appreciation of both.

The Writing Program. For students who wish to prepare for a career in fiction or nonfiction writing, the English department offers a major program with special emphasis in writing. In addition to general requirements for a BA degree, students who wish to pursue this program must complete 30 hours of coursework beyond sophomore English with at least 12 credits in the following courses: ENGL 309, 310, 397, 398, 464, 465, 466, 467, 503.

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.

Writers' Conference and Literary Festival

The University's annual Writers' Conference and Literary Festival, which may be taken for undergraduate or graduate credit, brings poets, writers, editors, and publishers to campus for readings, lectures, workshops, and panel discussions. Writers who have visited the campus through the Festival or as part of the regular reading series include Lucille Clifton, Robert Coover, Amiri Baraka, Marvin Bell, Jane Howard, Raymond Federman, Michael Harper, John Irving, Maxine Kumin, and others.

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 chairperson of the Department of English.

The English Department offers a double English-Philosophy major in cooperation with the Department of Philosophy and Religion. Contact the English Department for details.

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. Students must meet the following requirements: senior status, 15 hours in English or special permission of the chairperson, a grade point average of 3.00 in advanced English courses, and permission of the instructor. 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.

Undergraduate-Graduate Courses

The following undergraduate course has been approved for graduate credit: ENGL 431: Medieval Intellectual Topics. Course description appears in the Course Dictionary of this catalog.

COLLEGE OF ARTS AND SCIENCES

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Sample Schedule for Undergraduate English Majors

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<td>Econ., govt., geog., or hist.</td>
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<td>Logic or mathematics</td>
<td>Philosophy or religion</td>
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<td>ANTH 114</td>
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<td>Oral communication</td>
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<tr>
<td>16</td>
<td>15</td>
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Graduate
The Department of English offers graduate study designed to provide professional training in the study and practice of writing and literature to students with widely differing aims. The Master of Arts in English (30 semester hours) provides concentrations in literature, in professional writing and editing, in the writing of fiction or poetry, and in the teaching of writing and literature. The department also offers a Master of Arts in English: Linguistics (30 semester hours) and a Master of Fine Arts in creative writing (48 semester hours); a certificate in the teaching of English as a second language (15 semester hours); and courses as part of the Doctor of Arts in Education degree.

Master of Arts in English...
...with Concentration in Literature
...with Concentration in Professional Writing and Editing
...with Concentration in the Writing of Fiction or Poetry
...with Concentration in the Teaching of Writing and Literature

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, applicants are asked to submit two copies of a writing sample of approximately 1,000 words and two letters of recommendation. The writing sample may be a paper written for an undergraduate course or any other material which gives evidence of an applicant's writing skills. In addition to the 1,000-word writing sample required of all applicants for the MA in English, applicants for the Concentration in Professional Writing and Editing are asked to submit two copies of a 10-15 page sample of their non-fiction work (this sample may consist of a technical or business report, an essay, a term paper, an editing project, or any other material reflecting the student's interests and skills in non-fiction writing). Applicants for the Concentration in the Writing of Fiction or Poetry are requested to submit, in addition to the 1,000-word writing sample, 2 copies of a portfolio consisting of up to 10 pages of poetry or 20 pages of fiction. Applicants may submit scores on the Graduate Record Examination when they believe those scores will lead to a clearer presentation of their qualifications. Those with undergraduate majors in disciplines other than English are encouraged to apply, but they may be required to make up deficiencies by taking appropriate undergraduate courses without graduate credit.

Departmental Degree Requirements
A. Successfully complete 30 semester hours of credit in graduate English courses. With the approval of the department, up to six hours of graduate credit in courses in related disciplines may be substituted for six hours in English.
B. General Requirements for all Concentrations
1. ENGL 701: Literary Scholarship, normally in the first semester of study.
2. Nine hours in literature courses, including:
   a. Three hours in English or American literature written before 1900.
   b. Three hours in the major figures series (ENGL 745-781). The hours used to fulfill this requirement may not be used to satisfy 2a.
   c. For the Concentration in the Teaching of Writing and Literature only, ENGL 610 may be used to fulfill the remaining three hours of the literature requirement.
3. Students who have not already successfully completed 12 hours of undergraduate credit in a foreign language (or its equivalent) must either do so or demonstrate equivalent proficiency by passing the Graduate School Foreign Language Test (GSFLT). (Apply to Academic Testing, Trailer #105, for further details.)
C. Concentration Requirement (one Concentration must be completed)
   1. Concentration in Literature.
      a. Three hours in ENGL 705: Literary Theory and Criticism.
      b. Nine hours in a core program organized by period, genre, theme, or some other principle approved by the student's advisor and the Director of Graduate Studies in English. These hours will customarily be in addition to those used to satisfy the general requirements. In two courses of the core program, the candidate must write an MA paper, a substantial paper on a topic agreed upon with the course instructor at the beginning of the semester. The MA papers must receive a grade of B or better, and will be filed with the Department of English.
      c. Six hours of electives.
      d. Optional: Six hours of thesis may be substituted for the core program.
   2. Concentration in Professional Writing and Editing.
      a. Three hours in nonfiction writing.
      b. Nine hours in professional courses: e.g., editing, technical writing, or Northern Virginia Writing Project.
      c. Three hours in creative writing.
      d. Three hours of thesis.
   3. Concentration in the Writing of Fiction or Poetry.
      a. Three hours in Form of Poetry or Form of Fiction.
      b. Six hours of workshop in fiction or poetry.
      c. Six hours of electives in writing or literature.
      d. Three hours of thesis.
   4. Concentration in the Teaching of Writing and Literature.
      a. Six hours in writing courses.
      b. Three hours in linguistics.
      c. Three hours in the teaching of writing and three hours in the teaching of literature.
      d. Six hours of electives from literature or writing; alternatively, a thesis may be arranged through the student's advisor and the Director of Graduate Studies in English.
Master of Arts in English: Linguistics

The MA degree in English: Linguistics is an interdisciplinary program which combines courses in linguistics with courses in some related area of language study such as teaching English as a second language, bilingual education, or foreign language teaching. The course of study is designed to prepare students for teaching in one of these fields or for doctoral work. The Certificate in Teaching English as a Second Language can be earned concurrently (see below).

Departmental Entrance Requirements

The entrance requirements are the same as those for the Master of Arts in English. Students with undergraduate majors in any field are encouraged to apply; there are no specific prerequisites.

Departmental Degree Requirements

A. Successfully complete 30 semester hours of graduate credit distributed as follows:
   1. 15 hours in the following core courses:
      a. ENGL 620: Descriptive Linguistics
      b. ENGL 522: Modern English Grammar
      c. ENGL 530: Generative Phonology
      d. ENGL 535: Theories of Language
      e. ENGL 623: Semantics and Pragmatics
   2. 15 hours of graduate electives, chosen in consultation with an adviser, which reflect one or more areas of language study. The electives can be in such areas as literary criticism, bilingual education, or a foreign language, and may include six hours of thesis.

B. Students who have not already successfully completed 12 hours of undergraduate credit in a foreign language (or its equivalent) must either do so or demonstrate equivalent proficiency by passing the Graduate School Foreign Language Test (GSFLT). (Apply to Academic Testing, Trailer #105, for further details.)

Master of Fine Arts in Creative Writing

In addition to fulfilling the entrance requirements of the Graduate School, applicants are asked to submit two letters of recommendation, two copies of a non-fiction writing sample of approximately 1000 words, and two copies of a portfolio of fiction and/or poetry. The non-fiction writing sample may be a paper written for an undergraduate class or any other work which gives evidence of an applicant's basic writing skills. The additional portfolio should contain up to 20 pages of poetry or 50 pages of fiction.

Basic Discipline in English as Part of Doctor of Arts in Education

Departmental Entrance Requirements

A. Application Material. In addition to material requested by the Graduate School and the Department of Education, applicants planning a Basic Discipline in English must present:
   1. Scores from the aptitude section of the Graduate Record Examination.
   2. A writing sample of approximately 1000 words.
   3. A letter of recommendation from a person with specific knowledge of the applicant's work in English.

B. Minimum Requirements. While a BA or an MA in English is desirable, an applicant must have earned:
   1. Fifteen credits of graduate or upper-division undergraduate work in English or American literature.
   2. Three credits in graduate or upper-division undergraduate work in Linguistics or History of the Language.
   3. Three credits of graduate coursework in Bibliography and Research, and three credits of graduate coursework in Critical Theory.

Applicants with a particular interest in a concentration in writing are also required to present evidence of advanced work in the field. Especially qualified students lacking certain of the above requirements may be admitted and allowed to enroll in the appropriate English courses on the graduate level. These courses will not be counted toward the Doctor of Arts in Education.

Certificate in the Teaching of English as a Second Language

In addition to fulfilling the entrance requirements of the Graduate School, applicants are asked to submit two letters of recommendation, two copies of a non-fiction writing sample of approximately 1000 words, and two letters of recommendation. The certificate may be pursued concurrently with any of several degree programs offered through the Department of Education, the Department of English, and the Department of Foreign Languages and Literatures, and part of the work toward the certificate may be applicable toward degrees in those departments.

Departmental Certificate Requirements

Candidates for the certificate must successfully complete the series of graduate English courses listed below, achieving a grade of B or better in each course in the series.

1. ENGL 620: Descriptive Linguistics
2. ENGL 522: Modern English Grammar
3. ENGL 580: Applied Linguistics
4. ENGL 581: Psycholinguistics or ENGL 615: Proseminar in Composition Instruction (Additional courses, including some from other departments, may be used to fulfill this requirement. Please apply to the Department of English for a list of approved electives.)
5. ENGL 621: Applied Linguistics: Teaching English as a Second Language Methodology
Fine and Performing Arts
and Communication

Faculty
Professors: Taylor (Communication) (Chairman), di Bonaventura (Music), Swan (Theatre)
Associate Professors: Burton (Music), Decker (Communication), Hill (Music Education), Kanyan (Music), Kravitz (Art), Manchester (Communication), Murphey (Dance), J. Smith (Music)
Assistant Professors: Allen (Communication), Brawley (Music), Castro (Art), ffoliott (Art), Friedley (Speech), Hammond (Art), Jahnke (Dance), Mattusch (Art), Nichols (Theatre), North (Art), Powell (Theatre), G. Smith (Music), Ward (Art)
Acting Assistant Professors: Hausman (Theatre), Rainey (Communication)

Lecturers: Boileau (Communication), Dassenbrock (Art), Distefano (Communication), Ferruza (Music), Gabriel (Communication), Gary (Music), Hutchens (Art), Joffe (Communication), Kendall (Art), MacDonald (Dance), McCarty (Art), Ofori-Ansah (Art), Perlo (Dance), Seltzer (Communication), Smith (Music), Stevens (Music), von Bogendorf-Rupprath (Art), Woolen (Music)

Applied Music Faculty
Bassoon
Truman Harris. BA, North Texas State University; MM, Catholic University; bassoonist, National Symphony Orchestra.

Cello
Yvonne Caruthers. BM, Eastman School; cellist, National Symphony Orchestra.

Thea Cooper. BFA, Carnegie-Mellon; MM, University of Maryland; former cellist, Kennedy Center Opera House Orchestra; former gambist, A Newe Jewell.

Clarinet
Joseph Kanyan. BS, Indiana University, Pennsylvania; MM, DMA, Catholic University; former clarinetist, US Army Band (Washington, DC); Director Instrumental Music, GMU.

Euphonium
Merrill Erler. BM, University of Minnesota; former brass performer, National Theatre Orchestra, National Gallery Orchestra, and US Navy Band (Washington, DC).

Flute

Guitar (Classic)

Harp
Jeanner Chalifoux. Curtis Institute of Music.

Horn
David Whaley. BME, Drake University; MM, DMA, University of Illinois; hornist, National Symphony Orchestra.

Oboe
Gene Montooth. BME, Indiana University; principal oboist, Kennedy Center Opera House Orchestra, Filene Center Orchestra (Wolf Trap), and National Gallery Orchestra.

Organ
J. Franklin Clark. BA, University of Evansville; MM, New England Conservatory; organist, Lewinsville Presbyterian Church; accompanist and assistant director, Alexandria Performing Arts Chorale.

Charles Whittaker. BM, Westminster Choir College; organist, Fairfax United Methodist Church.

Percussion
Kenneth Harbison. BM, Eastman School; MM, Catholic University; percussionist, National Symphony Orchestra.

Piano
Thomas Brawley. BM, Greensboro College; MM, PhD, Northwestern University.

Joaanne Haroutounian. BA, Trenton State College; MA, American University.


Johanne Schmitt. BM, Michigan State University; MM, Indiana University; pianist, Cosmos Camerata; formerly, Gallery Chamber Artists, and Aspen Festival Orchestra.

Elizabeth Stevens. BM, Oberlin Conservatory; MM, University of Illinois; DMA, Boston University; pianist, National Symphony Orchestra.

June Tray hern. BM, Eastman School; founder and former director, Academy of Musical Arts (McLean, VA).

Saxophone
Richard Kleinfieldt. BME, Millikin University; MM, Catholic University; saxophonist, US Army Band (Washington, DC).

String bass
Donald Havas. BM, Oberlin Conservatory; MM, University of Tulsa; string bassist, National Symphony Orchestra.

Trombone
Merrill Erler (see listing under Euphonium).

Milton Stevens. BM, Oberlin Conservatory; MM, University of Illinois; DMA, Boston University; principal trombonist, National Symphony Orchestra.

Trumpet
David Flowers. BM, MM, University of Michigan; DMA, Catholic University; trumpeter, National Symphony Orchestra.


Tuba
Merrill Erler (see listing under Euphonium).

Viola
Richard Parmas. Curtis Institute of Music; principal violist, National Symphony Orchestra.

Ramón Scavelli. Philadelphia Musical Academy; violist, National Symphony Orchestra.

Violin
William Haroutounian. BM, Curtis Institute of Music; MM, Catholic University; violinist, National Symphony Orchestra.

Voice
Inga-Brita Elgcrna. AB, Barnard College; soloist, Hermon Presbyterian Church.

Rilla Mervine. AA, North Dakota State University; Certificate, Peabody Conservatory; soloist; major US orchestras, oratorio and choral societies, Phillips Collection, and National Gallery of Art.

James G. Smith. BM, MM, Peabody Conservatory; DMA, University of Illinois; former conductor, University of Illinois Chamber Choir; former Director, Choral Activities, the Eastman School.

Vera Tilson. Mannes School of Music; music director, Unitarian Church of Arlington; former music director and conductor, Arlington Metropolitan Chorus.

Gene Tucker. BM, Eastman School; soloist with Marlboro Music Festival, major US orchestras, opera companies, oratorio and choral societies.

Jane White. BM, Eastman School; MA, American University; soloist, Marlboro Bach Festival, Phillips Collection, and musical organizations (Washington, DC).
Early Instruments
Viola Da Gamba
Thea Cooper (see listing under Cello).

Non-Western Instruments
Koto
Kyoko Okamoto. Bachelor in Languages, Kyoto University of Foreign Studies; Toho Kinshu Kai (Koto School).

Composition
Sam di Bonaventura. BS, Julliard School; BM, MM, Yale University; MA, Harvard University; DMA, Peabody Conservatory.
Glen Smith. BA, MA, California State University, Hayward; D Mus, Indiana University.

Conducting
Joseph Kanyan (see listing under Clarinet).
James G. Smith (see listing under Voice).

Department of Fine and Performing Arts and Communication Coursework
This department offers all coursework designated ART, COMM, DANC, MUSI, and THR in the Course Dictionary of this catalog.

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.

Requirements for the Degrees
Undergraduate

Art
BA 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.

Studio Art. In addition to general requirements for a Bachelor of Arts degree, students concentrating in studio art must complete a minimum of 42 hours in art.

Concentration in Studio Art
Introductory Drawing 6
Fundamentals of Design 6
Introductory Painting 3
Introductory Sculpture 3
Introductory Printmaking 3
Survey of Western Art 6
Studio Art Electives 15
Total 42

Students can choose an emphasis in one of the following Studio Art areas:
1. Design
2. Painting
3. Drawing
4. Sculpture
5. Printmaking
6. General Studio

Studio electives can be chosen as follows:

Design Emphasis
ART 211, 212: Intermediate Design
ART 309, 310: Graphic Design
ART 311 or 312: Basic Letterpress Typography

Drawing Emphasis
ART 201 or 202: Introductory Painting
ART 203, 204: Intermediate Drawing
ART 303, 304: Advanced Drawing Studio

Painting Emphasis
ART 201 or 202: Introductory Painting
ART 203 or 204: Intermediate Painting
ART 301, 302: Intermediate Painting
ART 401 or 402: Advanced Painting

Sculpture Emphasis
ART 203 or 204: Intermediate Drawing
ART 215 or 216: Introductory Sculpture
ART 315, 316: Intermediate Sculpture
ART 415 or 416: Advanced Sculpture

Printmaking Emphasis
ART 203 or 204: Intermediate Drawing
ART 205, 206: Printmaking—Relief and Intaglio
ART 305, 306: Intermediate Printmaking
ART 311 or 312: Basic Letterpress Typography

General Studio Emphasis
ART 201 or 202: Introductory Painting
ART 203 or 204: Intermediate Painting
ART 301 or 302: Intermediate Painting
ART 315 or 316: Intermediate Sculpture

Art History. In addition to the general degree requirements for a Bachelor of Arts 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. Students contemplating graduate study in art history should acquire a reading knowledge of French and/or German.

Concentration in Art History
Introductory Drawing or Fundamentals of Design 3
Art History Electives at the 100 or 200 level . . . . 6
Art History Electives at the 300 level . . . . . . . . 24
Art History Electives at the 400 level . . . . . . . . 6

Sample Schedule for Emphasis in Design

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Fundamentals of Design</td>
<td>Fundamentals of Design</td>
</tr>
<tr>
<td>Introductory Drawing</td>
<td>Introductory Drawing</td>
</tr>
<tr>
<td>Survey of Western Art</td>
<td>Survey of Western Art</td>
</tr>
<tr>
<td>Studio Art Electives</td>
<td>Studio Art Electives</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>
Courses in Support of Graduate Programs

Although a graduate degree program in art is not available through the Department of Fine and Performing Arts and Communication, the department does offer graduate courses in support of graduate programs: ART 601, 602, 605, 606. In addition, the following undergraduate art courses have been approved for graduate credit: ART 491, 492. Course descriptions appear in the Course Dictionary of this catalog.

Music
Requirements for the Major in Music

The two music 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 music on the elementary and secondary levels. Entrance to all music degree programs is by audition only. Arrangements must be made in advance for an audition by contacting the Department of Fine and Performing Arts and Communication 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 also required of all transfer students who desire to present transfer credit in any of the following areas: Written Harmony, Keyboard Harmony, Sight Singing, Ear Training, and Class Piano (for dates, see the Academic Calendar in the front of this catalog).

At the University, students seeking certification to teach music on the elementary and secondary levels must earn the Bachelor of Music degree. Music students applying for admission to the teacher education program must meet the requirements of the Teacher Education Screening Committee and, in addition, must be recommended by the music faculty to the Teacher Education Screening Committee. For students who have earned a baccalaureate degree and who are seeking state certification to teach music, this recommendation is normally made contingent upon completion of the sequence of courses listed under "Bachelor of Music—Concentration in Music Education." It should be noted that the courses listed under General Education and Additional Courses in the Music Education Concentration are used to fulfill state certification requirements and the University's requirements.

BA 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 in music.

Required courses in music are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony I, II, III, IV</td>
<td>11</td>
</tr>
<tr>
<td>Keyboard Harmony</td>
<td>1</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I, II</td>
<td>4</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music¹</td>
<td>9</td>
</tr>
<tr>
<td>Class Piano I, II</td>
<td>2</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

¹MUSI 231 (Survey of World Music), which fulfills half of the non-Western culture requirement, is usually taken the semester preceding the first course in the Historical, Theoretical, and Analytical Study of Music sequence.

²Voice majors must earn seven credits in University Choruses and or University 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 Choruses, University Chorus, Chamber Orchestra, Symphonic Winds).

Bachelor of Music

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 Education² | 32  
ENGL 101 and 102 | 6  
Literature | 6  
This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures or from among the following specified 200-level courses in foreign literatures: CLAS 250, FREN 255, GERM 254, RUSS 254.

Natural Sciences/ Mathematics/ Computer Science | 6  
astronomy, biology, chemistry, computer science, geology, mathematics, physics

Social Sciences | 6  
anthropology, economics, geography, government, history, linguistics, psychology, sociology

Additional Non-Music Courses | 8  
Basic Musicianship | 58  
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  
Ensemble² | 8  
Music Concentration³ | 18  
Free Electives | 22  
Total | 130  

²Courses in the College of Arts and Sciences only
³Voice majors must earn eight credits in University Choruses and or University 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 Choruses, University 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.)
Concentrations in Music (Bachelor of Music)

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).
Private Music Instruction-Composition 8
Composition Recital 1
Techniques of 20th-Century Style Analysis 3
Theory Elective 3
Advanced Conducting 2
Improvisation 1
18

Concentration in Performance
For admittance into the concentration in Performance, a student must submit 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 Keyboard Performance
Major Instrument (Private Music Instruction) 8
Junior Recital 1
Senior Recital 1
Keyboard Literature 3
Keyboard Pedagogy 3
Improvisation 1
Music Elective 1
18

Concentration in Vocal Performance
Eight semester hours must be earned in French or German.
Private Voice (Private Music Instruction) 8
Junior Recital 1
Senior Recital 1
Choral Literature or Operatic Literature 3
Advanced Conducting 2
Improvisation 1
Ensembles 2
18

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
18

Concentration in Music History and Literature
Fifteen semester hours must be earned in GER 151, 152, 251, and 254.
For admittance into the Music History and Literature Concentration, 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).
Music Literature 12
Theory Elective 3
Independent Study 3
18

Concentration in Music Education (Virginia Certification to Teach Music)
A total of 139 semester hours is required for the Bachelor of Music with a concentration in Music Education.
The requirements by area are:
General Education
ENGL 101 and 102 6
Literature
This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures or from among the following specified 200-level courses in foreign literatures: CLAS 250, FREN 255, GERM 254, RUSS 254, SPAN 255, 257, or 258.
HIST 121 or 122 3
Social and/or behavioral science 9
Laboratory science 8
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 7
Laboratory Ensemble 1
Music Education Concentration
Laboratory Ensemble 1
Class Instruments/Voice 4
Advanced Conducting 2
Improvisation 1
Music Methods 6
Additional Courses
Mathematics 2 3
Mathematics or science 2 3
Human Growth and Development 3
Foundations of Education 3
Educational Psychology 3
HEAL 110 3
Modern Dance 2 2
Free elective 2
Additional Requirements
Student teaching 9 9
Total 139
1The Music Education degree program is certified by the Virginia State Department of Education and the National Council for the Accreditation of Teacher Education. General Education courses and Additional Courses are derived from state certification and NCATE requirements as outlined by the Department of Education. The National Teachers Examination and the related music examination must be taken before state certification can be granted.
2Courses from the College of Arts and Sciences only.
3Voice majors must earn seven credits in University Chorale and/ or University 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, University Chorus, Chamber Orchestra, Symphonic Winds).
4Intrumental Emphasis—The following 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. Students whose major performance medium is something other than a band or orchestra 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—The following courses are required: Class Voice I, Class Guitar, two credits of Private Music Instruction (piano), and three of the following instrument classes: (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). Students whose major performance medium is not voice, must earn five of the seven required ensemble credits in University Chorale or Chorus and/ or Gloriana Singers and must earn a minimum of six additional credits of Private Music Instruction in voice (or the equivalent), the actual number to be determined by an audition committee.
6MUSI 461 and 462, 463, or 464, or MUSI 462 and 463 or 464.
7May not be used to satisfy the 130 credit hours required for the Bachelor of Music degree.
### Sample Schedule for BA with Major in Music

<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>FRLN 151</td>
<td>FRLN 152</td>
</tr>
<tr>
<td>Harmony I</td>
<td>Harmony II</td>
</tr>
<tr>
<td>Sight Singing and Ear</td>
<td>Sight Singing and Ear</td>
</tr>
<tr>
<td>Training I</td>
<td>Training II</td>
</tr>
<tr>
<td>Class Piano I</td>
<td>Class Piano II</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>Major instrument or voice (Private Music Instruction)</td>
</tr>
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### Third Semester

<table>
<thead>
<tr>
<th>Literature (English or Foreign Languages and Literatures)</th>
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<tbody>
<tr>
<td>FRLN 251</td>
<td>3</td>
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<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>Harmony III</td>
<td>3</td>
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<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
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### Fourth Semester

<table>
<thead>
<tr>
<th>Literature (English or Foreign Languages and Literatures)</th>
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<tbody>
<tr>
<td>Natural science</td>
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<tr>
<td>Survey of World Music</td>
<td>3</td>
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<tr>
<td>Harmony IV</td>
<td>2</td>
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<tr>
<td>Keyboard Harmony</td>
<td>1</td>
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<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
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### Fifth Semester

<table>
<thead>
<tr>
<th>Social science</th>
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</thead>
<tbody>
<tr>
<td>Mathematics or logic</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I</td>
<td>3</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
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<tr>
<td>Ensemble</td>
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### Sixth Semester

<table>
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<tr>
<th>Social science</th>
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</thead>
<tbody>
<tr>
<td>Fine arts elective</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music II</td>
<td>3</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music concentration</td>
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</tr>
<tr>
<td>Free electives</td>
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</table>

### Seventh Semester

<table>
<thead>
<tr>
<th>Social science</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music III</td>
<td>3</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
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</tbody>
</table>

### Eighth Semester

<table>
<thead>
<tr>
<th>Historical Theoretical, and Analytical Study of Music IV</th>
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<tbody>
<tr>
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<tr>
<td>Ensemble</td>
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</tr>
<tr>
<td>Music concentration</td>
<td>3</td>
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<tr>
<td>Free electives</td>
<td>16</td>
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</table>

### Sample Schedule for Bachelor of Music with Virginia Certification to Teach Music

<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>Social or behavioral science</td>
<td>3</td>
</tr>
<tr>
<td>Harmony I</td>
<td>3</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano I</td>
<td>2</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I</td>
<td>3</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>Harmony III</td>
<td>3</td>
</tr>
<tr>
<td>Class instrument:voice</td>
<td>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social or behavioral science</td>
<td>3</td>
</tr>
<tr>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>History, Theoretical, and Analytical Study of Music IV</td>
<td>3</td>
</tr>
<tr>
<td>General Conducting</td>
<td>2</td>
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<tr>
<td>Class instrument:voice</td>
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</tr>
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<table>
<thead>
<tr>
<th>Foundation Studies</th>
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<tbody>
<tr>
<td>Educational Psychology</td>
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<tr>
<td>History, Theoretical, and Analytical Study of Music IV</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Class instrument:voice</td>
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</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
</tbody>
</table>
Courses in Support of Graduate Programs

Although a graduate degree program in music is not available through the Department of Fine and Performing Arts and Communication, the department does offer graduate music courses in support of graduate programs: MUSI 561, 597, 671, 675, 800. Course descriptions appear in the Course Dictionary of this catalog.

Speech Communication

BA Degree with a Major in Speech Communication

The speech communication program prepares the major for graduate study in acting and directing, technical theatre, history and literature, and dance, as well as for professional activities and research. In addition to general requirements for the Bachelor of Arts degree, theatre majors must complete a minimum of 42 hours in the major, 23 hours required core courses and 19 hours in an elected area of concentration. Areas of concentration are: 1. Acting/Directing, 2. Technical Theatre, 3. History and Literature, 4. Dance. All majors are expected to participate in theatre or dance production. Required courses for the theatre major are:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>ENGL 101 3</td>
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<tr>
<td></td>
<td>Natural science 4</td>
</tr>
<tr>
<td></td>
<td>Foreign language 4</td>
</tr>
<tr>
<td></td>
<td>COMM 110, 120, or 130 3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>ENGL 102 3</td>
</tr>
<tr>
<td></td>
<td>Natural science 4</td>
</tr>
<tr>
<td></td>
<td>Foreign language 4</td>
</tr>
<tr>
<td></td>
<td>COMM core course 3</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Foreign language 4</td>
</tr>
<tr>
<td></td>
<td>Fine arts 3</td>
</tr>
<tr>
<td></td>
<td>Anth., or psych., or soci. 3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Anth., or psych., or soci. 3</td>
</tr>
<tr>
<td></td>
<td>Analytical Reasoning 3</td>
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<tr>
<td></td>
<td>Literature 3</td>
</tr>
<tr>
<td></td>
<td>COMM core course 3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Econ., geog., or hist. 3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture 3</td>
</tr>
<tr>
<td></td>
<td>Cognate 3</td>
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<tr>
<td></td>
<td>Communication elective 3</td>
</tr>
<tr>
<td></td>
<td>General elective 3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Econ., geog., or hist. 3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture 3</td>
</tr>
<tr>
<td></td>
<td>Cognate 3</td>
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<tr>
<td></td>
<td>Communication elective 3</td>
</tr>
<tr>
<td></td>
<td>General elective 3</td>
</tr>
</tbody>
</table>

Area of Concentration Requirements:

1. Acting/Directing
   1. Acting III 3
   2. Directing I and II 6
   3. Practicum** 4
   4. Theatre electives 6
   Total 19

2. Technical Theatre
   1. Scene Design 3
   2. Stagelighting Design 3
   3. Costume and Make-up 3
   4. Practicum** 4
   Total 19

3. History and Literature
   1. Theatre of India & Southeast Asia 3
   2. Theatre of East Asia 3

Total 42
Black Theatre ........................................ 3
Theories of Theatre .................................. 3
Practicum* ............................................. 1
Dramatic literature courses (see ENGL) ............ 6
Total ................................................. 19

4. Dance**
Dance Composition I & II ................................ 6
Dance History ......................................... 3
Dynamic Alignment ................................... 3
Dynamic Alignment as applied to the Teaching of Dance ........................................ 3
Dance Performance .................................... 3
Dance Elective ......................................... 1
Total ................................................. 19

*Dance Appreciation may be substituted for those selecting the dance area of concentration.
**Practicum—courses such as Play Production Practicum, Play Performance Practicum, and Field Experience.
***Theatre majors concentrating in dance should also enroll in technique courses each semester.

Sample Schedule for Theatre Majors
Concentration: Acting/Directing

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>DANC 125</td>
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</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy or religion</td>
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<tr>
<td>Natural science</td>
<td>15</td>
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<table>
<thead>
<tr>
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<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Acting I</td>
<td>3</td>
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<tr>
<td>Social science</td>
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<tr>
<td>Oral communication</td>
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<tr>
<td>Foreign language</td>
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<table>
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<tr>
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<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>Acting III</td>
<td>3</td>
</tr>
<tr>
<td>Directing I</td>
<td>3</td>
</tr>
<tr>
<td>Survey of Theatre History I</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td>Practicum</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Literature</td>
<td>3</td>
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<td>Practicum</td>
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<td>Electives</td>
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Sample Schedule for Theatre Majors
Concentration: Technical Theatre

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>DANC 125</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting I</td>
<td>3</td>
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<tr>
<td>ART 103</td>
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<tr>
<td>Foreign language</td>
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<tr>
<td>Natural science</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey of Theatre</td>
<td>3</td>
</tr>
<tr>
<td>History I</td>
<td>3</td>
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<tr>
<td>Dance Composition II</td>
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Sample Schedule for Theatre Majors
Concentration: Theatre History and Literature

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<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>DAN 125</td>
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</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
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<tr>
<td>Foreign language</td>
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<tr>
<td>Natural science</td>
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<table>
<thead>
<tr>
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<tbody>
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<td>Acting I</td>
<td>3</td>
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<tr>
<td>Oral communication</td>
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<tr>
<td>Literature</td>
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<tr>
<td>Philosophy or religion</td>
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<td>Social science</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Oral communication</td>
<td>3</td>
</tr>
<tr>
<td>Theatre of India &amp; Southeast Asia</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>15</td>
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<tr>
<td>Practicum</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theories of the Theatre</td>
<td>3</td>
</tr>
<tr>
<td>Seminar in Shapers of the Modern Theatre</td>
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</tr>
<tr>
<td>Electives</td>
<td>9</td>
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| Sample Schedule for Theatre Majors
Concentration: Dance |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>Dance Appreciation</td>
</tr>
<tr>
<td>Beginning Modern Dance</td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>Foreign language</td>
</tr>
<tr>
<td>Electives</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>3</td>
</tr>
<tr>
<td>Technology</td>
<td>3</td>
</tr>
<tr>
<td>Dance Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
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<tr>
<td>Electives</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dance</td>
<td>3</td>
</tr>
<tr>
<td>History I</td>
<td>3</td>
</tr>
<tr>
<td>Dance Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
Non-Western culture  3  Math or logic  3
Social science  3  Social science  3
Electives  3  Electives  3
  15  15

Seventh Semester
Eighth Semester
Dance History  3  Dance Performance  3
Dynamic Alignment  3  Dynamic Alignment as
Non-Western culture  3  Applied to Teaching  3
Electives  3-5  Philosophy or religion  3  Electives  3-5
  12-14  12-14

Foreign Languages and Literatures

Faculty
Professors: Francescato (Spanish) (Chairman), Aguera (Spanish), Elstun (German), Font (Spanish), Willis (French)
Associate Professors: Chu (Asian Languages), Cordero (French), Goldin (Spanish), Hazera (Spanish), Hecht (Russian), Hobson (German), Meyer (French), Tedder (French)
Assistant Professors: Brooks (Spanish), Bufill (Spanish), Evans (French), LePage (French), Weissberger (Spanish), Wekerle (German)
Lecturers: Barilla (Spanish), Berls (Russian), Brinkley (Spanish), Businger-Chassot (French), Harmon (French), Kang (Asian Languages), Layman (Classics), Meson-Sosnowski (Spanish), Neudling (Classics), Pineda (Spanish), Rojas (Spanish), Seidman (German), Smith (French), Tran (Asian Languages), Villavicencio (Spanish), Werres (German), Witty (German), Yager (French)

Department of Foreign Languages and Literatures Coursework

This department offers all coursework designated CLAS, FREN, FRLN, GERM, GREE, ITAL, JAPA, KORE, LATN, PORT, RUSS, SPAN, and VIET in the Course Dictionary of this catalog.

General Aims and Guidelines

Courses in the Department of Foreign Languages and Literatures are designed to meet the needs of several categories of students. Majors are provided in French, German, Spanish, and Area (Russian) Studies (see BA in Area Studies) for those who wish to build a liberal education around the intensive study of a foreign language, literature, and culture; for those who plan to undertake graduate study in these fields; and for those who intend to become foreign language teachers, professional translators, interpreters, and foreign correspondents.

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. These elective courses are CLAS 250 and 300; FREN 252, 325, 329, 356, 357, 391, 392; GERM 252 through 255; RUSS 252, 254, 311, 353, and 354; and SPAN 252, 325, 353, 359, 361, and 362.

The following courses are offered in English; the knowledge of a foreign language is not required:
CLAS 250: Classical Myths and Legends (3)
CLAS 300: Homer and Greek Tragedy (3)
FREN 325: Major French Writers (3)
FREN 329: Problems of Western Civilization in French Literature (3)
FRLN 431: Medieval Intellectual Topics (3)
FRLN 450: Methodology of Foreign Language Teaching (3)
GERM 301: German Culture and Civilization (3)
GERM 302: Germany Today (3)
GERM 305: Field Study in German Culture (1)
GERM 325: Major German Writers (3)
JAPA 301, 302: Japanese Culture and Civilization (3, 3)
KORE 450, 451: Korean Culture and Civilization (3, 3)
RUSS 300: Field Study in Russian Culture (1, 2, or 3)
RUSS 353: Russian Civilisation (3)
RUSS 354: Contemporary Soviet Life (3)
SPAN 325: Major Hispanic Writers (3)
VIET 301, 302: Vietnamese Culture and Civilization (3, 3)

Elementary and intermediate courses are offered in French, German, Greek, Latin, Portuguese, Russian, and Spanish, which may be used to fulfill the College's foreign language area requirement for the BA 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. Language instruction is also offered in Japanese, Korean, and Vietnamese.

Courses Which 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: RUSS 353, 354.

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.

Requirements for the Degrees

Undergraduate

French
BA Degree with a Major in French

In addition to meeting the general degree requirements for the Bachelor of Arts degree as established by the College of Arts and Science, students majoring in French must complete a minimum of 27 semester hours of work in French courses at the 300 level and above. Students are expected to complete a balanced program that includes courses in language, culture and civilization, and literature. The 27 hours required in the major must include the following:
1. One advanced language course (FREN 351, 353, 355, 356, or 461)
2. One course in French civilization (FREN 375 or 376)
3. One survey course in French literature (FREN 377 or 378)
4. Four courses at the 400 level or above.

No more than six hours in French literature in translation may be applied to the major. Students majoring in French 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.

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**Sample Schedule for Undergraduate Spanish Majors**

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>SPAN 151</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 120</td>
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<td></td>
<td>Natural science</td>
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</tr>
<tr>
<td></td>
<td>History</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Third Semester</td>
<td>SPAN 325</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SPAN 251</td>
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<tr>
<td></td>
<td>Social science A</td>
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</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture (HIST 271)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Spanish (300, 400, or 500 level)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective (second language suggested)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Social Science B</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Spanish (300, 400, or 500 level)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective (second language suggested)</td>
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</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

**Spanish BA 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 Bachelor of Arts 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. SPAN 303, 304, 317, and 318 are required. Six hours may be taken in Spanish courses in translation. Students who major in Spanish will also find it useful to complete some or all of these related courses: ENGL 313: Critical Approaches to Literature; ENGL 391: General Linguistics; HIST 271, 272: Latin American History; and HIST 443: History of Spain and Portugal.

**Sample Schedule for Undergraduate German Majors**

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>GERM 151</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Third Semester</td>
<td>GERM 251</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Oral communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Logic or math</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science B</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>GERM 252 or 254</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science B</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science B</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

**Sample Schedule for French Majors**

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>FREN 151</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science (A)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Third Semester</td>
<td>FREN 251</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>FREN 255 or 325</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science (B)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>FREN 376 or 378</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Advanced French language or literature</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives (EUST 350, 450, and ENGL 391 suggested)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>FREN 152</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>FREN 252</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social science (B)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>French literature (400 level)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

**German BA 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 Science, students majoring in German 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 (1) language, (2) culture and civilization, and (3) literature. The literature component must include GERM 340. Students are urged to include PHIL 231, 232, and ENGL 391 among their electives.

Students who plan to double major in German and another subject will prepare a program of study in consultation with advisers from both disciplines.

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Graduate

Master of Arts in Foreign Languages

The Master of Arts in Foreign Languages offers students the possibility of concentrating their work in one language field: French, German, or Spanish alone, or in any two of these in combination; or in Spanish in combination with Bilingual Education. In addition, the student chooses between two orientations: A) Language/Linguistics/Methodology; and B) Literature and Literary Criticism. The first orientation will best meet the needs of foreign language teachers; the second, the diverse needs of students preparing for graduate study at the doctoral level.

Departmental Entrance Requirements

In addition to fulfilling the general entrance requirements of the Graduate School, applicants are expected to have a BA degree with a major in French, German, or Spanish. Students with majors in related fields who present evidence of competence in one or these languages are also encouraged to apply. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

Departmental Degree Requirements

In addition to fulfilling the degree requirements of the Graduate School, candidates must meet the requirements appropriate to the orientation chosen and pass a comprehensive examination.

Programs of Study

Orientation A: Language/Linguistics/Methodology

Option 1: concentration in one language
a) nine hours of language/linguistics courses, including history of the language
b) nine hours of methodology courses
c) twelve additional hours in the field of concentration, six hours of which may be earned with a thesis
A minimum of thirty-six hours is required in this option.

Option 2: concentration in two languages
a) six hours of language/linguistics courses in the major
b) six hours of language/linguistics courses in the minor
c) nine hours of methodology courses
d) nine additional hours of coursework in the major
e) six additional hours of coursework in the minor
A minimum of thirty-six hours is required in this option.

Option 3: major in Spanish language, minor in Bilingual Education
a) nine hours of Spanish language courses
b) nine hours of methodology courses
c) six hours of multicultural/bilingual education courses
d) three hours of sociolinguistics
e) nine additional hours in Spanish, six of which may be earned with a thesis on a bilingual topic
A minimum of thirty-six hours is required in this option.

Orientation B: Literature and Literary Criticism

Option 1: concentration in one language
a) six hours of coursework in literary criticism and the history of the language
b) twelve hours of literature courses, covering at least three major periods
c) twelve additional hours, six of which may be earned in a related field approved in advance or with a thesis
A minimum of thirty hours is required in this option.

Option 2: concentration in two languages
a) six hours of coursework in literary criticism (3) and the history of the language of major concentration (3)
b) twelve hours of literature courses in the major

c) nine hours of literature courses in the minor
d) nine additional hours, six of which may be earned with a thesis
A minimum of thirty-six hours is required in this option.

History

Faculty

Professors: Cassara, Spence*  
Associate Professors: Harsh (Chairman), Deshmukh, Gleisner, Jensen, Lytton, Pacheco, Pugh*, Saeed, Soder, Spindler, Walker*  
Assistant Professors: Censer, Cohen, DeMarce, Hawkes, Henriquez, Holsinger, Sli  
Lecturers: Alexander, Angel, Arnsen, Beyer, Bloom, Butowsky, Jessup, Lanza, Lykes, Moore, McClellan, Pitcher, Roland, Sosna, Stewart

* Italics indicate graduate faculty.

Department of History

Coursework

This department offers all coursework designated HIST and LAC in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in History

Candidates for a Bachelor of Arts degree in history must present 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:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. United States history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>2. European history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>3. Latin American, African, Asian or Middle Eastern history at the 200, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>4. HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>5. HIST 499</td>
<td>3</td>
</tr>
<tr>
<td>6. Electives in history at the 300 and/or 400 levels</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

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 taking one of the following courses: EUST 300 and EUST 400. This may be done by permission of the department, when the course curriculum includes a substantial amount of history.

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.

http://catalog.gmu.edu
Sample Schedule for BA in History

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>HIST 102</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>English composition</td>
<td>English composition</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>Social Science</td>
</tr>
<tr>
<td>(Group A or B)</td>
<td>(Group A or B)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
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<tr>
<td>Fine arts</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>16</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>HIST 121</td>
<td>HIST 122</td>
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<td>3</td>
<td>3</td>
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<tr>
<td>Foreign language</td>
<td>Literature</td>
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<td>4</td>
<td>3</td>
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<tr>
<td>Natural science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Literature</td>
<td>Philosophy or religion</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>14</td>
<td>16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 300</td>
<td>History elective</td>
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<td>3</td>
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<tr>
<td>History elective</td>
<td>History elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Social science</td>
</tr>
<tr>
<td>3</td>
<td>(Group A or B)</td>
</tr>
<tr>
<td>Social science</td>
<td>(Group A or B)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Seminar in History</td>
<td>Senior Seminar in History</td>
</tr>
<tr>
<td>(or history elective)</td>
<td>(or history elective)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

**Graduate**

**Master of Arts in History**

This program is designed to help students achieve a greater understanding of the discipline of history and to master the methodology of the historian. Since this is a research-oriented program, it can be useful to students who plan to become candidates for the PhD.

Students may concentrate on the history of the United States, Modern Europe, or Latin America.

**Departmental Entrance Requirements**

In addition to fulfilling the entrance requirements of the Graduate School, applicants for the Master of Arts in history should have majored in history at the undergraduate level. Students with undergraduate majors in fields other than history may be admitted, if their records demonstrate strong background in history and studies closely related to it. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

**Other Requirements**

1. Satisfactory scores in the Graduate Record Examination, including the area examination in history.
2. Two letters of recommendation from professors of history with whom the applicant has studied or from others directly familiar with the applicant’s professional competence.

**Departmental Degree Requirements**

Candidates for the Master of Arts degree in history must successfully meet the following requirements to be awarded the degree:

1. With thesis, 30 semester hours of approved graduate work with a grade point average of not less than 3.000; or, alternatively, 33 semester hours of approved graduate work with a grade point average of not less than 3.000.
2. Three semester hours in HIST 500 (to be taken within the first nine hours of coursework).
3. Twelve semester hours in a major field of concentration, including one research seminar; such major fields presently offered are United States, Latin American, and Modern European history.
4. Nine semester hours in a second field of history; minor fields presently offered are United States, Latin American, and Modern European history.
5. A student's program may include up to six semester hours in approved undergraduate courses.
6. Candidates must meet the foreign language requirement in one of the following ways:
   a. have successfully completed (before completing 15 hours of graduate work) college courses through the intermediate level in a modern foreign language appropriate to the field of concentration.
   b. pass a proficiency examination administered by the Foreign Languages and Literatures Department.
7. Pass an oral comprehensive examination administered by the history faculty covering the area of concentration and one other field of history. The candidate must petition the chairperson to schedule this examination no earlier than the end of the last semester of coursework, nor later than the beginning of the next regular semester. Oral comprehensive examinations are not scheduled during the summer session.
8. One of the following alternatives:
   a. Six semester hours in HIST 599 (Thesis);
   b. Nine semester hours, including one additional research seminar in either major or minor field and two elective graduate history courses, which need not be in the candidate's fields of concentration.

**Sample Program for the MA in History with Thesis Courses**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 500</td>
<td>3</td>
</tr>
<tr>
<td>Field of major concentration</td>
<td>12</td>
</tr>
<tr>
<td>(United States, Latin American, or Modern European history) (including one research seminar)</td>
<td>9</td>
</tr>
<tr>
<td>Field of minor concentration</td>
<td>9</td>
</tr>
<tr>
<td>(same fields as above)</td>
<td></td>
</tr>
<tr>
<td>HIST 599 (Thesis)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

**Sample Program for the MA in History without Thesis**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 500</td>
<td>3</td>
</tr>
<tr>
<td>Field of major concentration</td>
<td>12</td>
</tr>
<tr>
<td>(United States, Latin American, or Modern European history) (including one research seminar)</td>
<td>9</td>
</tr>
<tr>
<td>Field of minor concentration</td>
<td>9</td>
</tr>
<tr>
<td>(same fields as above)</td>
<td></td>
</tr>
<tr>
<td>Additional coursework</td>
<td></td>
</tr>
<tr>
<td>Research Seminar</td>
<td>3</td>
</tr>
<tr>
<td>(in major or minor field)</td>
<td></td>
</tr>
<tr>
<td>Two elective graduate courses</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>33</td>
</tr>
</tbody>
</table>

**Master of Arts in Teaching (History)**

The program leading to the degree of Master of Arts in Teaching is designed to help teachers extend their knowledge of bibliography and current trends in historical thinking and to improve their effectiveness in presenting history in the class-
room. Narrow specialization is avoided by allowing great latitude in choice of courses. Study in the methodology of teaching social studies is included in the program.

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, applicants for the degree of Master of Arts in Teaching should have majored in history. Applicants with undergraduate majors in fields other than history may be admitted if their records demonstrate strong background in history and studies closely related to it. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

Other Requirements
1. Satisfactory scores in the Graduate Record Examination, including the area examination in history.
2. Two letters of recommendation from professors of history with whom the applicant has studied or from others directly familiar with the applicant’s professional competence.

Departmental Degree Requirements
Candidates for the Master of Arts in Teaching must successfully complete the following:
1. 24 credits in history, including the three credits in HIST 500 (to be taken within the first nine hours of coursework).
2. 12 credits in education, including EDUC 567 and 583.
3. A comprehensive examination administered by the faculty.
Candidates intending to teach at the secondary level must also qualify for the Virginia Collegiate Professional Certificate (or its equivalent) in history.
The Master of Arts in Teaching degree requires a minimum of 36 hours of graduate credit.

Undergraduate-Graduate Courses
A student’s program may include up to six semester hours in approved undergraduate courses. The following courses, descriptions of which appear in the Course Dictionary of this catalog, have been approved for graduate credit: HIST 401, 403, 404, 406, 409, 410, 411, 412, 435, 436, 441, 443, 463, 464, 470, 475, 47B.

Mathematical Sciences

Faculty
Professors: Draper (Acting Chairman), Oppelt, Papp, Smith (Mathematics Education)
Visiting Professor: Herschner
Associate Professors: R. Bolstein, Cabell, K. Fischer, Gantz, Kiley, Norris (Computer Science), Rice, Saperstone, Seidman
Assistant Professors: Brandenburg, Carrig, Carter**, Damiano, Gabel, Gerasch (Mathematics and Computer Science), Greenland, Grotzinger**, Kolfer, Levy, Lim, Manare, Miller, Paik, Zoltek
Lecturers: Andersen, Arrillaga, H. Bolstein, Cragg, Driver, Dykes, E. Fischer, Frazier, Goldschen, Haenisch, Marin, Mayer, Monk, Morse, Mouchohoir, Oliver, Ong, Senus, C. Swain, T. Swain

**On leave of absence, 1980-81
*(italics indicate graduate faculty.)*

Department of Mathematical Sciences Coursework
This department offers all coursework designated CS, MATH, OR, and STAT in the Course Dictionary of this catalog. The department has renumbered its graduate courses. The old course number is indicated in parentheses. A student may not receive credit for a course if such credit has already been received under the old course number.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Mathematics
In addition to general degree requirements for a Bachelor of Arts degree, the following courses are required: MATH 115, 116, 200, 215, 303, 306, plus 15 additional hours numbered above 310 for a total of 37 semester hours in mathematics. Three semester hours in computer science are recommended.

Those students pursuing certification for secondary school teaching are advised to take MATH 200, 302, 303, CS 111 (263), or CS 261. A sample schedule including certification requirements is available in the department.

BS Degree with a Major in Mathematics
In addition to general degree requirements for a Bachelor of Science degree, the following courses are required: MATH 115, 116, 200, 215, 303, 306, 315, 316, 321, 322, plus 12 additional hours numbered above 310 for a total of 46 semester hours in mathematics. CS 111 (263) and CS 211 (264) are also required.

The science requirements may be fulfilled by one of the following options:
(a) PHYS 250, 350, 351, 352, 353
(b) BIOL 113, 114 and CHEM 211-212
(c) BIOL 113, 114 and GEOL 101, 102
(d) CHEM 211-212 and GEOL 101, 102
(e) Four semesters of chemistry excluding CHEM 103-104, 106
(f) Four semesters of biology including BIOL 113, 114 and two courses numbered above 300
(g) Four semesters of geology excluding GEOL 103

The department strongly recommends that a two-year proficiency in either French, German, or Russian be demonstrated by each student pursuing a Bachelor of Science in mathematics.

MATH 113, 114, 213, 304 are not recommended for mathematics majors. MATH 106, 108, 109, 110, 111, 252, 254, 255, 256, 371, 372, and 373 do not count toward satisfying the requirements for a major in mathematics. Students may not duplicate equivalent courses in the 113 and 115 sequence.

For Non-Majors
Designed for the students in the social and behavioral sciences are MATH 108, 109, 110, and 111, and CS 261 and 262. Liberal arts majors are advised to take either MATH 106 or the sequence 110, 111, and possibly CS 261. Students in the natural sciences who plan to do graduate work are advised to add to their basic calculus sequence from CS 111 (263), CS 211 (264), MATH 313, 314, 351, 352, 382, 441, 442, 446, 447. Students pursuing certification for elementary school teaching are advised to take MATH 106, 110, 111, 113, 114, 200; CS 111 (263), 211 (264), 261, 262. Students who have received credit for MATH 113 may not receive credit for MATH 108. Also, credit for MATH 252 and MATH 109 may not be duplicated.

http://catalog.gmu.edu
### Sample Schedule for BA Mathematics Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 161</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>FRLN 152</td>
</tr>
<tr>
<td>FRLN 151</td>
<td>MATH 116</td>
</tr>
<tr>
<td>MATH 115</td>
<td>Natural science</td>
</tr>
<tr>
<td>Natural science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>FRLN 251</td>
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</tr>
<tr>
<td>MATH 215</td>
<td></td>
</tr>
<tr>
<td>MATH 200</td>
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</tr>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>Fine arts</td>
<td>Philosophy or</td>
</tr>
<tr>
<td>MATH 321</td>
<td>religion</td>
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<tr>
<td>MATH 315</td>
<td></td>
</tr>
<tr>
<td>Econ, geog., govt., or hist.</td>
<td>Elective</td>
</tr>
<tr>
<td>Soci., psych., or anth.</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
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<tbody>
<tr>
<td>Computer science</td>
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</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
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<tr>
<td>Elective</td>
<td>Elective</td>
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<tr>
<td>MATH 400 level</td>
<td>MATH 400 level</td>
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### Sample Schedule for BS Mathematics Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>CS 161</td>
<td>Natural science</td>
</tr>
<tr>
<td>Natural science</td>
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<tr>
<td>MATH 115</td>
<td>MATH 116</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>FRLN 151</td>
<td>FRLN 152</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>MATH 215</td>
<td>MATH 306</td>
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<td>MATH 200</td>
<td>Computer science</td>
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<td>FRLN 251</td>
<td>MATH 303</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>MATH 315</td>
<td>MATH 316</td>
</tr>
<tr>
<td>MATH 321</td>
<td>MATH 322</td>
</tr>
<tr>
<td>Elective (nonscience)</td>
<td>Elective (nonscience)</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Computer science</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>MATH 351</td>
<td>MATH 352 or 382</td>
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<tr>
<td>MATH 400 level</td>
<td>MATH 400 level</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<tr>
<td>Elective (nonscience)</td>
<td>Elective (nonscience)</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Graduate

#### Master of Science in Mathematics

The mathematics graduate program is designed to serve those who seek a Master of Science degree as well as those who wish to improve their professional skills. In order to make it convenient for working people to attend, graduate courses are offered primarily during late afternoon and evening. The department offers a variety of courses in modern applied mathematics, statistics, and operations research, in addition to the standard curriculum in pure mathematics. The courses are designed to train students in areas relevant to the needs of business, industry, and government, as well as to provide the background for advanced graduate work in the mathematical sciences and for continuing education in the teaching profession. The University computer center is built around two computers: an HP 2000 and an HP 3000. Access is also provided through these computers to the IBM 370/158 at the College of William and Mary. The Computer Science Laboratory has an HP 1000 computer for use by computer science students and faculty.

A student wishing to pursue a concentrated study in either Operations Research or Statistics may elect to specialize in these areas. The requirements for these specializations are listed below and students may choose to have this emphasis so indicated on their transcript.

### BS Degree with a Major in Computer Science

In addition to the general degree requirements for a Bachelor of Science degree, the following courses are required: Computer Science: CS 111 (263), 211 (264), 212, 311, 365, 465, plus 12 additional hours of courses numbered above 300 for a total of 30 hours in computer science. Mathematics: MATH 113, 114, 213, 303, 304, 305, 351, 446, for a total of 26 hours in mathematics. Engineering: ENGR 441.

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72 George Mason University
Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, applicants for the master's degree in mathematics must have:

1. Three letters of recommendation.
2. An extensive undergraduate training in mathematics that includes courses similar to MATH 315, 316: Advanced Calculus, and MATH 322: Linear Algebra offered at George Mason University. The courses MATH 611 (503): Intermediate Analysis and MATH 612 (504): Intermediate Algebra present some of the highlights of these prerequisite courses and sharpen the skills necessary to enable a student to enter the degree program in mathematics.

Departmental Degree Requirements
In addition to fulfilling the degree requirements of the Graduate School, the candidate for the Master of Science degree in mathematics must:

1. Complete no less than 30 semester hours of graduate work approved by the department. These include courses listed under MATH, OR, and STAT. Up to six hours toward the master’s degree in mathematics may be chosen from certain mathematically related courses in other departments, provided prior approval has been obtained from the department.
2. Complete MATH 675 (515) and 676 (516) by the end of the second full year in the degree program.
3. Complete a research component of the degree: Thesis 799 (599)/Seminar 795, 796 (591, 592). This component must be at least three hours and may not exceed nine hours. No more than six hours of either thesis or seminar can be applied toward the 30 hours minimum requirement for the degree.
4. Pass the departmental examination. This oral exam is to be taken near the completion of the degree and tests the cumulative skills acquired by the student. The exam consists of a Basic and Advanced unit in each of the areas of Pure Mathematics, Operations Research, and Statistics. A student must pass two units, one Basic and one Advanced. The two units of the examination are chosen by the student in consultation with the Graduate Coordinator.

Specialization in Operations Research
The purpose of this specialization is to allow students to concentrate their studies in the theory and practice of the methods and techniques of statistical analysis. The requirements for students wishing to specialize in Statistics are:

1. In addition to satisfying the general degree requirements of the department, students must complete MATH 651 (551) and STAT 752.
2. Complete three of the following courses: STAT 653, 654, 655, 656, and 657.
3. The Departmental Examination must consist of the basic unit in the area of Statistics and an advanced unit in any area.

Specialization in Statistics
The purpose of the specialization is to allow students to concentrate their studies in the theory and practice of the methods and techniques of statistical analysis.

Philosophy and Religion
Faculty
Professor: McFarlane (Philosophy)
Associate Professors: Bergoffen (Philosophy) (Chairman), Fletcher (Philosophy), Holman (Philosophy), McDermott (Philosophy), Yance (Religion)
Assistant Professors: Halbrook (Philosophy), Pieke (Religion), Rothbart (Philosophy), Srinivasan (Indian Studies)
Lecturers: Badr (Religion), Casement (Philosophy), Gregory (Philosophy)

Department of Philosophy and Religion Coursework
This department offers all coursework designated PHIL and RELI in the Course Dictionary of this catalog.

Requirements for the Degree
Undergraduate
BA Degree with a Major in Philosophy
The degree program in philosophy is designed to meet the needs of students with various interests and career goals. Major concentrations are available for students who wish (a) to pursue graduate studies in philosophy; (b) to emphasize philosophy in acquiring a broad liberal arts education; (c) to prepare for certain professions, such as law, the ministry, government service; or (d) to complement other interests by taking a double major in philosophy and some related field of study.

The department offers a traditional philosophy major, a specially designed Philosophy-English major in cooperation with the English Department, and a specially designed religion track within the philosophy major. Each of these programs leads to a BA 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 including: History of Western Philosophy (two semesters) and either Logic or Symbolic Logic. At least 21 semester hours which are credited toward the major must be courses at the 300 level or above, including six credit hours at the 400 level. For those students who plan to pursue graduate studies in philosophy, the following courses are recommended: Ethics or Social and Political Philosophy; Metaphysics; Philosophy of Mind or Theory of Knowledge; Twentieth-Century Analytic Philosophy; Contemporary Continental Thought (Existentialism and Phenomenology).
Religion Track in Philosophy

Students who plan to pursue a program in philosophy and religious thought must complete at least 39 semester hours in philosophy and religion including: Logic or Symbolic Logic; History of Medieval Philosophy and either History of Ancient Philosophy or History of Modern Philosophy; Philosophy of Religion; Religions of the Near East; Religions of the Orient; Biblical Studies: The Old Testament; Approaches to the Study of Religion; either History of Christian Thought I or History of Christian Thought II; and either Studies in Jewish Thought or Studies in Islamic Thought. At least 21 semester hours which are credited toward the major in the special program in religious thought and philosophy must be in courses at the 300 level or above, including six hours at the 400 level.

Philosophy-English Double Major

Students interested in pursuing the specially designed joint major in philosophy and English should contact the Philosophy or English Department for details of the program.

<table>
<thead>
<tr>
<th>Sample Schedule for Philosophy Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>Natural science</td>
</tr>
<tr>
<td>English composition</td>
</tr>
<tr>
<td>Foreign language</td>
</tr>
<tr>
<td>PHIL 100, 111, or 173</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>Social sciences</td>
</tr>
<tr>
<td>(Group A or B)</td>
</tr>
<tr>
<td>Foreign language</td>
</tr>
<tr>
<td>PHIL 301 (231)</td>
</tr>
<tr>
<td>Philosophy elective</td>
</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
</tr>
<tr>
<td>Social sciences</td>
</tr>
<tr>
<td>(Group A or B)</td>
</tr>
<tr>
<td>Non-Western culture</td>
</tr>
<tr>
<td>PHIL 332</td>
</tr>
<tr>
<td>Philosophy electives</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Seventh Semester</strong></td>
</tr>
<tr>
<td>PHIL 421</td>
</tr>
<tr>
<td>Fine arts</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>15</td>
</tr>
</tbody>
</table>

Coursework

Although a graduate degree program is not available through the Department of Philosophy and Religion, the department does offer graduate courses in support of graduate programs: PHIL 531 and 800. Course descriptions appear in the Course Dictionary of this catalog.

Physics

Faculty

Professors: Ehrlich (Chairman)*, Johnston, Lankford, Mielczarek (Acting Chairman, Fall 1980)

Associate Professors: Black (Coordinator, Engineering) (Acting Chairman, Spring, 1981), Ellsworth, Evans (Astronomy), Flinn, Kafatos (Astronomy), Lieb, Nainan, Wang (Engineering)

Assistant Professors: Ceperley (Engineering), Peterson

Visiting Assistant Professor: Bagoiu (Engineering)

Lecturers: Anderson (Astronomy), Halle, Kowalski (Astronomy), Morgan (Astronomy), Mouchahoir (Engineering), Papaconstantopoulos, Reyzer (Engineering), Smith (Engineering)

*On leave from chairmanship, 1980-81. (Italics indicate graduate faculty.)

Department of Physics

Coursework

This department offers all coursework designated ASTR, ENGR, and PHYS in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

Requirements for the Major

Entering freshmen who do not have a math SAT score of 600 should take a proficiency examination in elementary algebra and trigonometry. The test is given before the beginning of the summer, fall, and spring semesters. The exact dates may be found in the Academic Calendar. Students who fail the examination are urged to take MATH 100 and 102 or retake and pass the examination. Ideally, MATH 100 and 102 should be taken during the summer prior to MATH 113, or alternatively along with MATH 113 in the student's first semester.

BS Degree with a Major in Physics

In addition to general degree requirements, a Bachelor of Science in physics requires the completion of 44 semester hours in the major and 23 semester hours in mathematics. The following physics courses are required for the BS degree: PHYS 111, 250, 350, 351, 352, 353 (2 cr), 303, 305, 306, 402, 403, 405, 407, 417. The remaining eight credits are to be elected from PHYS 408, 410, 414, 301, 302, 307, 412, 417, ASTR 328, and ASTR 428 with at least five semester hours from the first three courses. Included in the 23 semester hours of mathematics, the following courses are required: the two-year calculus sequence (MATH 113-114, 213, 304); PHYS 311 or MATH 313; PHYS 312 or MATH 314; plus one course in mathematics at the 300 or 400 level.

The course labeled "Problems in Physics" is intended for the outstanding student who can proceed beyond the standard requirements of other courses in the physics program. Students electing the Bachelor of Science program in physics are required to demonstrate a proficiency in computer programming. Proficiency in computer programming is required for senior level physics courses. One way to demonstrate such proficiency is to complete a computer programming course.

BA Degree with a Major in Physics

In addition to general degree requirements, a Bachelor of Arts 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 (2 cr), 303, 305, 306, 402, and either 407 or 302.

Voluntary Comprehensive Examination

The physics faculty offers a comprehensive examination each spring, which is optional for senior physics majors. An outstanding performance on this examination entitles the student to the following statement on his/her transcript: "Voluntary Comprehensive Examination in Physics Passed with Distinction, (date)."
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.

Coursework Recommendations

PHYS 341-342 are recommended for biology, chemistry, and premedical students and for mathematics majors who seek a Bachelor of Arts degree. PHYS 103, 104, 106, 151, 201, and 315 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 and mathematics students who pursue a Bachelor of Science degree. Students may receive credit for only one of the following sequences: 341-342 or 103, 104; or 250, 350, 351, 352, 353.

Sample Schedule for Physics Majors

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<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>
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<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Elective</td>
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<tr>
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<th>Fourth Semester</th>
</tr>
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<tbody>
<tr>
<td>PHYS 350</td>
<td>PHYS 352</td>
</tr>
<tr>
<td>PHYS 351</td>
<td>PHYS 353 (2cr)</td>
</tr>
<tr>
<td>MATH 213</td>
<td>MATH 304</td>
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<td>Literature</td>
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<td>Elective</td>
<td>Computer science</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
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<td>PHYS 303</td>
<td>PHYS 306</td>
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<td>PHYS 302</td>
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<td>PHYS 312</td>
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<tr>
<td>Mathematics elective</td>
<td>PHYS 402</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>PHYS 403</td>
<td>PHYS 410</td>
</tr>
<tr>
<td>PHYS 405</td>
<td>PHYS 414</td>
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<td>PHYS 407</td>
<td>PHYS 408</td>
</tr>
<tr>
<td>Mathematics elective</td>
<td>PHYS 412</td>
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<tr>
<td>Elective</td>
<td>PHYS 416</td>
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<td>Elective</td>
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<td>15</td>
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</table>

Graduate

Master of Science in Applied Physics

Beginning in Fall 1982 the University will offer a Master of Science (MS) degree in applied physics. New graduate courses, in addition to those listed below, will be announced in Fall 1981.

Courses in Support of Graduate Programs

Although a graduate degree program is not now available through the Department of Physics, the department does offer graduate courses in support of graduate programs: ASTR 505, PHYS 500, 501, 511, 520, 590. In addition, the following undergraduate courses have been approved for graduate credit:

PHYS 403, 405, 410, 412, 414. Course descriptions appear in the Course Dictionary of this catalog.

Engineering

Undergraduate

BS Degree in Computer and Electronics Engineering

This degree program in computer and electronics engineering is designed to prepare the graduate either for direct entry into a career in engineering at the BS level or for graduate study.

In addition to the general BS degree requirements, the computer and electronics engineering course requirements are outlined in the following program curriculum. Students may complete the requirements on a part-time or co-op basis. In either case, the program must be approved by an academic adviser. The humanities electives must be in philosophy, religion, literature, fine arts, or modern languages beyond the introductory skills courses. The social science electives must be in sociology, psychology, anthropology, economics, history, linguistics, regional cultures, or political science.

Other Engineering Disciplines besides Computer and Electronics Engineering

Students interested in other engineering disciplines may complete the first two years of coursework which are designed to meet most of the basic requirements of a standard engineering curriculum. Students completing the first two years of study may expect to complete a Bachelor of Science degree in any of the specialized areas offered at other schools of engineering.

Advising

All engineering students are required to see their major adviser prior to course registration each semester. Students interested in engineering who are not declared majors are also strongly urged to see an engineering adviser each semester.

Graduate

MS Degree in Computer and Electronics Engineering

Beginning in the fall of 1982 the University plans to offer a Master of Science (MS) degree in computer and electronics engineering. Specific graduate course offerings will be announced in the fall of 1981.

Inquiries concerning any of the engineering courses of study should be directed to Dr. W. M. Black, Department of Physics, George Mason University, Fairfax, Virginia 22030.

Sample Schedule for Engineering Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
<td>PHYS 250</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>MATH 114</td>
</tr>
<tr>
<td>ENGR 110</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>ENGR 181 (or ENGR 100)</td>
<td>ENGR 100 (or ENGR 181)</td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 350</td>
<td>PHYS 352</td>
</tr>
<tr>
<td>PHYS 351</td>
<td>PHYS 353</td>
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<tr>
<td>MATH 213</td>
<td>MATH 304</td>
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<tr>
<td>ENGR 285</td>
<td>COMP SCI 211</td>
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<td>ENGR sci elective*</td>
<td>ENGR SCI elective*</td>
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<tr>
<td>ENGL or For. Lang.-Lit.</td>
<td>ENGL or For. Lang.-Lit.</td>
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</table>

http://catalog.gmu.edu
### Fifth Semester
- **ENGR 331** 3
- **ENGR 381** 2
- **ENGR 320** 3
- **ENGR 305** 3
- **MATH 313** 3
- **Humanities or social science elective** 3

### Sixth Semester
- **ENGR 332** 3
- **ENGR 382** 2
- **ENGR 321** 3
- **MATH 3xx/4xx** 3
- **Humanities or social science elective** 3

### Seventh Semester
- **COMP SCI 465** 3
- **ENGR 4xx** 8
- **ENGL 310** 3
- **Humanities or social science elective** 3

### Eighth Semester
- **ENGR 491** 1
- **ENGR 4xx** 7
- **ENGR 490** 3
- **Humanities or social science elective** 3
- **Elective** 3

Notes:
1. Course descriptions for the courses marked new may be obtained from the Physics Department.
2. PHYS 113, 114, 213, 214 may substitute for PHYS 250, 350, 351, 352, 353.
3. ENGR 191 may substitute for ENGR 181.
4. ENGR 301 taken prior to Spring 1982 may substitute for ENGR 331, 381. ENGR 302 taken prior to Spring 1982 may substitute for ENGR 332, 382.
5. Students interested in a discipline of engineering other than computer and electronics or electrical engineering may choose one hour for PHYS 353 and take ENGR 182 or an elective in place of ENGR 285.

### Psychology

**Faculty**
- **Professors**: Boneau (Chairman), Jordan*, Mandes, Pasnak, Tyer
- **Associate Professors**: Allen, Blaha, Bradt**, Buffnak, Cooper**, Erdwins, Flinn, Gessner, Gross**, Melling, Moretz, Rugel, Sanford, Savage***
- **Assistant Professors**: Battie****, Hollenbeck, Holt, Lehman, Margolies, Small, Smith, Wahl, Walters, Williams
- **Adjunct Professor**: Kurke


*On study leave, Spring 1981; **Spring, 1981, only; ***on leave of absence, 1980-81; ****Fall, 1980, only.

(italics indicate graduate faculty)

### Department of Psychology Coursework

This department offers all coursework designated PSYC in the Course Dictionary of this catalog.

### Requirements for the Degrees

**Undergraduate**

**BA Degree with a Major in Psychology**

In addition to general requirements for a Bachelor of Arts degree, students majoring in psychology must complete 36 semester hours of coursework in psychology. These hours must include PSYC 100, 300, either 360 or 365, and one of the following: PSYC 304, 305, 309, 311, or 316. Hours earned in psychology may be applied to both the general degree requirement and the psychology major.

**BS Degree with a Major in Psychology**

Students who wish to graduate with the Bachelor of Science degree with a major in psychology must complete the following requirements:
- **Psychology**: 38 semester hours including PSYC 100, 300, either 360 or 365, and two of the following: 304, 305, 309, 311, 316, and 323.
- **BIOL 113, 114**.
- **Mathematics**: MATH 110, 108 are recommended; otherwise, six hours of mathematics selected from MATH 110, 111, 107, 108, 113, 114, 115, 116.
- **CS 161 and 262** (recommended); or 261.
- **Nine hours of ANTH 114, 332, BIOL 225, or any sociology courses**.
- **English Composition**: six semester hours.
- **Literature**: six semester hours.
- **Cognate Courses**: 24 semester hours.
- **Electives**: 19-21 semester hours.

There are five specialty areas for the BS degree in psychology: developmental, experimental, industrial, physiological, and social. For each of these specialty areas there is a list of cognate courses which 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 required to obtain approval of a program of courses in their specialty area before or during their junior year. Students who have not obtained approval may not be allowed to graduate with a BS degree in psychology. Students should plan their program of courses with their adviser. The program is then submitted to the BS Committee appointed by the Psychology Department for final approval. 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.

**BA and BS 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 several required 300-level courses. Students interested in clinical psychology should take PSYC 220 as early as possible because it is a prerequisite to many clinical psychology courses. In addition, it is recommended that students planning to pursue graduate study in psychology take PSYC 320, 371, 372, 373, and CS 161 and 262. Students who expect to go on to graduate school in experimental psychology are advised to take PSYC 207 as well as the required four-hour experimental course. Working knowledge of computers is also recommended.

http://catalog.gmu.edu
Areas in psychology are identified by the last two digits of each course number (experimental 00, developmental 10, clinical 20, industrial-social 30, and general 60). It is recommended that students with a serious interest in psychology distribute courses over as many areas as possible in order to get a comprehensive picture of modern psychology.

Students interested in developing technical skills in the application of psychology at the paraprofessional level may wish to earn a psychology technician certificate. The purpose of this program is to provide students with technical expertise for use in human service employment settings at the paraprofessional level. The psychology technician certificate requirements are shown under Certificate Programs in this catalog. No more than six semester hours of PSYC 326, 421, 422, 548, and 549 may be used to satisfy either the 36-hour psychology requirement for the BA degree, the 38-hour psychology requirement for the BS degree, or the 24-hour requirement in psychology at the 300-level or above.

### Sample Schedule for BA Psychology Majors

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Oral communication</td>
<td>3</td>
<td>Natural science</td>
</tr>
<tr>
<td>Natural science</td>
<td>4</td>
<td>Psychology (any 200-level courses)</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>PSYC 360 or 365</td>
</tr>
<tr>
<td>Mathematics or Logic</td>
<td>3</td>
<td>Social science (non-Western)</td>
</tr>
<tr>
<td>Psychology (any 200-level courses)</td>
<td>3</td>
<td>Psychology (any 200-level courses)</td>
</tr>
<tr>
<td>Fine arts</td>
<td>3</td>
<td>Foreign language</td>
</tr>
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<td>Literature</td>
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<td>16</td>
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</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social science (non-Western)</td>
<td>3</td>
<td>PSYC 304, 305, 309, 311, 316</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
<td>Psychology (300- or 400-level)</td>
</tr>
<tr>
<td>PSYC 300</td>
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<td>Elective</td>
</tr>
<tr>
<td>Foreign language</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><strong>Seventh Semester</strong></td>
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<td></td>
</tr>
<tr>
<td>Psychology (300- or 400-level)</td>
<td>6-7</td>
<td>Psychology (300- or 400-level)</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>15-16</td>
<td>15-16</td>
</tr>
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</table>

*MATH 110 is recommended.

### Sample Schedule for BS Psychology Majors

<table>
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<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
<td>Sociology</td>
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<tr>
<td>Mathematics*</td>
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<td>Mathematics*</td>
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<td>Sociology</td>
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<td>Cognate</td>
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<tr>
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<td>3</td>
<td>Elective</td>
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<tr>
<td></td>
<td>15-16</td>
<td>15-16</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
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<td></td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>Literature</td>
</tr>
<tr>
<td>Psychology electives</td>
<td>6-7</td>
<td>Anthropology</td>
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<tr>
<td>BIOL 113</td>
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<td>BIOL 114</td>
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<tr>
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</table>

### Secondary Teacher Certification

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

### Graduate

#### Master of Arts in Psychology

The graduate program in psychology is designed to be sufficiently flexible to provide professional or research training to students with diverse interests as outlined below:

1. Persons who wish to become candidates for the doctorate in psychology.
2. Those intending to pursue a career in research in experimental psychology upon completion of the master's degree.
3. Those intending to pursue a career in industrial/organizational psychology upon completion of the master's degree.
4. Persons who wish to receive professional training in child or adult clinical psychology, in counseling, or in school psychology.

#### Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants to the program are normally expected to have at least 15 semester hours of undergraduate psychology, including statistics and a laboratory course in experimental psychology. Applicants to the industrial/organizational specialization are required to have undergraduate courses in psychological measurement and industrial psychology. Applicants to the clinical and counseling specializations are also required to have undergraduate courses in psychological measurement, abnormal psychology, and personality theory. Applicants to the school psychology specialization should have courses in the following areas of psychology: introductory, statistics, developmental, personality, and either learning or experimental psychology. Those with undergraduate majors in fields other than psychology are encouraged to apply. Applicants are required to make up deficiencies by taking appropriate undergraduate courses without graduate credit.

Three letters of reference from persons familiar with the applicant's academic work and/or potential for professional work, as well as GRE aptitude scores, are required of all applicants for admission to the psychology program. A Miller Analogies Test score may be submitted if the applicant wishes to give further evidence of ability.

* Students earning only six credits in mathematics require one additional course to total 120 hours.
Applicants who wish to specialize in the clinical, counseling, and school areas are evaluated on potential clinical ability as well as academic performance since sound interpersonal skills are an important aspect of clinical effectiveness. Applicants are asked to submit a biographical statement, outlining their background and experience and describing their future goals in psychology. A personal interview is required of school psychology applicants. Applicants to these specializations should generally have an overall grade point average of 3.00 for the last 60 undergraduate hours and a minimum of 3.250 in undergraduate psychology courses.

Because space is limited, fulfillment of the minimum requirements stated above does not guarantee admission to the graduate program in psychology. Selection is made of the best qualified from among all applicants. Work experience, publications, or special recommendations may compensate for deficiencies in other qualifications.

Special Departmental Regulations
Provisional students should take 12 semester hours of graduate work in psychology from the courses listed below before applying for degree status. Provisional students are expected to obtain a minimum 3.250 grade point average in these courses. Their grade point average is a major (but not the sole) factor in determining acceptance to the degree program. The courses needed before the student requests a change to degree status are:
1. PSYC 641
2. PSYC 651, or 652, or 653. Students in the experimental specialization should take 651 or 652.
3. Two courses in the area of specialization. Students should consult the department to determine the exact courses required.

Non-Degree Status
Applicants who qualify for degree status, but who are not applicants for a degree at George Mason University, may be admitted to non-degree status. Non-degree status is not intended to be used as a qualifying program for degree status. It is strongly recommended that students who want to take courses prior to admission to degree status do so through Continuing Education. While consideration may be given at a later date to the application of credits earned toward a degree program while in non-degree status, there is no assurance that such requests will be granted. If granted, however, no more than 12 semester hours of credit earned in non-degree status may be applied to a degree program.

Departmental Degree Requirements
In addition to fulfilling the degree requirements of the Graduate School, candidates must fulfill the following departmental requirements:
1. Candidates in the experimental and industrial/organizational specializations must complete 30 hours of graduate credit. Candidates in the clinical and counseling specializations must complete 40-42 hours of graduate credit. Candidates in the school specialization must complete 50 hours of graduate credit; in addition, a one-year supervised internship is required for certification.
2. All candidates must complete six credit hours of general psychology (PSYC 641 and 642).
3. All candidates must take work in methodology in psychology. Clinical, counseling, and industrial/organizational students must take at least three credit hours in methodology, while students in the experimental and school specializations must take at least six credit hours of methodology.
4. All students must complete a practicum or a research thesis. Students in the industrial/organizational area are given the option of completing either a six-credit practicum or a six-credit thesis. A thesis is required in the experimental specialization and may focus on a variety of areas in human or animal experimental or physiological psychology. Students in the clinical and counseling specializations must complete a six-credit practicum. The opportunity to participate in clinical research is also available. Students in the school specialization must complete a practicum; in addition, they must complete either a thesis or a practical project in a school system. The project is concurrent with the internship experience. No more than six hours of practical credit may be applied to MA degree requirements.

Clinical and Counseling Specializations
These specializations share a common core curriculum and are designed to train students in various forms of psychological testing and treatment. They differ in that the clinical specialization stresses the psychological testing and psychotherapy skills required to work with individuals with various forms of psychopathology. The counseling specialization emphasizes the psychological testing and counseling skills needed to work with individuals whose personal and vocational problems can be dealt with in community settings.

All students in these two specializations are required to take a total of 40-42 hours including 18 hours of core courses as follows: (a) review of recent research in the major areas of psychology: PSYC 641, 642; (b) methodology used in psychological research: PSYC 653; (c) an introduction to psychotherapy techniques and their application: PSYC 728; and (d) six credit hours in a practicum that provides work experience in a human service setting: PSYC 750. Students specializing in clinical psychology are also required to take (a) a course in physiological psychology: PSYC 644; (b) three hours of psychopathology; (c) 11-12 hours of psychological assessment; (d) three additional hours of psychotherapy or counseling; (e) a three-hour elective.

In addition to the basic core, students in the counseling specialization are required to take (a) three hours of ego psychology or psychopathology; (b) three hours in a special concentration (vocational theory, gerontology, alcoholism, or personnel testing); (c) seven to eight hours of psychological assessment; (d) six additional hours of counseling or psychotherapy; and (e) a three-hour elective.

Students specializing in clinical psychology may further concentrate in child or adult clinical psychology. Those specializing in counseling may choose to concentrate in the areas of industrial mental health, alcoholism and drug abuse, or counseling with the aged. A program of studies will be planned by the student and the student's academic adviser.

Since interpersonal skills are an essential aspect of clinical effectiveness, students specializing in the clinical and counseling areas are periodically evaluated during their graduate work by the clinical faculty. Clinical skills as well as academic performance will be assessed. As a result of these evaluations, some students may be asked to discontinue their clinical or counseling specializations.

Experimental Specialization
Students specializing in experimental psychology must complete a total of 30 hours of graduate credit including (a) core courses that cover research in the major areas of psychology: PSYC 641, 642; (b) six credit hours of research methodology: PSYC 651, 652; (c) a six-credit-hour research component, including the completion of a thesis: PSYC 799; (d) three additional courses in various areas of experimental psychology; and (e) a three-hour elective.
Industrial/Organizational Specialization

Students in the industrial/organizational specialization also complete 30 hours of graduate credit including (a) core courses that cover research in the major areas of psychology; PSYC 641, 642; (b) three courses in the industrial/organizational area; (c) one three-hour course in research methodology; (d) a six-credit-hour research component, including the completion of a thesis: PSYC 799, or a six-credit-hour practicum: PSYC 750; and (e) six hours of electives.

School Psychology Specialization

The basic goal of the school psychology training program at George Mason University is to produce high quality psychologists who can apply the knowledge of psychology to the problems of education. Since school psychology students develop knowledge, skills, and competencies in both education and psychology, the program is coordinated jointly by the Department of Psychology and the Department of Education. The program is approved by the Virginia Department of Education and prepares the student for endorsement as a fully certified school psychologist in Virginia. The program is also designed to meet the standards of the National Association of School Psychologists and the Division of School Psychology of the American Psychological Association. Thus it prepares the student for certification as a school psychologist in the majority of states.

Two years are needed to complete the 50 semester hours of coursework in the program. Written comprehensive examinations are administered after a minimum of 30 semester hours of coursework. The comprehensive must be passed prior to the internship and the awarding of the master’s degree.

Coursework is integrated with practical experience gained in two practica during the second year of training. The first practicum involves in-depth case studies, which students conduct on children at the Psychological Clinic of George Mason University. Students are placed in a school system for their second practicum.

At the conclusion of their coursework, students may choose to complete a thesis or to conduct a practical research project concurrent with the internship. A full-year internship, completed after the Master of Arts degree, is required for certification of a school psychologist in Virginia and other states. The school system usually pays a stipend to the student for services provided during the third year when the internship is completed. The student receives six semester hours credit for the internship experience. Thus a minimum of 60 semester hours is needed to satisfy all requirements necessary for certification.

Students in the school psychology program are evaluated each semester by the School Psychology Committee on the basis of their clinical and interpersonal skills as well as their academic performance. Since a school psychologist needs to be effective in all three areas, some students may be asked to discontinue their school psychology specialty if they are not able to remediate problem areas.

Programs of Study

Clinical and Counseling Psychology

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<thead>
<tr>
<th>Course Type</th>
<th>Semester hours</th>
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<td>Basic core courses:</td>
<td></td>
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<tr>
<td>General psychology core:</td>
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<tr>
<td>PSYC 641, 642, 653, 728</td>
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</tr>
<tr>
<td>Psychology practicum: PSYC 750</td>
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<tr>
<td>Elective:</td>
<td>18</td>
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II. Select from courses listed below:

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<tr>
<th>Course Type</th>
<th>Semester hours</th>
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<tbody>
<tr>
<td>Clinical:</td>
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</tr>
<tr>
<td>Psychological assessment:</td>
<td>11-12</td>
</tr>
<tr>
<td>PSYC 711, 715, 712, or 722</td>
<td></td>
</tr>
<tr>
<td>Psychopathology: PSYC 616 or 617</td>
<td>3</td>
</tr>
<tr>
<td>Biological foundations: PSYC 644</td>
<td>3</td>
</tr>
<tr>
<td>Psychotherapy and counseling: PSYC 729, 784, or 785</td>
<td>3</td>
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<tr>
<td>Elective:</td>
<td>23-24</td>
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<td>41-42</td>
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Counseling:

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<tr>
<td>Psychological assessment:</td>
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<tr>
<td>PSYC 711, 715, 786, or 687</td>
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<tr>
<td>Psychotherapy and counseling:</td>
<td>6</td>
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<tr>
<td>PSYC 729, 784, 785</td>
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</tr>
<tr>
<td>Special concentration:</td>
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<tr>
<td>PSYC 614, 524, 631, or 682</td>
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<tr>
<td>Ego psychology or psychopathology:</td>
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<tr>
<td>PSYC 616 or 680</td>
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<tr>
<td>Elective</td>
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Experimental Psychology

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<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>General experimental: PSYC 641 (may be waived on an individual basis), 642</td>
<td>6</td>
</tr>
<tr>
<td>Methodology: PSYC 651, 652</td>
<td></td>
</tr>
<tr>
<td>Research: PSYC 799</td>
<td>6</td>
</tr>
<tr>
<td>At least three courses from the experimental methodology area: PSYC 560, 563, 564, 565, 654, 661, 662, 666, 667, 668, 669, 772</td>
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</tr>
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<td>Elective</td>
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Industrial/Organizational Psychology

<table>
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<th>Type</th>
<th>Hours</th>
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<tr>
<td>General experimental: PSYC 641</td>
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</tr>
<tr>
<td>Research or practicum: PSYC 750 or 799</td>
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<tr>
<td>Three courses from the Industrial/Organizational area: PSYC 540, 533, 631, 632, 634, 635, 682</td>
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</tr>
<tr>
<td>One course from the area of Methodology: PSYC 633, 651, 652, 653, 654, 756</td>
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<tr>
<td>Electives</td>
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School Psychology

Coursework

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<th>Type</th>
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</thead>
<tbody>
<tr>
<td>Child study: PSYC 711, 715, 722, 750, EDSE 641</td>
<td>17-18</td>
</tr>
<tr>
<td>Personality and developmental: PSYC 508, 617, 642</td>
<td>9</td>
</tr>
<tr>
<td>Learning and remediation: PSYC 641, EDRD 611 and EDCI 650, 651, or 652</td>
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</tr>
<tr>
<td>School organizations: EDAS 621, EDUC 571 and 579 or PSYC 671</td>
<td>9</td>
</tr>
<tr>
<td>Methodology: PSYC 653, EDUC 531</td>
<td>6</td>
</tr>
<tr>
<td>Thesis Option:</td>
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</tr>
<tr>
<td>Thesis: PSYC 799</td>
<td>6</td>
</tr>
<tr>
<td>Internship: PSYC 765 and/or EDUC 665</td>
<td>6</td>
</tr>
<tr>
<td>Non-Thesis Option:</td>
<td></td>
</tr>
<tr>
<td>Practical Project: PSYC 798 or EDUC 610</td>
<td>4</td>
</tr>
<tr>
<td>Internship: PSYC 765 and/or EDUC 665</td>
<td>6</td>
</tr>
</tbody>
</table>

Total for Certification 60 or 62

Department of Psychology Graduate Coursework

To assist students in program planning, the semester in which courses are normally offered is indicated by the following abbreviations:

F—Fall Semester  Sp—Spring  Su—Summer Session

Typical schedules for each specialization are available in the department office.

With the approval of the department chairperson, a maximum of six credit hours in disciplines related to psychology may be accepted in fulfillment of the requirements for the MA.

Students who have the background equivalent to the prerequisites listed for any graduate psychology course may apply to the instructor for permission to enter the course.

A minimum of 15 undergraduate hours in psychology is a prerequisite for all psychology graduate courses. Students who have fewer hours in psychology but who have had similar courses in other disciplines should consult the department for permission to take graduate psychology courses.

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Public Affairs

Faculty
Professors: Clark (Government and Politics) (Chairman), Early (Government and Politics) (Director, Law Enforcement and Fire Administration Programs), Stillman (Government and Politics)

Visiting Professors: Cole (Government and Politics), Gibbons (Government and Politics), Hager (Government and Politics), Knowles (Latin American Studies)

Associate Professors: Andrews (Geography), Boswell-Thomas (Geography), Brown (Government and Politics), Fonseca (Geography), Gartner (Government and Politics) (Director, Public Administration Programs), Khoury (Government and Politics), Knight (Government and Politics), Nicholson (Government and Politics), Sacco (Government and Politics)

Assistant Professors: Abrams* (Government and Politics), Cox (Geography) (Director, Geography Programs), Hayden (Geography), Hung (Government and Politics), Ostrowski (Government and Politics), Plant (Government and Politics), Stopp (Geography), White (Government and Politics)

Instructor: Blodgett (Government and Politics)

Lecturers: Angelino (Government and Politics), Chapman (Geography), Fogarty (Government and Politics), Goldberg (Government and Politics), Hoppie (Government and Politics), Jentsch (Government and Politics), Knight (Government and Politics), Marcus (Government and Politics), Morayadas (Geography), Neal (Government and Politics), Persil (Government and Politics), Reiber (Government and Politics), Russell (Government and Politics), Russillo (Government and Politics), Shaw (Government and Politics), Stephenson (Geography)

* On leave, 1980-81. (Italicics indicate graduate faculty.)

Department of Public Affairs
Coursework
This department offers all coursework designated CART, GEOG, GOVT, PUAD, and PUAF in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Geography

To be eligible to graduate with a BA with a major in geography, a student must complete at least 120 semester hours of work and satisfy all requirements for the Bachelor of Arts degree prescribed by the University.

A candidate for the degree must present 36 semester hours of credit in geography to include GEOG 102, 103, 310, 415 and three of the following: GEOG 301, 304, 305, and 306. MATH 252-256 (Statistics) is also required but may not be counted toward the 36 hours in geography. In addition, a student may offer a maximum of three of the following regional courses toward the degree: GEOG 201, 205, 220, 230, 280. The following geology courses may be counted toward the 36-hour requirement: GEOL 204, 205, 301, 302.

Secondary Teacher Certification

Students pursuing certification for secondary school teaching are advised to take GEOG 101, 102, 103, 215, and 520; must present a minimum of 131 hours for graduation in order to include nine hours of credit for practice teaching; and should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education. Sample Schedule for BA Degree Geography Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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<td>ENGL 102</td>
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<td>Geography</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
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<tbody>
<tr>
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<td>GEOG 304</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Western culture</td>
<td>GEOG 230*</td>
</tr>
<tr>
<td>GEOG 305</td>
<td>GEOG 310</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>GEOG 306</td>
</tr>
<tr>
<td>MATH 252, 256</td>
<td>Econ., govt., or hist.</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
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<td>3</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 415</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td>Geography</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Geography</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
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<td>3</td>
<td>3</td>
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<td>3</td>
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<table>
<thead>
<tr>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>15</td>
</tr>
<tr>
<td>15</td>
</tr>
</tbody>
</table>

* Satisfies part of non-Western requirement.

Geography Courses

Descriptions of geography courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under GEOG.

BA Degree with a Major in Government and Politics

To be eligible to graduate with a BA in government and politics, a student must complete at least 120 semester hours of coursework and satisfy all requirements for the Bachelor of Arts degree prescribed by the University.

In addition to the General Requirements for the Bachelor of Arts degree, the student must complete 39 hours of coursework in government and politics. Twelve of these hours must be completed in the four introductory courses in the curriculum: GOVT 103: Introduction to Democratic Government; GOVT 132: Introduction to International Relations; GOVT 241: Introduction to Public Administration; and GOVT 250: Introduction to Political Analysis. Twenty-four hours must be drawn from courses in the six fields in the Curriculum Field A, American Government Institutions and Processes (GOVT 301-309, 401-409); Field B, Political Behavior (GOVT 310-319, 410-419); Field C, Political Theory (GOVT 320-329, 420-429); Field D, Comparative and Regional Politics (GOVT 330-339, 430-439); Field E, International Relations (GOVT 340-349, 440-449); or Field F, Public Administration and Policy Analysis (GOVT 350-359, 450-459). With the approval of the department, a student may substitute three hours of Internship (GOVT 480) or Seminar (GOVT 490) for an equivalent amount of credit in the field requirement of 24 hours. No more than six hours from any single field may be taken for completion of major requirements.

Three hours must be completed in courses involving politically relevant skills or techniques. Courses from the 360-369
Government and Politics Courses

Descriptions of government and politics courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under GOVT.

BA Degree with a Major in International Studies

A student who desires to earn a BA with a major in international studies must complete 120 semester hours of coursework and satisfy all requirements for the Bachelor of Arts degree prescribed by the College.

Each candidate for the degree must complete the following:
1. A required core of courses amounting to 62 hours distributed as follows:

- Communication: 21
  - Composition (ENGL 101, 102)
  - Oral (COMM 100, 110, 120, 130)
  - Foreign language (12 hours)

- Analytical reasoning: 3

- Humanities: 12

- Social sciences: 18

2. One concentration to be selected according to the student's individual interests from those designated (39-42 hours)

- International Politics Concentration: 39

- International Economics Concentration: 39

3. Free Electives: 19-16

Lists of courses approved for inclusion in the concentrations and the regional groupings are available in the Department of Public Affairs.

BS Degree with a Major in Law Enforcement

This interinstitutional and interdisciplinary program culminates in the conferral of the Bachelor of Science with a major in law enforcement and requires a minimum of 128 semester hours of coursework. 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. Generally, 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 a Bachelor of Science degree with a major in law enforcement are summarized below. English composition or an equivalent course must be completed prior to entry into the program at George Mason University. Except for the specified professional courses and English composition, all requirements may be completed at this University.

Inquiries concerning this program should be directed to Dr. Stephen T. Early, Jr., Department of Public Affairs, George Mason University, Fairfax, Virginia 22030.
### Requirements for the BS in Law Enforcement

**Minimum Quantitative and Distributional Requirements by Subject**

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>General</th>
<th>Major requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English composition</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Art, religion, music and/or philosophy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>American History or Principles of Economics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>A two-semester sequence in one recognized science with a laboratory</td>
<td>8</td>
</tr>
</tbody>
</table>

**Supporting Requirements**

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Statistics</th>
<th>Accounting</th>
<th>Computer Science</th>
<th>Communications</th>
<th>Special Investigative Techniques or Administration of Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 252 and 255</td>
<td>ACCT 201</td>
<td>MATH 110 (103), CS 161, and CS 261</td>
<td>MGMT 341, COMM 130 and ENGL 309 or 310</td>
<td>(among Criminal Investigation Techniques I, II or Principles of Criminal Investigation and Advanced Criminal Investigation)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>(Special Investigative Techniques or Administration of Justice)</td>
</tr>
</tbody>
</table>

**Core Requirements**

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Composition and Literature</th>
<th>Core Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENG L 101</td>
<td>GOVT 103</td>
</tr>
<tr>
<td></td>
<td>SOCI 203 or 332</td>
<td>ECON 103</td>
</tr>
<tr>
<td></td>
<td>GOVT 204</td>
<td>ACCT 201</td>
</tr>
<tr>
<td></td>
<td>GOVT 301, 309, and 320</td>
<td>PSYC 100</td>
</tr>
<tr>
<td></td>
<td>MATH 255</td>
<td>ECON 104</td>
</tr>
<tr>
<td></td>
<td>MATH 252, 255</td>
<td>SOCI 101</td>
</tr>
<tr>
<td></td>
<td>MATH 252 and 255</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>MATH 252 and 255</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>MATH 252 and 255</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>MATH 252 and 255</td>
<td>Elective</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Elective 3</th>
<th>Elective 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elective 3</td>
<td>Elective 4</td>
</tr>
<tr>
<td></td>
<td>Elective 3</td>
<td>Elective 4</td>
</tr>
</tbody>
</table>

**Total**

128 semester hours

### BS Degree with a Major in Public Administration

The program of study leading to the Bachelor of Science degree with a major in public administration comprises a core of work in government and politics and quantitative and distributive requirements for appropriate courses in other subjects of the curriculum. To complete this course of study, a student must earn 125 semester hours of credit and meet general degree requirements set for the BS degree by work falling within the following pattern:

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[http://catalog.gmu.edu](http://catalog.gmu.edu)
## Fire Administration and Technology Program Requirements

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>53</td>
</tr>
<tr>
<td>English composition</td>
<td>6</td>
</tr>
<tr>
<td>Literature</td>
<td>6</td>
</tr>
<tr>
<td>Art, music, religion, philosophy, dance appreciation</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>Science with laboratory</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Sociology (Introductory)</td>
<td>6</td>
</tr>
<tr>
<td>Government (American National and State-Local)</td>
<td>6</td>
</tr>
<tr>
<td>Psychology (Introductory)</td>
<td>3</td>
</tr>
<tr>
<td>Economics (Macroeconomic Principles)</td>
<td>3</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Major Requirements

**1. Fire science—at NVCC**

20-30

Fire science courses that satisfy one of the AAS degree programs of the Northern Virginia Community College or their acceptable substitutes, but excluding FIRE 290 and 298, are required for completion of this program. However, not more than 30 semester hours of credit earned in fire science may be applied to completion of the BS degree in fire administration and technology.

**Fire science—at GMU**

12

Professional required

- GOVT 241: Introduction to Public Administration
- GOVT 376: Collective Bargaining in the Public Sector
- GOVT 377: Public Safety Officers and the Law
- GOVT 378: Risk and Insurance

**2. Directly related Management tools—three courses to be selected from the following options:**

- Accounting: ACCT 201 and 202
- Statistics: MATH 252 and 255
- Computers: CS 161 and 261 or 263; INFS 201 and 211

**3. Concentration**

To consist of 18 hours of coursework additional to that offered to meet requirements designated above and taught by either the School of Business Administration, the Department of Public Affairs, or by the Departments of Psychology and Sociology, in combination. At least nine hours of credit must be earned by completing courses numbered at the 300 and 400 levels.

Acceptable courses by academic unit are:

- School of Business Administration
  - ACCT 201, 202, 311;
  - DESC 211, 311, 312;
  - INFS 201;
  - MGMT 311, 381 and 411.
- Departments of Psychology and Sociology
  - PSYC 220, 230, 231, 310, 325 and 361
  - PSYC 203, 205, 304, 308, 332, 340, 373, 392, 401, and 441
  - Department of Public Affairs
  - GOVT 309, 355, 356, 358, 401, 402, 451, and 452

### Open electives

**6-16**

Sufficient credit hours in courses of the student's unrestricted choice may be earned as is necessary to bring the total presented for graduation to 128 semester hours of credit.

**Total**

128

Students who attend George Mason University to complete the program leading to the BS with a major in fire administration and technology usually bring with them approximately 60 semester hours of work applicable to this program. While the additional courses required depend on which subjects are included in these transfer credits, a schedule similar to the following five-semester sample schedule may be typical. In this sample, the first three semesters of work are assumed to be met through transfer credit.

### Sample Schedule in Fire Administration and Technology

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Semester</td>
<td>MGMT 301</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>GOVT 204</td>
</tr>
</tbody>
</table>

### Graduate

#### Master of Science in Geographic and Cartographic Sciences

The objective of this program is to serve the needs of persons in three categories: those currently employed in research, technical, or teaching fields related to geography or cartography and who wish to improve their occupational skills; those with baccalaureate degrees in geography or cartography who desire to improve their skills before entering a career; and those who wish to earn a master’s degree as a prelude to additional graduate work in geography or cartography.

#### Program Entrance Requirements

In addition to meeting all general requirements for admission to the Graduate School, students admitted to the program must have a BA or BS in geography or cartography, or the equivalent. They must have earned a grade point average of 3.000 (on a 4.000 scale) during their last two years of undergraduate work. Three letters of recommendation and transcripts of all college coursework must be submitted in support of the application. In addition to these general program requirements, applicants for the cartography track of the program must have completed courses in FORTRAN, Elementary Cartography, Photo Interpretation, Elementary Photogrammetry, and courses in two of the following: statistics, calculus, or matrix algebra. Applicants who do not meet all of these requirements may be offered provisional or non-degree status in accordance with the general regulations of the Graduate School.

#### Degree Requirements

The following is a statement of the complete set of degree requirements as they are planned by the geography faculty of the Department of Public Affairs. Since the program is in its early years of operation, some of the specific courses listed below may not yet be approved for inclusion in the course listing. Prospective students should consult the Course Dictionary of this catalog for descriptions of approved graduate courses in geography and cartography.

In addition to fulfilling the degree requirements of the Graduate School, the candidates for the MS in geographic and cartographic sciences must complete several requirements specific to the program:

1. The student must complete all required core courses in either the geography or the cartography track. The MS degree in geographic and cartographic sciences is organized around two tracks, each of which offers two specializations.

   - Core courses in the geography track are the following: GEOG 680 (580): Seminar in Geographic Thought and Methodology; GEOG 785 (585): Geographic Fieldwork and Quantitative Methods; GEOG 795 (595): Seminar in Regional Analysis; and GEOG 799 (599): Thesis. Core courses in the cartography track are as follows: CART 650 (550): Mapping Foundations; CART 551: Thematic Cartography; CART 652 (552): Computer Applications in Cartography; CART 579:...

2. In addition to the core courses in either track, the student must complete enough additional courses to constitute a total of 33 hours of earned credit. (A maximum of two approved undergraduate courses taken for graduate credit may be included in this total.) The 33 hours of credit includes all courses taken in the core of either track.


The cartography track, there are two specializations available. The topographic specialization includes the following cartography courses: CART 660: Geodetic Cartography; CART 661: Map Projections and Coordinate Systems; CART 662: Advanced Photogrammetry; CART 663: Advanced Remote Sensing; and CART 664: Advanced Computer Cartography. The thematic specialization includes the following cartography courses: CART 653: Geographic Information Systems; CART 554: History of Cartography; CART 655 (565): Map Design; CART 656: Map Reproduction; CART 657: Statistical Mapping; CART 658: Terrain Representation; and CART 690 (590): Selected Topics in Cartography.

Courses from the two tracks may be mixed in consultation with the student's adviser. CART 794: Internship; GEOG 794: Internship; GEOG 796: Directed Reading and Research; and CART 797: Independent Reading and Research may be taken with permission of the department. CART 799: Thesis Research and GEOG 799: Thesis Research are normally taken at the end of the student's program.

3. Prior to the completion of 12 hours of graduate coursework in geography or cartography, including extended studies and transfer credit, the student must take a written examination. The examination consists of two parts: an objective component designed to evaluate the student's undergraduate preparation in geography or cartography, and an essay component designed to evaluate the student's ability to communicate in written form. Depending on the grade achieved, and after consultation with advisers, the student may also be required to remedy any deficiencies by completing GEOG 499: Independent Study in Geography, with a minimum grade of B. All remedial work must be completed with a grade of B or higher by the end of the semester in which the student completes 18 hours of graduate coursework, including extended studies and transfer credit. Credits taken in excess of 18 hours, prior to the successful completion of remedial work, may not be applied as credits toward the MS degree.

4. The student must complete a master's thesis. The content and nature of the thesis may vary in accordance with the particular track chosen as the field of study. An oral defense of the thesis may be required. Not more than six credit hours of thesis research (GEOG / CART 799) may be offered toward fulfillment of the 33 hours of required credit. Students should refer to the Graduate Policies and Procedures section of this catalog for regulations concerning the thesis committee, style, and fees.

Undergraduate-Graduate Courses

The following undergraduate geography courses have been approved for graduate credit: GEOG 403, 405. No more than two of these may be offered to fulfill requirements for the MS degree. Course descriptions appear in the Course Dictionary of this catalog.

Geography and Cartography Courses

Descriptions of geography and cartography courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under CART and GEOG.

Master of Public Administration

The Master of Public Administration program is designed to raise the students' competence in public service careers by improving their understanding of the processes of management and policy analysis and the role and practices of public administration and the public policy system. As the standard professional credential in the public service, the MPA is designed to serve the career needs of most public administrators. MPA graduates are expected to assume responsible managerial and staff positions in the public service, in a wide variety of organizational settings. While the program is designed for mid-career public employees who hold baccalaureate degrees in various disciplines, it also will help preprofessional students who expect to enter public employment and who aspire to reach middle and upper-level positions to develop their managerial and analytic skills.

MPA Admissions Criteria and Procedure

Applicants for the MPA program must meet all of the admission requirements of the Graduate School. In addition, for admission to degree student status, applicants must have achieved a 3.000 grade point average (on a 4.000 scale) in (1) overall undergraduate work, (2) the last 60 hours of undergraduate work, or (3) the major field of study. Applications are accepted from the full range of baccalaureate degrees.

Provisional admission may be effected. Provisional students, as defined by the admission regulations of the Graduate School, will be admitted to degree status if within two years after their initial admission they have removed any deficiencies in the designated administrative tools and completed six to twelve hours of graduate coursework with at least a B average. Those who cannot or who fail to do so will be automatically dropped from the MPA program.

Applicants must furnish the materials required by the Graduate School. In addition, they must furnish:

1. Three letters of recommendation. (At least one letter should be from an individual who is familiar with the applicant's undergraduate academic accomplishments; and, if the applicant is employed, one letter should be from an individual who is familiar with the applicant's employment record. All letters should assess the applicant's academic and career potential.)

2. A resume detailing work and civic activities experience if the applicant is employed.

3. Training certificates or other work-related or post-baccalaureate training information. (No credit will be given for this experience but the information will be used in helping to plan the student's education program.)

4. Notification as to whether the applicant is applying for Management or Policy Analysis track within the MPA program.

5. GRE Aptitude Test scores. (Not required of persons who have completed a graduate degree; e.g., master's, J.D.)

All applications are reviewed by an admissions committee composed of faculty teaching in the MPA program. Individuals who are denied admission or students who are admitted to the MPA program and drop out for reasons other than academic inadequacy may reapply for admission. Persons making reapplication must meet the full University and departmental requirements. Applications for readmission are considered only prior to the fall semester of each year, except that readmissions after suspension for academic inadequacy are considered only after the lapse of two years.

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Departmental Degree Requirements

The MPA program has two tracks within it, each leading to conferral of the MPA degree. The management track is the appropriate degree program for those students who desire to enhance their managerial abilities. For those students who wish to develop their skills and knowledge in the area of public policy and analysis the appropriate track is policy analysis. (The Department of Sociology offers a social policy analysis track within the MPA degree program. For full details, consult the Department of Sociology.) Listed below are the degree requirements for the two tracks. These are requirements in addition to those established by the Graduate School.

1. Analytic and Managerial Tools—Students in the MPA program must demonstrate proficiency in the use of the following analytic and managerial tools:
   a. Written Communication. Students must show the ability to write cogent, concise, precise, and lucid English. Proficiency in this area is proven through the preparation of course-related written work.
   b. Statistics
   c. Either Computer Science or Accounting (This applies only to students in the management track.) Students may demonstrate their proficiency in statistics, computer technology, and accounting either by completing an appropriate course in each of those subjects, or by satisfying the MPA faculty that work experience clearly demonstrates proficiency of the appropriate tool.

2. Requirements in the Management Track
   a. Core courses (27 hours). Required of all students in the management track.
      *PUAD 502: Theory and Practice of Public Administration (3)
      *PUAD 503: The Political Environment of Public Administration (3)
      **PUAD 611: Methods of Analysis for Public Managers II (3)
      PUAD 612: Methods of Analysis for Public Managers II (3)
      PUAD 615: Administrative Law (3)
      PUAD 620: Organization Theory and Management Behavior (3)
      PUAD 650: Intergovernmental Relations in the U.S. (3)
      PUAD 660: Public Financial Management (3)
      PUAD 700: Ethical Dimensions of Public Administration (3) (This course is to be taken during the final semester of a student’s MPA program.)
   b. Concentrations (9 hours). One concentration area required of all students.
      —Public Financial Management
      PUAD 661: Public Budgeting Systems (3)
      PUAD 662: State and Local Financial Management (3)
      PUAD 769: Issues in Public Financial Management (3)
      —Public Management
      PUAD 621: Principles and Practices in Government Organization and Management (3)
      PUAD 622: Program Planning and Implementation (3)
      PUAD 729: Issues in Public Management (3)
      —Public Personnel Administration
      PUAD 670: Personnel Administration in the Public Sector (3)
      PUAD 671: Public Employee Labor Relations (3)
      PUAD 779: Issues in Public Personnel Administration (3)
      —Public Policy Analysis (For students who want the MPA management track with a policy analysis concentration.)
      PUAD 641: Program and Policy Analysis (3)
      PUAD 642: Program Evaluation (3)
      One graduate course in analysis approved by the student’s adviser.

3. Requirements in the Policy Analysis Track
   a. Core courses (15 hours). Required of all students in the policy analysis track.
      *PUAD 503: The Political Environment of Public Management (3)
      **PUAD 611: Methods of Analysis for Public Managers I (3)
      PUAD 620: Organization Theory and Management Behavior (3)
      PUAD 700: Ethical Dimensions of Public Administration (3) (This course is to be taken during the final semester of a student’s MPA coursework.)
   b. Analytic methods (9 hours). Three graduate courses—one in each of the following fields:
      Statistics
      Computer Science
      Economic Analysis

Appropriate courses are designated by the Department of Public Affairs; courses are drawn from available offerings throughout the University. These courses must be taken only with the written approval of the student’s adviser.

3. Policy concentration (12 hours)
   a. Program and Policy Analysis (3)
   b. Program Evaluation (3)
   Two additional graduate policy-related courses. Courses may be chosen from throughout the University. Courses from other universities may be taken if appropriate approvals are gained. (See section of MPA program description entitled “Limitation on Transfer and Equivalency Credits.”) At least one of these courses should deal with substantive policy. These courses must be approved in writing by the student’s adviser.

4. Individual research project (6 hours)
   The individual research project can be done either as an internship or as an independent study. If it is done as an internship, some research must be involved in the student’s job. Guidelines for the project are developed jointly by the student and the student’s faculty adviser.

*Must be taken as the first courses in the program.
**Prerequisites: Computer science and statistics tools proficiency must be fulfilled.
Graduate Student Advising
Each student admitted to the MPA program is assigned to a member of the public administration faculty in the Department of Public Affairs for graduate academic counseling and advice. Working together, the student and the faculty member design a course of study to meet the practical career needs of the individual student, with particular attention given to the concentration and elective courses. No student is permitted to enroll in other than MPA core courses without the written approval of the faculty adviser.

Transfer and Equivalency Credit
Transfer Credits. Subject to overall University requirements, a student with prior approval of the graduate faculty adviser may transfer a maximum of six semester hours of graduate work completed at another fully accredited institution of higher learning. As appropriate, and with the prior approval of the graduate faculty adviser, these six hours may be used to fulfill any of the MPA degree requirements. Such transfer credit hours must have been completed prior to admission as a degree student to the MPA program at George Mason University. In addition to all other requirements, the credits must have been earned within ten years of admission as a degree candidate to the MPA program; the credits must not have been previously used to satisfy any requirement for any other University degree; and the credits must relate closely to the field of public administration, covering, for example, such subjects as public administration, government, political science, management, policy analysis, behavioral science, or similar material. Approval of transfer credits in the MPA program must be obtained from the student’s graduate adviser and from the faculty of the Department of Public Affairs. Decisions on transfer credits by the faculty of the Department of Public Affairs are final, subject to overall approval of the Dean of the Graduate School. After admission as a degree student, a student with the prior approval of the graduate faculty adviser and the Graduate Dean may, when need exists, earn up to nine hours of transfer credits for graduate courses taken at other universities.

Equivalency Credit. Students who, prior to admission to the MPA program, have had extensive professional, managerial, administrative, or technical experience in the public service and who have successfully completed programs of instruction of graduate level caliber for which no graduate academic credit was awarded, may request the Department of Public Affairs to grant graduate credits therefor. The department may grant graduate credit for such work not to exceed nine graduate semester hours. Instructional experiences submitted for consideration as academic credit must have been completed in programs that operate at an instructional level comparable to that of a university graduate school; or have been conducted by recognized professional societies that publish courses of comparable graduate level; or have been conducted by an accredited university. Credit, if granted, will be awarded at the rate of three semester hours for each 45 clock hours of instruction. In no case, however, may more than three credit hours be awarded for a single instructional experience (e.g., completion of one full session at the Federal Executive Institute). The graduate faculty adviser in the Department of Public Affairs must find that equivalency credits proposed for acceptance into the MPA program fit the career needs and program requirements of the individual student.

Students who petition for such equivalency credit must submit to the Department of Public Affairs the following:
1. Name, address, and affiliation of the organization that conducted the instruction.
2. Name, description, contents, and requirements of the course.
3. Name, profession, qualifications, and position of the instructor or instructors.
4. Exact dates, duration of the course, and the total hours of contact with the instructor.
5. Evaluation of the course by the student.
6. Account of the instructional tools, physical environment, and materials used during the course of instruction.
7. Authoritative evidence that the course was successfully completed. In all cases, the courses for which equivalency credit are claimed, if any, must have been completed prior to admission as a graduate student under the MPA program at George Mason University.

Limitation on Transfer and Equivalency Credits
1. A minimum of 30 graduate semester hours of credit must be earned at George Mason University toward the Master of Public Administration degree.
2. A maximum of 12 graduate semester hours of credit may be earned toward the Master of Public Administration degree by a combination of the following:
a. Transfer of not more that six graduate semester hours of credit awarded according to the paragraph headed “Transfer Credit” of this section, and/or
b. By award of not more than nine graduate semester hours of credit awarded according to the paragraph headed “Equivalency Credit” of this section, and/or
c. After admission to degree status in the Master of Public Administration program by earning at one or more universities offering accredited graduate programs a maximum of nine transfer graduate semester hours of credit not available in the graduate curricula of George Mason University. These courses must receive the approval of the student’s graduate faculty adviser and the Graduate Dean prior to registration at another institution and must be relevant to the student’s professional development. Students should read the paragraph of the Graduate School academic regulations entitled “Permission to Take a Course Elsewhere.”
3. The graduate semester hours of credit resulting from options exercised under a, b, and c may not exceed nine in categories b and c or more than 12 from any combination of the above options.

Undergraduate-Graduate Courses
No undergraduate courses may be counted for graduate credit to satisfy any requirement of this program.

Public Administration Courses
Descriptions of public administration courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under PUAD.

Doctor of Public Administration
The Doctor of Public Administration program has as its goal the education of individuals who intend to devote their lives to public service. Doctoral education, as opposed to that at the master’s level, is characterized by greater depth of inquiry into the basic issues and problems which confront the field of public administration, and those likely to emerge in the future. The DPA curriculum taps the overall intellectual traditions of our culture, thereby contributing to the development of leaders within the field of public affairs who have the intellectual, moral capacity and resiliency to analyze, understand, and influence the art and science of public administration and to improve the performance and responsiveness of government. To fulfill these goals, the program stresses the development of conceptual and analytical capacities; and understanding of administrative institutions and behavior in a wide variety of social and cultural settings; an appreciation of the basic ethical and substantive questions faced by society; the discernment of future challenges to public administration knowledge and action; the enhancement of administrative and managerial competency; and the development of opportunities for ongoing personal and professional development.
Criteria for Admission
The number of applicants admitted to the DPA class each year is strictly limited. All applications are reviewed by the DPA admissions committee; those who pass the initial screening are interviewed by the graduate public administration faculty. The potential candidates, approved by the graduate public administration faculty, are notified by mail in the first week of June and invited to the required introductory seminar which meets approximately two weeks prior to the beginning of the fall semester. Applicants accepted for the introductory seminar to the DPA may be required to take PUAD 502 prior to the introductory seminar. Upon satisfactory completion of the introductory seminar the applicants are certified as participants in the DPA class of that year.

The applicants for admission to the DPA program must meet the following general criteria. While the criteria are stated generally, applicants must be aware of the fact that the class size each year is limited to no more than 20 participants; therefore, it is expected that only those individuals with outstanding records and potential will be chosen.

1. Applicants should demonstrate high intellectual capability through their previous academic record and be judged by the graduate public administration faculty to be capable of completing the doctoral degree.

2. The faculty must determine that the courses appropriate to the applicant's proposed doctoral plan can be adequately given and that the required research can be supported and directed.

3. Most participants in the program are expected to have had the equivalent of five years of substantial responsibility in governmental or public service organizations. The lack of such experience, however, does not automatically preclude the admission of those with exceptional potential and who meet the other admission criteria.

4. Applicants must have an MPA, MS, MA, or equivalent post-baccalaureate work at the time of entry into the DPA class (August 1 of the year for which application is made).

George Mason University does not discriminate based on race, color, sex, or national origin. The Admissions Committee will act to assure a mixture of doctoral study participants with varied cultural, academic, professional, social, and geographical backgrounds.

Procedures for Application
Applications, including all supporting materials, must be received by the Graduate School Admissions Office no later than April 15 to be considered for the annual DPA class to be admitted approximately August 1. The following supporting materials are required in addition to the application documents required by the Graduate School Admissions Office:

1. Certification of completion of a master's degree, law degree, or equivalent post-baccalaureate study from an accredited institution of a recognized institution. (Where regional accreditation associations do not exist, the graduate public administration faculty, with the advice of the appropriate GMU administrative officers, reserves the right to make the final judgement on the recognition of institutions.) A variety of academic backgrounds will be considered.

2. Letters of completion or certification from instructional institutions attended other than colleges and universities. No academic credit will be given for such courses; however, the information will be considered as part of the total individual profile for admission.

3. Three letters of reference. At least one letter should be from someone who is familiar with the applicant's prior academic career, and all letters should evaluate the applicant's academic and professional career potential.

4. A detailed resume, including information on all significant work, civic activities, and interests.

5. An essay of 1,500 to 2,000 words which describes how the applicant believes the DPA program at GMU can help in the achievement of his or her intellectual and professional objectives.

6. Scores from the GRE Aptitude Test.

The DPA program requires 90 semester hours of work beyond the baccalaureate degree. Participants must show proficiency in two analytic and/or managerial tools before being advanced to candidacy. Although all participants admitted to the DPA program must have the equivalent of a master's degree, they must take at least 36 hours of coursework (the core seminars, intensive seminars, and work spelled out in their individual education plan) and pass two comprehensive examinations before being advanced to candidacy. A dissertation is required, and it must be defended in an oral examination. These and other requirements for the DPA degree are described below.

Residency. All participants in the DPA program must establish academic residency at GMU before being advanced to candidacy. Residency is established by:

1. Participating in the introductory seminar, held prior to the fall semester;

2. Completion of the core curriculum, two six-hour seminars taken consecutively during the first two semesters of the DPA program;

3. Passing the core comprehensive examination, given after the completion of the core curriculum; and

4. Successful completion of at least six hours of intensive seminars (including the Introductory Doctoral Program Seminar) during the first two years of the DPA program.

Analytical and/or Managerial Tools Proficiency. In order to satisfy the analytic and managerial tools component of the DPA degree, participants must meet two sets of requirements. First, they must demonstrate a working knowledge of the principal research and management tools applicable to public administration. This includes:

1. Successfully completing a graduate seminar or intensive study in the logic of research;

2. Showing knowledge of basic statistical methods (descriptive statistics, probability, sampling, hypothesis testing, and correlation regression), which may be done by providing evidence of completing an appropriate statistics course within the last ten years; and

3. Showing knowledge of advanced analytical methods (micro economics, decision analysis, systems theory, and modeling), which may be done by taking PUAD 612 or by passing the course's final exam.

Second, participants must demonstrate competence in those research and management methods related to their dissertation topic. This will be accomplished by successfully defending their dissertation proposal.

Curriculum Requirements. Participants in the DPA program must complete the core seminars during the first full year of study and they must participate in six credits of intensive seminars (the pre-entry seminar plus seminars totaling five additional credits) during the first two years. After completing the core seminars, DPA participants may focus their studies in one of several broadly defined areas. This part of the doctoral program is spelled out in the education plan of each participant prepared during the required pre-entry seminar. The plan for the special area of study is periodically updated as the participant proceeds through the program. This plan must be worked out jointly by the participant and his or her adviser or, once established, advisory committee and is reviewable by the graduate public administration faculty, which retains ultimate authority in such matters. Participants are expected to use the
following matrix as a guide to establish the parameters of the education plans.

The following matrix is intended as a vehicle to provide structure to participants' education plans while also allowing maximum flexibility. The cells of the matrix are not considered to be mutually exclusive nor are the activities and perspectives exhaustive; instead, the intersections of activities and perspectives are intended to be used as foci around which participants construct their individual education plans. While a participant may take the majority of work in one part of the matrix and may spell out the issues, activities, and perspectives that are central to his or her goals for the DPA, each individual is responsible for the broader set of activities and perspectives represented by the other cells vertical and horizontal to the one chosen as the focus of attention. This five-cell configuration forms the basis of the special area of study comprehensive examination. In order to successfully complete the special area of study comprehensive it is expected that students will take coursework in those cells that are vertical and horizontal to the main focus of attention. However, the amount and type of coursework required in the other cells is to be spelled out in each participant's education plan.

The matrix serves not only as a guide to DPA participants and their advisory committees, but it is used as a framework for designing course content by the DPA faculty. Therefore, the seminars and tutorials of the DPA program focus on selected issues represented within the matrix even though the courses relating to each individual cell may deal with a variety of theoretical, procedural, and substantive materials. By establishing direction and parameters for both faculty and participants, the special area of study allows maximum flexibility and at the same time guarantees a commonality and consistency of intellectual experience.

Model for Special Areas of Study Portion of DPA Program at George Mason University

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Analysis and Evaluation</th>
<th>Leadership</th>
<th>Change and Innovation</th>
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<tbody>
<tr>
<td>Individual Perspective</td>
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<tr>
<td>Organizational and Inter-organizational Perspective</td>
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<tr>
<td>Societal and Environmental Perspective</td>
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</table>

The minimum requirement for any cell may be met by a standard seminar, a special topics course, or a tutorial. These courses may be 1-3 hours. More than one course may be taken in any cell. (Additional information concerning this model is available from the Department of Public Affairs.)

The following additional guidelines are to be observed as special area study plans are designed. DPA participants:

1. Must take at least one special area of study seminar;
2. May take no more than one MPA course as part of the special area of study program; (Core courses from the MPA may not be counted.)
3. May design the remainder of the coursework looking to the tutorials, the other resources of GMU, and to other universities in the area. Work at other universities must be approved by the director of the Public Administration Program, based on the recommendation of the participant's advisory committee. No more than six hours of work from other universities taken subsequent to the DPA core seminars can be counted toward the degree.

**Doctoral Examinations.** Participants in the DPA program must complete three (3) doctoral examinations.

1. Core comprehensive examination. Upon completion of the two core seminars participants must pass a written comprehensive examination covering the material included in the core of the program. This examination is prepared by the entire graduate public administration faculty.
2. Special area of study comprehensive examination. Upon completion of the special area of study a written examination must be completed by the participant as the final step in advancing to candidacy. This examination is prepared by the participant's advisory committee.
3. Oral defense of dissertation prospectus. The candidate must defend his or her research in a presentation to the graduate faculty. Oral defense of a dissertation prospectus is scheduled after the candidate has developed a re-search design for the dissertation that is acceptable to the dissertation review committee, and after the candidate has completed research, but before the final dissertation manuscript has been prepared.

**Advancement to Candidacy.** Upon establishing proficiency in two analytic and managerial tools, completing the required coursework as specified in the core and intensive seminars and in the plan for the special area of study, and passing the three examinations, participants are advanced to candidacy for the DPA.

**Dissertation.** Each candidate for the doctorate must present a dissertation on some subject connected with his or her special area of study. The dissertation must represent technical mastery of the subject, originality in research, independent thinking, and scholarly ability. Its conclusions must be logical, its literary form must be acceptable, and its contribution to knowledge must be recognizable to others in the field.

Candidates must register for at least 18 hours of dissertation credit. They may register for no more than 24 hours of such credit, the hours of credit depending on the number of courses required in the candidate's education program plan and based on a requirement of 90 hours for conferral of the DPA.

The dissertation, signed by the Dissertation Review Committee members, must be submitted to the Dean of the Graduate School for approval not later than two weeks prior to graduation. Three official copies of the dissertation must be filed in the University Library for binding (the cost of binding to be paid by the candidate). Each copy must carry a certificate of approval signed by the Dissertation Review Committee and the Dean of the Graduate School. An original abstract of the dissertation (not more than 600 words) must also be filed with the Library.

Before the degree is awarded, the candidate must file with the Graduate School a copy of the abstract of the dissertation. At the same time, the candidate must submit a receipt showing that he or she has deposited with the treasurer of the University the amount required to cover the cost of binding and of microfilming the dissertation. If the candidate desires to have the dissertation copyrighted, an amount equal to the copyright fee must be paid to the University Library in the form of a certified check or money order payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School not later than one week (seven days) prior to graduation.

**Satisfactory Progress Toward Degree**

All requirements for the DPA, except the dissertation and oral defense, must be completed within a period of five years from the time of registration for the first of the core seminars. Those not advancing to candidacy within the five-year period must apply to the graduate public administration faculty for a continuance in participant status each additional year or else they are automatically dropped from the program and must apply for readmission.
A candidate for the DPA must complete the dissertation within four years after advancing to candidacy. If the dissertation is not completed within the four-year period, the candidate must take another defense of dissertation oral examination and be admitted to candidacy a second time by action of the graduate public administration faculty.

Any participant who does not enroll for coursework or take a comprehensive examination within a 12-month period must request a formal withdrawal from the program, stating the reasons for the delay in progress toward the degree. The graduate public administration faculty may grant or deny such a withdrawal. If the withdrawal is granted, the individual may re-enroll in the program within 24 months of last enrollment without penalty toward the time limitations stated above. If the request for withdrawal is not filed, or if it is denied, and the individual does not enroll in coursework or take a comprehensive examination over a 12-month period, that person must apply for readmission into the DPA program. Decisions on readmission are made by the graduate public administration faculty. These requirements do not apply for candidates for the DPA.

Participants in the DPA program must maintain at least a 3.000 (B) grade point average on all graduate courses taken while in the program. No grade below B will be counted toward the required hours for the degree.

Transfer of Credit

No more than 30 semester hours of post-baccalaureate academic work taken prior to admission can be transferred into the DPA program. Participants may take up to six hours of work at other universities, subsequent to completion of the DPA core seminars and with the approval of the participant's advisory committee, the director of the Public Administration Program, and the Dean of the Graduate School.

DPA Committees

Participant Advisory Committee. DPA participants are assigned advisers at the beginning of the program. During the first year, the Director of the Public Administration Program, in consultation with the participant and the adviser, must appoint an Advisory Committee consisting of a chairperson and one additional faculty member. The chairperson of the committee must be a member of the graduate public administration faculty.

Special Area of Study Comprehensive Committee. The Special Area of Study Comprehensive Committee is composed of three faculty members, at least two of whom must be from the graduate public administration faculty. This committee is appointed by the participant's advisory committee and the Director. It is the role of the committee to work with the DPA participant to define the area over which the participant will be examined. The committee is then responsible for preparing, administering, and grading the examination. Formal notification of the satisfactory (or unsatisfactory) completion of the Special Area of Study Comprehensive Examination is sent by the committee to the Director of the Public Administration Program and to the participant.

Dissertation Review Committee. The Dissertation Review Committee is composed of at least three individuals, two of whom must be taken from the graduate public administration faculty. The third member of the Committee must have appropriate expertise and academic credentials to serve on a dissertation committee, but need not be a George Mason University faculty member. It is the task of the Dissertation Review Committee to approve the dissertation topic, advise on the research and writing, administer the oral defense of dissertation, and read and approve the dissertation.

Public Administration and Public Affairs Courses

Descriptions of public administration and public affairs courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under PUAD and PUAF.
Courses in Support of Graduate Programs

Although a graduate degree program in anthropology is not now available through the Department of Sociology, the department does offer graduate courses in support of graduate programs: ANTH 610, 616. Course descriptions appear in the Course Dictionary of this catalog.

BS 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. 41 semester hours in social work, to include SOCW 301, 351, 323, 324, 352, 357, 358, 453, 454 or 455, 471, and two 400-level social work electives;
2. SOCI 101 and 221, PSYC 100, and either SOCI 203 or PSYC 231;
3. Six semester hours in each of the following: English composition; English literature; philosophy/religion; and the social sciences (history/economics/government), to include GOVT 204;
4. BIOL 103, 104;
5. Three semester hours in mathematics;
6. 12 elective semester hours outside of the behavioral sciences (recommended in communication, Spanish, economics, public administration, government);
7. 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 an average of 2.000 quality grade points.
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 an application for social work major to the coordinator 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.

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 BS Degree Social Work Majors

<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>PSYC 100</td>
<td>3</td>
</tr>
<tr>
<td>History, economics, or government</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 101</td>
<td>3</td>
</tr>
<tr>
<td>English Literature</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 103</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Literature</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 104</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCW 357*</td>
<td>SOCW 352</td>
</tr>
<tr>
<td>SOCW 323*</td>
<td>SOCW 358</td>
</tr>
<tr>
<td>SOCW 301</td>
<td>SOCW 324</td>
</tr>
<tr>
<td>SOCW 351*</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>(if SOCW 100 not taken)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCW 453 or 455**</td>
<td>SOCW 454 or 455**</td>
</tr>
<tr>
<td>Social work elective</td>
<td>Social work elective</td>
</tr>
<tr>
<td>SOCI 221</td>
<td>SOCI 471</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

*The Social Work Program can be completed in the final four semesters. Students who must do so are advised to take the asterisked courses in the fifth (Fall) semester. Otherwise, their graduation will be delayed.
** Students who wish to register for Block Placement must meet requirements and be advised by the director of field instruction.

BA Degree With A Major In Sociology

Students majoring in sociology must satisfy general requirements set for the Bachelor of Arts degree at George Mason University.

In addition to the general requirements for a BA degree, 36 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 36-hour sociology requirement.

In addition to the above requirements for majors, students are advised to elect other relevant anthropology courses as well as courses in biology, philosophy, psychology, and government and politics.

Secondary Teacher Certification

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

Sample Schedule For BA Degree Sociology Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 101</td>
<td>Sociology (200 level)</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Literature</td>
<td></td>
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<td></td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology (200 level)</td>
<td>Sociology (200 or 300 level)</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Oral communication</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Analytical reasoning</td>
<td>Analytical reasoning</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>ANTH 114</td>
<td>Elective</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>Advanced sociology courses 6</td>
<td>Sociology</td>
</tr>
<tr>
<td>SOCI 303</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 332</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced sociology courses 6</td>
<td>Sociology</td>
</tr>
<tr>
<td>Econ., govt., geog., or hist.</td>
<td>Elective</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
</tbody>
</table>

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Graduate

Master of Public Administration (MPA) Social Policy Analysis Specialization

The sociology department in conjunction with the public administration faculty is offering an interdisciplinary graduate degree. Upon successful completion of the program of study, the student receives the degree of Master of Public Administration (MPA) with specialization in social policy analysis. This program specialization has as its major objective the acquisition and development of sociological training and applied research skills for persons who are interested in understanding and influencing social policy.

Non-Degree Students

Students who do not wish to pursue a degree, or who have not supplied all required documents, may be admitted to non-degree status. Non-degree students may later apply for degree status. With approval, a maximum of 12 graduate credit hours earned in non-degree status may be applied to a master's degree.

The Graduate Record Examination, or similar scholastic aptitude testing, is not automatically required of all applicants. Where there is no clear evidence of potential for graduate study, the Department of Sociology may require such examinations.

Admission Requirements

Applicants for the MPA program must meet all of the admission requirements of the Graduate School. In addition, for admission to degree student status, applicants must have achieved a 3.000 grade point average (on a 4.000 scale) in (1) overall undergraduate work, (2) the last 60 hours of undergraduate work, or (3) the major field of study. Applications are accepted from the full range of baccalaureate degrees.

Students may be admitted provisionally. Provisional students, as defined by the admission regulations of the Graduate School, are admitted to degree status if within two years after their initial admission they have removed any deficiencies in the designated administrative tools and completed six to twelve hours of graduate coursework with at least a B average. Those who cannot or who fail to do so are automatically dropped from the MPA program.

Applicants must furnish the materials required by the Graduate School. In addition they must furnish:

1. Three letters of recommendation. (At least one letter should be from an individual who is familiar with the applicant's undergraduate academic accomplishments; and, if the applicant is employed, one letter should be from an individual who is familiar with the applicant's employment record. All letters should assess the applicant's academic and career potentials.)

2. A resume detailing civic activities and work experience, if the applicant is employed.

3. GRE aptitude scores. (The test must have been taken within five years of the date of application.)

Degree Requirements

Degree students are required to complete 42 hours consisting of 18 hours of core requirements. Students may then concentrate in one of four areas with a minimum of nine hours required, and with the remaining hours selected from the electives or any of the other areas.

Suburban-Urban Studies. Designed for students who wish to develop a theoretical basis for understanding the social organization and structure of metropolitan areas, skills for assessing suburban-urban social policies and planning, and tools for conducting research concerned with suburban-urban problems.

Criminal Justice. Provides students with an understanding of theoretical models of deviance, the social context of the criminal justice system, and policies and planning in criminology.

Medical Sociology and Health Delivery Systems. Provides an understanding of medical sociology and the policy implications of health delivery.

Clinical Sociology. Presents techniques and skills which enable students to apply the sociological perspective for action and change.

Courses of Study

1. Core requirements (18 hours)
   - PUAD 502: Theory and Practice of Public Admin (3)
   - PUAD 641: Policy Analysis (3)
   - PUAD 622: Program Planning and Implementation (3)
   - SOCI 620 (520): Design of Social Research (3)
   - SOCI 630 (530): Analytical Techniques of Social Research (3)
   - SOCI 640 (540): Social Theory and Social Policy (3)

2. Specialization (9 hours)

3. Electives (9 hours, 6 of which may be from other departments)

4. Individual Research Project (6 hours)
   - Either an internship or an independent study. If an internship, some research must be involved in the student's job. Guidelines for the project are developed jointly by the student and the student's faculty advisor and must be approved in writing by the advisor.

5. Transfer Credit
   - Subject to University requirements, a student may transfer with prior approval of his/her graduate faculty advisor up to six graduate credits taken at another university.

6. Comprehensive Examination
   - The student is expected to pass a comprehensive examination, written and administered by the sociology department, before the MPA is awarded. The student must have completed 36 hours or be in the final semester before being permitted to take the comprehensive examination.

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College of Professional Studies

Mission

The College of Professional Studies is dedicated to preparing competent practitioners in the fields of human services. Students come to the College from increasingly diverse backgrounds and are encouraged to seek excellence in their chosen careers through programs of study which have become increasingly multidisciplinary in order to emphasize the richness and complexity of the human personality.

All degree options require that students experience knowledge in a variety of disciplines in order to become thoughtful, informed, and skilled members of their professions.

The College of Professional Studies has a unique position within the university community. Its mission derives from the integration and application of knowledge from a variety of disciplines, including the practicing disciplines. The professional school develops in the student the potential for both the researcher and the practitioner. The students integrate this wide scope of learning and define their personal contribution within the real world in which they will function.

Programs

The College of Professional Studies enrolls students preparing for specific professions. The College is composed of three departments in which baccalaureate professional programs are offered as major fields of study:

- Department of Education: Early Childhood Education (BS Ed), Elementary Education (BS Ed), Vocational Education (BS Ed)
- Department of Health and Physical Education: Health Education (BS Ed), Physical Education (BS Ed)
- Department of Nursing: Nursing (BSN)

Administration

Larry S. Bowen, Dean

Teacher Certification

The College of Professional Studies is responsible for the professional courses, special standards, and certification recommendation for students desiring to complete the requirements for the Virginia Collegiate Professional Teaching Certification in all state-approved and NCATE-accredited programs preparing teachers and administrative, supervisory, and related instructional personnel. Virginia requires persons seeking initial certification to submit the score(s) obtained on the National Teacher Examinations. Information on these tests can be obtained from the Teacher Certification Specialist in the Education Department.

Academic Policies and Degree Requirements

College of Professional Studies academic policies and degree requirements are described in detail under the following departmental sections: education, health and physical education, and nursing.

Sample Schedules

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

College of Professional Studies (1972)

Majors and degrees possible in the College of Professional Studies are the Bachelor of Science in Education (BS Ed) with majors in early childhood education, elementary education, health education, physical education, and vocational education; and the Bachelor of Science in Nursing (BSN).

Education

Faculty

Professors: Spikell (Chairman), Azarowicz, Beyer, Bindel, Bowen, Edgemon, Gilstrap, Martin, Montebello

Associate Professors: Bonfadini, Carroll, Chu, Dobson, Duck, Dzama, Given, Gray, Jacobs, Schuchman, Seligman, Smith, Supley, C. Thomas

Assistant Professors: Behrmann, Chernay, Collier, Doober, Fauth, Haynie, Hittner, Isenberg, Masat, O’Connell, Sears, W. Thomas


(italics indicate graduate faculty.)

Department of Education Coursework

This department offers all coursework designated EDAS, EDCI, EDGC, EDRD, EDSE, and EDUC in the Course Dictionary of this catalog.

Available Teacher Education Programs

The teacher education programs are designed to prepare teachers 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 Arts and Sciences and the College of Professional Studies, and post-baccalaureate students through the Graduate School.

The following teacher preparation programs are available:

1. Early Childhood Education—Nursery School through Grade 3

http://catalog.gmu.edu
Admission to Teacher Education Programs

Admission to teacher education programs is granted by the Teacher Education Screening Committee on a selective basis. Students may get application forms from the Office of Field Experiences. Prerequisites for admission are the following:

1. Formal application on file with the Teacher Education Screening Committee by November 1, March 15, or August 1 of the semester preceding that in which the student intends to enroll in 400-level education courses. Students must have completed a minimum of 60 hours (72 hours for students in the Department of Health and Physical Education), six of which must have been taken at George Mason before applying. The application can be submitted, however, while taking the six hours. Only students in good academic standing in the College of Professional Studies, the College of Arts and Sciences, and Graduate School (post-baccalaureate) are admitted to the program and allowed to register for student teaching.

2. For elementary education majors, completion of EDUC 300, 302, and 313. For those in secondary certification programs, completion of EDUC 301 and 313. For majors in music education, health education, and physical education, EDUC 300, 301, and 313. For vocational education majors (industrial arts), completion of EDUC 308, 313, and one of the following: 364, 366, 367; and an AAS degree from Northern Virginia Community College or its equivalent. For vocational education majors (trade and industrial education), completion of EDUC 309, 313, 325, 361, and one of the following: 368, 369; and an AAS degree from Northern Virginia Community College or its equivalent.

3. A grade point average of 2.500 (or above) in all courses attempted at any institution of higher education or 2.800 (or above) for the most recently completed 30 hours. The same minimum grade point average options (2.500 or 2.800) must be maintained for admission to student teaching.

4. A grade point average of 2.500 (or above) in all professional courses with a minimal grade of C in each professional course. (Deficiencies may be corrected by repeating the courses in accordance with University regulations.)

5. Three endorsements submitted by the applicant from faculty members evaluating the student’s suitability for teaching. One of these endorsements must be from a member of the George Mason Department of Education. An additional endorsement, if a student is not majoring in education, must be from a faculty member in the department to which the student is an assigned major. Appropriate forms are in the application packet.

6. Demonstrated proficiency in written and oral communication in English (and, in the case of early childhood/elementary majors, competency in quantitative skills).

7. Completion of those courses required by departments before the departments will recommend a student for the teacher education program. Students majoring in music, health, and/or physical education should check with the departments for information concerning courses required.

8. Suitability for teaching as stipulated in part by Virginia Certification Regulations for Teachers.

Admission to Student Teaching

A review of the qualifications needed to be a teacher is conducted throughout the program. In addition to the requirements for admission to the teacher education programs (see above), early childhood, upper elementary, and vocational education majors must complete all required education and support courses prior to student teaching. The support courses are ART 373; HEAL 305; MATH 371, 372, 373; MUSI 251; PHED 301; and THR 354 or an approved oral communications course. Prior to student teaching, secondary students must have completed all prerequisite education courses, be within three semester hours of completing the University’s state-approved program in the discipline, and have completed 12 hours at the 300 or higher level in the teaching discipline. Application for student teaching must be filed by April 1 for the fall semester and September 15 for the spring semester. During student teaching, coursework is limited to the 15 semester hours work in education plus any hours enrolled for Directed Field Experiences credit (EDUC 444-447). A minimal grade of C in Student Teaching is required to secure the recommendation of the University for certification. Because student teaching requires a full-time commitment and preparation work during evening hours, experience has shown that students with part-time employment or coursework overload usually experience difficulty.

Post Baccalaureate Students

Students with bachelor’s degrees in biology, chemistry, economics, English, French, German, geography, government, history, mathematics, physics, psychology, sociology, or Spanish may qualify for a Virginia certificate by completing all the requirements of the approved program. Students who have degrees in music should consult the Department of Fine and Performing Arts and Communication. Students who have degrees in subjects not designated above must go to other Virginia teacher education institutions to complete requirements for a Virginia certificate.

Admission to Post Baccalaureate Status

Students holding baccalaureate degrees who are working toward certification will be required to meet the general education and subject matter requirements prescribed for undergraduate students. All post baccalaureate students must apply as non-degree students through the Graduate School Admissions Office.

Recency of Study

Due to constant changes in the field of education, a student may benefit from repeating any course more than 10 years old. Therefore, education courses may be repeated for credit after a lapse of 10 years. Moreover, any education courses taken more than 10 years prior to admission to teacher education must be validated for credit by passing an examination constructed by education faculty who have taught the course that semester or during the previous two semesters, or by repeating the course. If the course is repeated, the new course credit will apply toward the degree requirement while the initial course will be applied as elective credit.
Requirements for the Degrees

Undergraduate

Bachelor of Science in Education

Major in Early Childhood or Upper Elementary Education

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Language Arts and Culture</td>
<td>6</td>
</tr>
<tr>
<td>1. English</td>
<td></td>
</tr>
<tr>
<td>1. English Composition (ENGL 101, 102)</td>
<td>3</td>
</tr>
<tr>
<td>B. Oral Communication</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>1. Creative Dramatics for the Elementary School (THR 354)</td>
<td>3</td>
</tr>
<tr>
<td>2. Oral Communication (COMM 100)</td>
<td>3</td>
</tr>
<tr>
<td>3. Public Speaking (COMM 120)</td>
<td>3</td>
</tr>
<tr>
<td>Option of C or D</td>
<td>8 or 6</td>
</tr>
<tr>
<td>C. Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>1. French</td>
<td>3</td>
</tr>
<tr>
<td>2. Spanish</td>
<td>3</td>
</tr>
<tr>
<td>3. German</td>
<td>3</td>
</tr>
<tr>
<td>D. Regional Cultures</td>
<td>6</td>
</tr>
<tr>
<td>Select two of the following:</td>
<td>6</td>
</tr>
<tr>
<td>1. Latin America (LAC 151)</td>
<td>3</td>
</tr>
<tr>
<td>2. Sub-Sahara Africa (LAC 152)</td>
<td>3</td>
</tr>
<tr>
<td>3. Asia and Western Pacific (LAC 153)</td>
<td>3</td>
</tr>
<tr>
<td>4. North Africa and the Middle East (LAC 154)</td>
<td>3</td>
</tr>
<tr>
<td>E. Literature</td>
<td>9</td>
</tr>
<tr>
<td>1. Readings in English and American Literature (ENGL 205, 206)</td>
<td>6</td>
</tr>
<tr>
<td>2. Children's Literature (EDUC 305)</td>
<td>3</td>
</tr>
<tr>
<td>F. Humanities</td>
<td>8</td>
</tr>
<tr>
<td>1. Art for the Elem School (ART 373)</td>
<td>4</td>
</tr>
<tr>
<td>2. Music for the Elem School (MUSI 251)</td>
<td>4</td>
</tr>
<tr>
<td>II. Social Science</td>
<td>12 or 15</td>
</tr>
<tr>
<td>A. History</td>
<td>6</td>
</tr>
<tr>
<td>1. American (HIST 121, 122)</td>
<td>6</td>
</tr>
<tr>
<td>2. Western Civilization (HIST 101 or 102)</td>
<td>6</td>
</tr>
<tr>
<td>B. Other subjects</td>
<td>3</td>
</tr>
<tr>
<td>1. Economics (ECON 103 or 104)</td>
<td>3</td>
</tr>
<tr>
<td>2. Geography (GEOG 101, 102, or 103)</td>
<td>3</td>
</tr>
<tr>
<td>III. General Health and Sciences</td>
<td>29</td>
</tr>
<tr>
<td>A. Teaching Health in the Elementary School (HEAL 305)</td>
<td>3</td>
</tr>
<tr>
<td>B. Teaching Physical Education in the Elementary School (PHED 301)</td>
<td>3</td>
</tr>
<tr>
<td>C. Physical Education Activities</td>
<td>2</td>
</tr>
<tr>
<td>D. Mathematics (MATH 371, 372, 373)</td>
<td>9</td>
</tr>
<tr>
<td>E. Laboratory Science (BIOL 151, CHEM 106, PHYS 151)</td>
<td>12</td>
</tr>
<tr>
<td>IV. Professional (Major) Sequence</td>
<td>45</td>
</tr>
<tr>
<td>Early Childhood Education: EDUC 300, 302, 313, 320, 325, 403, 407, 411, 412, 413, and 431</td>
<td>45</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Upper Elementary Education: EDUC 300, 302, 313, 320, 325, 404, 408, 411, 412, 413, and 432</td>
<td>45</td>
</tr>
<tr>
<td>V. Open Electives</td>
<td>7-12</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
</tr>
</tbody>
</table>

Early Childhood and Upper Elementary Education

Programs in early childhood education (nursery school, kindergarten, grades 1-3) and in upper elementary education (grades 4-7) are offered. These programs require completion of 130 semester hours including one semester of student teaching during the senior year. The student must decide prior to enrollment in 400-level courses whether he/she desires to be certified at the early childhood level or at the upper elementary level.

All undergraduates seeking dual certification (NK-3 and 4-7) must fulfill the following requirements:

1. The completion of three hours in reading methods at the second level of study.
2. A 15 semester hour student teaching experience at the early childhood level.
3. A nine semester hour student teaching experience in the upper elementary grades.

None of the additional professional course hours for dual certification will count toward the 130 hours needed for graduation.

The program listed leads to the awarding of the Bachelor of Science degree with a major in early childhood education or in upper elementary education and the Virginia Collegiate Professional Certificate with endorsement at the nursery school-kindergarten-grade 3 level, or the grades 4-7 level.

Sample Schedule for Early Childhood (NK-3) or Upper Elementary (4-7) Education Major

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 151 or CHEM 106 or</td>
<td>BIOL 151 or CHEM 106</td>
</tr>
<tr>
<td>PHYS 151</td>
<td>PHYS 151</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIS 121</td>
<td>HIST 122</td>
</tr>
<tr>
<td>Social science</td>
<td>Social science</td>
</tr>
<tr>
<td>Regional culture or foreign language</td>
<td>Regional culture or foreign language</td>
</tr>
<tr>
<td>3-4</td>
<td>3-4</td>
</tr>
<tr>
<td>EDUC 302</td>
<td>16-17</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>BIOL 151 or CHEM 106</td>
<td>BIOL 151 or CHEM 106</td>
</tr>
<tr>
<td>or PHYS 151</td>
<td>or PHYS 151</td>
</tr>
<tr>
<td>MUSI 251</td>
<td>MUSI 251</td>
</tr>
<tr>
<td>EDUC 300</td>
<td>EDUC 300</td>
</tr>
<tr>
<td>ENGL 205</td>
<td>ENGL 205</td>
</tr>
<tr>
<td>Approved elective, or</td>
<td>Approved elective, or</td>
</tr>
<tr>
<td>Regional culture course</td>
<td>Regional culture course</td>
</tr>
<tr>
<td>for those taking foreign</td>
<td>for those taking foreign</td>
</tr>
<tr>
<td>language option</td>
<td>language option</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>MATH 371</td>
<td>MATH 372</td>
</tr>
<tr>
<td>EDUC 306</td>
<td>EDUC 303 or 404</td>
</tr>
<tr>
<td>THR 354</td>
<td>EDUC 411</td>
</tr>
<tr>
<td>EDUC 325</td>
<td>EDUC 412</td>
</tr>
<tr>
<td>EDUC 320</td>
<td>EDUC 445</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Physical education activity</td>
<td>Physical education activity</td>
</tr>
<tr>
<td>17</td>
<td>14-16</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>MATH 373</td>
<td>MATH 372</td>
</tr>
<tr>
<td>PHED 301</td>
<td>EDUC 431 or 432</td>
</tr>
<tr>
<td>EDUC 407 or 408</td>
<td>15</td>
</tr>
<tr>
<td>EDUC 413</td>
<td></td>
</tr>
<tr>
<td>EDUC 446</td>
<td></td>
</tr>
<tr>
<td>Approved electives</td>
<td>Approved electives</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>*Elective Credit</td>
<td></td>
</tr>
</tbody>
</table>

Vocational Education Program

The Vocational Education program is a cooperative arrangement between George Mason University and Northern Virginia Community College. Freshman students may enroll in either

COLLEGE OF PROFESSIONAL STUDIES
Major in Industrial Arts and Trade and Industrial Education

Preparation for an Industrial Arts teacher requires the completion of the prescribed technical and curriculum courses offered at George Mason University. The degree certifies students to teach Industrial Arts in the public schools, K-12. This specialty requires completion of 131 semester hours including one semester of student teaching in the senior year. The following chart provides an overview of the four-year program.

<table>
<thead>
<tr>
<th>Sample Industrial Arts Program</th>
<th>Students Enter</th>
<th>George Mason University or Northern Virginia Community College</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Education</td>
<td>Technical Teaching Courses</td>
</tr>
<tr>
<td>Requirement</td>
<td>for</td>
<td>18 Sem. Hrs.</td>
</tr>
<tr>
<td>Certification</td>
<td>or AAS Degree</td>
<td>EDUC 370 3 EDUC 373 3 Freshman</td>
</tr>
<tr>
<td>NVCC or GMU</td>
<td>(41 Sem. Hrs.)</td>
<td>as per student's interest in areas of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Communications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Manufacturing and Construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Power and Transportation/Energy</td>
</tr>
<tr>
<td>Courses for BS Degree</td>
<td>in Education</td>
<td>George Mason University Teaching Methods Courses</td>
</tr>
<tr>
<td>GMU Only</td>
<td></td>
<td>12 Sem. Hrs.</td>
</tr>
<tr>
<td>18 Semester Hours</td>
<td></td>
<td>EDUC 367 3 EDUC 365 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EDUC 366 3 EDUC 463 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>George Mason University Industrial Arts Professional Courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 Semester Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EDUC 362 3 EDUC 308 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EDUC 468 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>George Mason University Student Teaching—12 Sem. Hrs.</td>
</tr>
</tbody>
</table>

Students may enroll at either GMU or NVCC as freshmen. General Education courses may be taken at either GMU or NVCC with proper approval from the Coordinator of Vocational Education and the Dean of the College of Professional Studies.

Students must take GMU technical teaching courses before enrolling in technical elective courses at NVCC—see following prerequisite chart.

All students will complete the minimum requirements for AAS Degree in Industrial Education by the end of their fifth semester.

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Elective at NVCC</td>
<td>Technical Elective at NVCC</td>
</tr>
<tr>
<td>Technical Elective at NVCC</td>
<td>Technical Elective at NVCC</td>
</tr>
<tr>
<td>EDUC 370, 371, or 372</td>
<td>History, English elective</td>
</tr>
<tr>
<td>EDUC 364, 373, or 374</td>
<td>History, English elective</td>
</tr>
<tr>
<td>Math or science elective</td>
<td>World Literature or speech/communications</td>
</tr>
<tr>
<td>Physical education</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 366</td>
<td>EDUC 367</td>
</tr>
<tr>
<td>EDUC 365</td>
<td>EDUC 468</td>
</tr>
<tr>
<td>EDUC 313</td>
<td>EDUC 370</td>
</tr>
<tr>
<td>HEAL 110</td>
<td>History, English elective</td>
</tr>
<tr>
<td>History, English elective</td>
<td>Math or science</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 463</td>
<td>EDUC 436</td>
</tr>
<tr>
<td>EDUC 362</td>
<td>EDUC 308</td>
</tr>
<tr>
<td>Regional cultures</td>
<td>15</td>
</tr>
<tr>
<td>Humanities, social science, lab</td>
<td></td>
</tr>
<tr>
<td>science, or math</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Trade and Industrial Education

The Trade and Industrial Education specialty is a degree associated with one specific area of vocational education, for example: auto mechanics, air conditioning/refrigeration, cosmetology, carpentry. Prospective teachers may complete an AAS degree or the equivalent at Northern Virginia Community College. University credit is given for technical work experience where appropriate. Completion of this degree prepares students to teach in a specific trade and industrial discipline. Practicing industrial education teachers can earn a college degree by completing the requirements of this program.

The program also requires appropriate work experience relating to the area of specialization. George Mason University's Vocational Program Coordinator evaluates prospective candidates' work experience and transcripts and recommends for approval university credit where applicable.

<table>
<thead>
<tr>
<th>Sample Schedule for Trade and Industrial Education</th>
<th>Freshman and sophomore years: Obtain AAS degree, or equivalent, from Northern Virginia Community College with a major in industrial education.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>66 Semester Hours</td>
</tr>
<tr>
<td>Fifteenth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>EDUC 369</td>
<td>EDUC 368</td>
</tr>
<tr>
<td>EDUC 309</td>
<td>EDUC 313</td>
</tr>
<tr>
<td>EDUC 361</td>
<td>EDUC 320</td>
</tr>
<tr>
<td>EDUC 325</td>
<td>EDUC 363</td>
</tr>
<tr>
<td>EDUC 370</td>
<td>Government, history, geography, or economics</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>EDUC 466</td>
<td>EDUC 436</td>
</tr>
<tr>
<td>EDUC 467</td>
<td>EDUC 460</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Schedule for Industrial Arts (7-12)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 121</td>
<td>HIST 122</td>
</tr>
<tr>
<td>Math</td>
<td>Science</td>
</tr>
<tr>
<td>EDUC 370, 371, or 372</td>
<td>EDUC 370, 371, or 372</td>
</tr>
<tr>
<td>EDUC 364, 373, or 374</td>
<td>EDUC 364, 373, or 374</td>
</tr>
</tbody>
</table>

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Fifth year: Internship in industry in the trade for which teacher certification is sought (12 months, 8 hours per day, 5 days per week). Documentation is necessary.

Note: Included in the program at NVCC and GMU are the General Education Requirements as mandated by the State of Virginia; see “Secondary School Education.”

Major in Secondary School Education

The Secondary School Teacher Education Program has three components:

1. Courses in the teaching discipline as developed by the College of Arts and Sciences. Majors are available in biology, chemistry, economics, English, French, German, geography, government, history, mathematics, physics, psychology, sociology, and Spanish. Added secondary endorsement certification is offered in pre-algebra, earth science, and general science. In addition, a specialization in multicultural/bilingual education is offered. Interested students should consult with an advisor in the Multicultural/Bilingual Education office. Students who major in music should consult the Department of Fine and Performing Arts and Communication. Students with majors in health education or physical education should consult the Department of Health and Physical Education. Students majoring in vocational education should consult the Department of Education.

2. General Education Requirements as mandated by the state of Virginia.

3. The Professional Courses offered by the Department of Education: 30 Semester Hours

Recommended:
EDUC 302: Human Growth and Development .................................................. 3
EDUC 301: Foundations of Education ................................................................. 3
EDUC 313: Education Psychology ................................................................. 3
EDUC 320: Introduction to Tests and Measurements ........................................... 3
EDUC 325: Production and Utilization of Instruction Materials ................................ 3
EDUC 450: Teaching Foreign Language (Fall Only) or........................................ 3
EDUC 463: Teaching Industrial Arts ................................................................. 3
EDUC 467: Methods of Teaching and Curriculum Construction for Trade and Industrial Education or ................................................................. 3
EDCI 667: Teaching Social Studies in the Secondary School (Spring Only) or........ 3
EDUC 669: Teaching English in the Secondary School (Spring Only) or............. 3
EDCI 672: Teaching Mathematics in the Secondary School (Spring Only) or........... 3

Semester Hours

Humanities .................................................. 12
ENGL 101, 102 .................................................. 6
English, foreign language, oral communication, fine arts, music, or philosophy .......... 6
Social Sciences ............................................. 12
HIST 121 or 122 ............................................. 3
Anthropology, economics1, geography, history, political science, psychology, or sociology ............................................. 9
Laboratory Science and Mathematics .............................................................. 12
(At least one course in each area)
Electives (from the above categories) ............................................................ 8
Health and Physical Education ................................................................. 5
HEAL 110 .................................................. 3
Physical Education activities2 ................................................................. 2

1 Required for all social science endorsements.
2 Credits for these courses may not be applied towards a degree in the College of Arts and Sciences.

EDCI 673: Teaching Science in the Secondary School (Spring Only)
EDUC 435—12 hours: Student Teaching in Secondary Schools

Undergraduate students will register in the department of the teaching discipline. Students must meet:
1. The degree requirements of the discipline; and the GMU-approved teacher certification requirements in the discipline;
2. The general education requirements;
3. The professional education requirements.

Students should consult with the secondary education advisor in each department as well as the appropriate discipline advisor in the Department of Education. Undergraduate students should plan to either (a) add a minimum of one semester or two summer terms of coursework to the requirements for the baccalaureate degree or (b) do student teaching at the post-baccalaureate level. Post-baccalaureate students will register as non-degree graduate education students.

Multicultural/Bilingual Education

A specialization in multicultural/bilingual education is offered within the secondary school education program. Interested students should consult with an advisor in the Multicultural/Bilingual Education office.

Library Science

Courses in library science are offered to enable students to qualify as School Library Media Specialists in addition to achieving certification at the early childhood, upper elementary, or secondary school levels. The following are the courses required for certification as a School Library Media Specialist: LSCI 401, 402, 403, 404, and 405; EDUC 305 and 325.

The library science sequence is offered only one course each semester; therefore, students interested in entering this program should obtain advice from the Basic Teacher Education Coordinator and a library science brochure in the Department of Education office. BIS students may take a concentration in library science. LSCI 401: Adolescent and Adult Literature, and 402: Information Services, may be taken as electives by any student.

Graduate

Master of Education Programs

The Department of Education offers the Master of Education degree in the following fields: elementary education, guidance and counseling, reading, school administration and supervision, secondary education, and special education.

Students holding the baccalaureate degree who wish to take courses toward teacher certification should apply for non-degree status in the Graduate School. For additional information contact the Department of Education.

Graduate Assistantships

Graduate assistantships are available in the Department of Education. To be eligible for an assistantship, a student must be admitted to degree status and take a minimum of six semester hours of graduate credit each semester. For 1980-81, full-time stipends range from $3,400 to $3,900 for the academic year. It is anticipated that these amounts will be adjusted yearly.
Program Approval and Accreditation

All of the graduate programs listed above have been approved by the state Department of Education and are accredited by the Southern Association of Colleges and Schools and by the National Council for the Accreditation of Teacher Education (NCATE).

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, the applicant must:

1. Possess a temperament appropriate for the teacher as required by Virginia Certification Regulations.
2. Meet specific requirements for the program desired. The entrance requirements for each program are shown immediately preceding the program outline. Students admitted provisionally because of low grade point averages normally will be required to reach the necessary grade point average by taking courses in Areas I, II, and III of the program before considered for admission as degree students.

Departmental Degree Requirements

In addition to fulfilling the degree requirements of the Graduate School, the candidate must:

1. Complete at least one course in each of the two foundation areas and at least one course in the research area. Each student, with adviser, should select courses which will broaden knowledge in those fields upon which professional school activities are based. In general, the following outline may serve as a guide to selections. (Please note that persons other than those preparing for positions in elementary and secondary schools may arrange with advisers for foundations courses not directly related to education.)

Area I, Historical, Philosophical, Sociological Foundations:
EDUC 501, 502, 503, 504, or 505.

Area II, Psychological Foundations: EDUC 525, 526, 527, or 533. (Special Education students should refer to program descriptions for specific requirements in this area.)

Area III, Research: EDUC 590 or 591.

2. Complete the number of semester hours required for the graduate program in which enrolled.

3. Pass a comprehensive examination (where required) covering the graduate program in which enrolled. The comprehensive examination at the conclusion of each student's program will be broadly conceived. Therefore, the student should support with independent reading those areas not chosen for coursework.

Students having an interest in research may elect a program requiring the preparation of a thesis. Students electing a thesis must include within the requirements for their program the following courses:
EDUC 590, 591, and 599.

Departmental Transfer of Credit Policy

Credit earned more than seven years prior to admission to a program is not transferred. Credits earned within the seven year period are evaluated by the student's adviser. The adviser's recommendation for transfer of credit must be approved by the coordinator of the student's program.

Program Requirements

It is each student's responsibility to be aware of all requirements and to develop with the assigned adviser a program which will meet the requirements. The program should be developed as soon as possible after the student is admitted to degree status. The typical programs which appear for each degree are offered as examples. There is considerable flexibility as each student's personal program is developed within the indicated guidelines.

The following programs require a practicum or internship: guidance and counseling, reading, school administration and supervision, and special education. Students should apply for practicum or internship one semester prior to enrollment and observe the following application deadlines:

April 1 for Fall semester
October 1 for Spring semester
March 1 for Summer session

Forms are available in the Office of Field Experiences, Room 3335 Robinson Hall, and must be returned to that office.

Computer Names

Names provided for specialized courses in the six M Ed programs offered in the Department of Education are:
EDAS School Administration/Supervision
EDCI Elementary/Secondary
EDGC Guidance/Counseling
EDRD Reading
EDSE Special Education

Other education courses (including sociological, historical, philosophical, and psychological foundations; research; and support courses) are prefixed EDUC. Prerequisites: All graduate education courses, unless otherwise indicated, require the Collegiate Professional Certificate or equivalent, or permission of the department. Specific additional prerequisites pertaining to each course are listed in the course description in the Course Dictionary of this catalog.

Elementary Education

The Master of Education Program in elementary education is designed to improve the competence of teachers working with children at the pre-elementary, lower elementary, and upper elementary levels.

Entrance Requirements

Students preparing for the pre-elementary specialization (infancy-kindergarten) must:

1. Possess a baccalaureate degree.
2. Submit evidence of three years of acceptable teaching or administrative experience in a preschool or elementary school program. (This requirement is waived for students who can provide evidence of certification at the Collegiate Professional level in elementary education by the state of Virginia or another jurisdiction.)
3. Submit recommendations by three persons qualified to judge the candidate's professional competence.

Students preparing for the elementary specialization must:

1. Provide evidence of certification at the Collegiate Professional level in elementary education by the state of Virginia or another acceptable jurisdiction.
2. Submit recommendations by three persons qualified to judge the candidate's professional competence.

Degree Requirements

In addition to the departmental degree requirements, students must take six hours of basic concentration courses, nine hours in an area of specialization, and additional coursework to meet the degree total of 30 semester hours. Normally, stu-
Students are required to take as the basic concentration EDCI 650 and 782, in that order. In addition, students normally take nine hours in one of the following specializations:

1. Pre-elementary Education (Infancy-Kindergarten): ED CI 511, 512, 513, 514, or EDSE 641 or other pre-elementary courses.
2. Elementary Education: ED CI 657, 658, 660, 661, 662, 663, 664, 666, EDGC 624, EDRD 559, EDSE 641, or EDUC 565.

### Vocational Education

Vocational education specialization is designed to serve a broad spectrum of vocational teachers seeking a Master's Degree in Secondary Education. Persons with a background in such areas as Industrial Arts, Occupational Education, Business and Office Education, General Vocational Education, Special Needs Education, Cooperative Education, Adult Education, and Home Economics Education may qualify for admission to this specialization. For information, contact Dr. John E. Bonfadini, Vocational Education Coordinator.

### Reading

The Master of Education program in reading is designed to permit qualified individuals to become reading specialists or reading teachers at the elementary or secondary level.

### Entrance Requirements

Applicants must:
1. Provide evidence of certification at the Collegiate Professional level by the state of Virginia or another jurisdiction.
2. Have completed two years of successful teaching experience.
3. Be recommended by three professional educators in the position of principal, supervisor, or administrator, including at least one who has observed the applicant's teaching.

### Degree Requirements

In addition to the departmental degree requirements, students must complete another three semester hours in research and 21 semester hours in reading, to meet the degree total of 33 semester hours. Normally, students are required to take EDRD 559 and/or 614, 611 or 612; 613, 615, 616, 617, 790 (3) and 794 (3).

### Multicultural/Bilingual Education

Currently, students in either the elementary or secondary education programs may specialize in multicultural/bilingual education by taking EDCI 517, 518, 519, and EDRD 615, and a three semester hour course in linguistics (English, Spanish, or Korean). Secondary majors may add the specialization by taking EDCI 517, 518, 519, and EDRD 615. Please note that from time to time special sections of EDUC 527: Evaluation of Student Progress will emphasize multicultural/bilingual education.

### Secondary Education

The Master of Education program in secondary education is designed to improve the competence of teachers who have completed a basic program in preparation for teaching and who hold the Virginia Collegiate Professional Certificate or its equivalent. Teaching fields available for study at George Mason are biology, business, chemistry, economics, English, French, German, government, history, mathematics, psychology, physical education, physics, science, social studies, Spanish, and vocational education.

### Entrance Requirements

Applicants must:
1. Provide evidence of certification at the Collegiate Professional level in secondary education by the state of Virginia or another jurisdiction.
2. Submit recommendations by three persons qualified to judge professional competence.

### Degree Requirements

In addition to the departmental degree requirements, students must complete at least nine semester hours of courses in the teaching field or in a related discipline: ED CI 652, 783, and one of the following as related to the teaching field: EDCI 667, 669, 672, 673, EDRD 614, 615, or EDUC 565. Approved electives bring the total to 30 semester hours.

### School Administration and Supervision

The Master of Education program in school administration and supervision is designed to enable qualified individuals to prepare for positions of leadership in individual schools and school systems.

### Entrance Requirements

Applicants must:
1. Provide evidence of certification at the Collegiate Professional level by the state of Virginia or another jurisdiction.
2. Have completed two years of successful teaching experience, a portion of which must be at the level where qualification is desired.
3. Be recommended by three professional educators in the position of principal, supervisor, or administrator, including at least one who has observed the applicant's teaching.

### Degree Requirements

In addition to the departmental degree requirements students must take at least one course in each of the following:
1. Elementary, Middle School, or Secondary School Curriculum
2. School Administration
3. Supervision of Instruction

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**Sample Program**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Psychological Foundations</td>
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<tr>
<td>Research</td>
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</tr>
<tr>
<td>Program Requirements</td>
<td>15</td>
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<tr>
<td>1. Basic Concentration (6)</td>
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</tr>
<tr>
<td>2. Area of Specialization (9)</td>
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</tr>
<tr>
<td>Approved Electives</td>
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**Sample Program**

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<tr>
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<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, and Sociological Foundations</td>
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</tr>
<tr>
<td>Psychological Foundations</td>
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<td>Research</td>
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</tr>
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<td>Program Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

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http://catalog.gmu.edu
4. EDAS 789: Seminar in School Leadership
5. EDAS 790: Practicum in School Administration and Supervision

Approved electives bring the degree total to a minimum of 30 semester hours. (In most cases the approved electives are used to meet requirements for endorsement in Virginia.)

To meet the departmental comprehensive examination requirement, candidates for the M Ed degree in school administration and supervision are required to demonstrate effective use of oral and written English (as a part of the courses in the area of concentration) and must present an acceptable written report based on a practice-oriented project completed during practicum enrollment.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Sample Program</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Psychological Foundations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Research</td>
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<td></td>
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<tr>
<td>Program Requirements</td>
<td>15-18</td>
<td></td>
</tr>
<tr>
<td>Approved Electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30-33</td>
<td></td>
</tr>
</tbody>
</table>

**Guidance and Counseling**

The Master of Education program in guidance and counseling is designed to prepare students to function as counselors in a variety of work settings, including elementary and secondary schools, colleges and community agencies, and as other student personnel professionals in higher education.

**Entrance Requirements**

Students must satisfy entrance requirements under either 1 or 2 below:

1. Students preparing for elementary or secondary school guidance must:
   a. Provide evidence of certification at the Collegiate Professional level by the state of Virginia or another acceptable jurisdiction.
   b. Have successfully completed a minimum of 12 semester hours of undergraduate work in the behavioral sciences. (The department requires that undergraduate deficiencies be made up by completion of appropriate work without graduate credit.)
   c. Have completed one year of successful teaching experience at the level where qualification is desired.
   d. Be recommended by three professional educators in the position of principal, supervisor, or administrator, regarding the potential of the applicant for the field of guidance and counseling.
   e. Submit a statement of interests and objectives.
   f. Be interviewed and recommended for acceptance.

2. Students preparing for counseling and student personnel work in colleges and for counseling in agencies must:
   a. Possess a baccalaureate degree.
   b. Have successfully completed a minimum of 12 semester hours of undergraduate work in the behavioral sciences.
   c. Submit three letters of recommendation concerning promise as a professional counselor or as a student personnel professional.
   d. Submit a statement of interests and objectives.
   e. Be interviewed and recommended for acceptance.

**Degree Requirements**

In addition, students take courses for one of the following specializations:

- Elementary School Guidance and Counseling Specialization: EDGC 624, 790A, and a Special Education Course
- Secondary School Guidance and Counseling Specialization: EDGC 634, 790B, and a Special Education Course
- Higher Education Guidance and Counseling Specialization: EDGC 644, 646, 648, and 790C
- Community Agency Guidance and Counseling Specialization: EDGC 654, 656, and 790D

**Special Education**

The Master of Education program in special education is designed to enable qualified individuals to become specialists in:

1. General Special Education (emotional disturbance—ED; or learning disabilities—LD) or
2. Education of the Severely Handicapped (early childhood handicapped—ECH, ages two to eight years; or severely multiply handicapped—SVMH)

Program options in autism and crippling conditions are subcomponents of the above programs.

**Entrance Requirements**

To be accepted as a degree student, each applicant must:

1. Submit recommendations by three persons qualified to judge the applicant's professional competence.
2. Submit a written autobiography.
3. Be interviewed and recommended for acceptance.
4. a. For General Special Education applicants must:
    i. have Virginia Collegiate Professional certification or the equivalent from another state.
    ii. complete or have completed one course in each of the following:
        - teaching of reading,
        - teaching of mathematics,
        - human growth and development, and
        - tests and measurements.
   b. For Education of the Severely Handicapped, applicants must:
      i. provide evidence of successful completion of a baccalaureate degree in a human services area, such as education, psychology, sociology, or allied health services, and
      ii. provide evidence of work-related experience with severely handicapped individuals
      iii. and, if preparing for endorsement in early childhood handicapped, have Virginia Collegiate Professional certification or the equivalent from another state and two years of teaching experience under that endorsement.

**Degree Requirements**

The student must complete a minimum of 27 hours in an area of special education emphasis: General Special Education (ED. LD), or Severely Handicapped (ECH, SVMH). The 27 hours must be planned with the student's special education adviser and approved by the Special Education Committee.
School Psychology
Certification in school psychology can be obtained by completing the MA in psychology. This program, jointly administered by the departments of education and psychology, is open to students with either an education or a psychology background. The degree is offered by the Department of Psychology, while the Department of Education assumes responsibility for certification. Further information concerning this program can be found under the Psychology Department in this catalog.

Doctor of Arts in Education
The Doctor of Arts in Education (DA Ed) program offers an advanced liberal-professional education for individuals pursuing or planning careers in non-traditional as well as traditional educational settings.

Program Requirements
The DA Ed requires a minimum of 90 semester hours of study beyond the baccalaureate degree or a minimum of 60 semester hours beyond the master's degree. A limited number of graduate hours may be transferred into the program. However, an individual's total program may require more semester hours than these minimum requirements depending on the individual's goals, assessed strengths, and program requirements.

Program of Study
With the guidance of graduate faculty, students develop their own individual programs of study in concert with their own goals, self-assessed skills and knowledge, and program requirements. However, each student's program must include study in the liberal arts, sciences, and humanities; in a basic discipline; and in professional education.

Structure of Program
All enrollees in the program participate in a common core of required courses and seminars. These include:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 800: Entry seminar (first summer)</td>
<td>n.c.</td>
</tr>
<tr>
<td>DAED 800: Ways of Knowing</td>
<td>3</td>
</tr>
<tr>
<td>DAED 801: Seminar in Liberal Education</td>
<td>3</td>
</tr>
<tr>
<td>DAED 811: Seminar in Special Scholarship</td>
<td>n.c.</td>
</tr>
<tr>
<td>EDUC 805: Special Issues in Education</td>
<td>8</td>
</tr>
<tr>
<td>(four 2-credit seminars over 2 years of coursework)</td>
<td></td>
</tr>
<tr>
<td>EDUC 590: Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 911: Project Seminar</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 994: Advanced Internship</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 998: Doctoral Project</td>
<td>3-6</td>
</tr>
</tbody>
</table>

A sequence of at least three courses (9 semester hours) must also be taken in a basic discipline related to the individual's professional area of expertise (e.g., public affairs for an administrator, English for an English teacher, etc.) Presentation of a paper demonstrating proficiency in an area of special scholarship and participation in seminar discussions of similar papers presented by one's peers culminate this study in a basic discipline. Additional internships, research seminars, specialized courses, or reading courses in special areas of education are elected or required to complete the program. The specific nature of these courses is determined by the student in conjunction with his or her faculty doctoral advising committee.

General Program Goals
To complete the DA Ed program each individual must demonstrate competence in oral and written English, quantitative literacy (including use of computer technology); mastery of the knowledge and skills of an area of special scholarship and of an area of professional expertise; and the ability to apply general and specific knowledge and skills to significant educational problems. Students may demonstrate these competencies by successful completion of courses and seminars, by passing a special written doctoral qualifying examination near the conclusion of program coursework, and by preparation and oral defense of a doctoral dissertation/project as the culminating requirement of the program.

Residency
The basic purposes of residency are achieved in the DA Ed program through a combination of core courses and special seminars and through continuous enrollment. These requirements include successful completion of the Entry Seminar and of the required number of weekend doctoral seminars and participation in a specified number of special scholarship presentations.

Internship
Candidates enroll in at least one and up to three internships designed to broaden their professional expertise. These internships may occur in a variety of settings, drawing on the rich resources of the Northern Virginia/metropolitan D.C. area. Three credits of internship must be taken in a setting that differs from the student's work setting. In all cases, the student works with University and on-site supervisors.

Admission
Candidates are admitted to study in the Department of Education and to a department offering study in a basic discipline applicable to the student's professional specialization. Admission is a highly selective process. Up to 15 persons are admitted to the program each year.

Eligibility for Admission
In addition to completing all George Mason University Graduate School admission requirements, each applicant to the DA Ed in Education program must fulfill the following program admission requirements:

1. A minimum of five years of successful experience as a practitioner in an educational setting.
2. A baccalaureate and/or master's degree from an accredited institution.
3. Demonstration of high intellectual capability.
4. Evidence of certification at the Virginia Collegiate Professional level (or its equivalent from another jurisdiction).
5. Minimum requirements established by the various disciplines.

Admission Documents
Each applicant must submit the following to be considered for admission:

1. A completed Graduate School Admission application.
2. A completed Virginia Domicile Classification Form (if applicable).
3. All undergraduate and graduate transcripts.
4. Three letters of recommendation.
5. Graduate Record Examination taken within the last five (5) years.
6. Evidence of certification at the Virginia Collegiate Professional level or its equivalent from another jurisdiction, if applicable.
7. A written statement relating the study in the DA Ed program to the applicant's educational and career plans.

The DA Ed program accepts only one class of students annually. Those admitted into the program must enter the program through a non-credit, program planning seminar offered during the summer session. Only upon faculty approval of a doctoral program are applicants admitted to full doctoral student status.

Information and Applications
For further information about admission and program requirements, contact the Graduate School or Coordinator of the Doctor of Arts in Education, 3378 Robinson Hall (323-2960). Completed applications must be submitted to the Graduate School of the University by February 1 of the year in which admission is sought.

Health and Physical Education

Faculty
Professors: Cooper (Health Education) (Chairman), Kilby (Physical Education)
Associate Professors: Metcalf (Physical Education), Richardson (Physical Education)
Assistant Professors: Bever (Health Education), Linn (Physical Education), Prager-Decker (Health Education), Schack (Physical Education)
Instructors: Masterson (Park, Recreation, and Leisure Studies), Walters (Physical Education)
Lecturers: Bhanos (Physical Education), Decker (Health Education), Fox (Physical Education), Godin (Physical Education), Magruder (Physical Education), Rodney (Physical Education)

(italics indicate graduate faculty.)

Department of Health and Physical Education Coursework
The department offers all coursework designated HEAL, PHED, and PRLS in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

Physical Education

Bachelor of Science in Education Degree in Physical Education with Teacher Certification
The physical education major includes basic coursework in biological and social sciences with special preparation in theory and methodology of physical education and education meeting state certification requirements for teaching grades K-12. Students must take both the Common and the Physical Education Area Examinations of the National Teacher Examinations prior to being recommended for state certification.

Admission to the Teacher Education Program
The program in teacher education is accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should apply for admission to the teacher education program during or upon completion of the spring semester of the junior year if all requirements are met. To be considered for admission to the teacher education program in physical education, students must meet the following requirements:

1. Have completed or be in the process of completing 72 semester hours, six of which must have been taken at George Mason University before applying.
2. Have completed EDUC 301, 302, 313.
3. Have a grade point average of 2.500 in all courses attempted at any institution of higher education or 2.800 (or above) for the most recently completed 30 hours.
4. Have a grade point average of 2.500 (or above) in the following courses with a minimum grade of C in each: EDUC 301, 302, 313, and PHED 206. Deficiencies may be corrected by repeating the courses in accordance with University regulations.
   a. Physical education majors must have successfully completed the following courses: BIOL 124-125; PHED 106, 300, 301, 303, 313, and 314. They must also have completed or be currently enrolled in the following courses: HEAL 110, 205; PHED 206, 304, 306, 315, 365.
5. Have requested and received a recommendation from the Health and Physical Education Department.
6. Have submitted three endorsements from faculty members evaluating the student's suitability for teaching. One of these endorsements must be from a member of the Department of Education and one from a faculty member in the Department of Health and Physical Education. Appropriate forms are available from the Coordinator of Field Experiences.
7. Have demonstrated proficiency in written and oral communication. See "Admission to Student Teaching" in the Department of Education section of the catalog.

Student Teaching Admission
1. The same minimum grade point average options of 2.500 or 2.800 for the most recently completed 30 hours must be maintained for admission to student teaching. Students are directed to review "Admission to Student Teaching" in the Department of Education section of the catalog.
2. Students are required to have a grade point average of 2.500 or above in the major and in the professional courses PHED 206, 371, and 403 with a minimum grade of C or better in each.
3. PHED 403 and 460 are required for admission to student teaching and must be taken in the semester prior to student teaching. All other major courses in the curriculum must have been completed with the exception of PHED 316 and 450.

4. In the semester preceding student teaching the physical education major student is required to meet minimum standards in the areas of cardiovascular fitness, strength, and flexibility and have a current Certificate in American Red Cross Standard First Aid.
5. Prior to the professional semester, the physical education major must pass a proficiency test in swimming or enroll in and pass with a grade of C or better a swimming course taken as an elective.

Program for Teacher Certification in Physical Education

<table>
<thead>
<tr>
<th>Program for Teacher Certification in Physical Education</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>24</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
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<tr>
<td>English Composition (ENGL 101,102)</td>
<td></td>
</tr>
<tr>
<td>Oral Communication/Select One</td>
<td>3</td>
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<tr>
<td>Introduction to Communication (COMM 100)</td>
<td></td>
</tr>
<tr>
<td>Introduction to Public Speaking (COMM 120)</td>
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</tbody>
</table>

102 GEORGE MASON UNIVERSITY
Regional Cultures/Select Two* 6
Latin America (LAC 151) 
Sub-Saharan Africa (LAC 152) 
Asia and Western Pacific (LAC 153) 
North Africa and the Middle East (LAC 154) 
Literature 6
Literature (200 level)  
Humanities/Select One 3
Art  
Music  
Drama  

Social Sciences 9
History 3
American (HIST 121 or 122)  
Other Subjects 3
Anthropology 6
Economics  
Geography  
Government  
History  
Sociology  

Psychology  

Mathematics 4
Required Courses 35
Biol. 124-125 8
HEAL 110, 205 6
EDUC 301, 302, 313, 436 21

Major Courses 49
Activity Courses 12
PHED 106, 313, 314, 315  
Professional Courses 37
PHED 206, 300, 303, 304, 306, 308, 316, 365, 371, 403, 450, 460, 472  
Electives 9
Total  

*May substitute equivalent number of hours in foreign language.

Sample Schedule
Program for Teacher Certification
in Physical Education

First Semester  
BIOL 124 4  
ENGL 101 3  
HIST 121 or 122 3  
HEAL 110 3  
PHED 106 3  
PHED 303 (Spring only) 3

Second Semester  
BIOL 125 4  
ENGL 102 3  
COMM 100 or 120 3  
PHED 314 3  

Total 15  

Third Semester  
EDUC 302 3  
PHED 300, 303, 304, 306, 308, 316, 365, 371, 403, 450, 460, 472  
Electives 9

Fourth Semester  
EDUC 301 3  
PHED 303 3  
PHED 316 2  
PHED 315 2

Total 16  

Fifth Semester  
EDUC 313 3  
Social studies 3  
Art/music/drama 3  
Reg. cult. 3  
HEAL 205 3  
PHED 313 4

Sixth Semester  
Mathematics 3  
Social studies 3  
PHED 304 (Spring only) 3  
PHED 306 3  
PHED 365 (Spring only) 3

Total 17

Seventh Semester  
PHED 308 3  
PHED 450 (Fall only) 3  
PHED 403 (Fall only) 3  
Elective 3  
PHED 460 (Fall only) 3  
Math 1

Eighth Semester  
Professional sem. (Spr. only) 3
EDUC 436 12

Total 16

Bachelor of Science in Education Degree in Physical Education with Selected Specialization

This degree is designed to meet the needs of students seeking a career in physical education or a sports-related field such as sports journalism or broadcasting, employment in or management of exercise or sports club facilities, and sales and marketing of sports equipment. Coursework includes a general education component and a core curriculum in health education and physical education. In addition, the student selects 24 semester hours in a supporting discipline or program of special interest outside of physical education. Fifteen of these hours must be in 300/400-level courses. The final semester includes a 12-semester-hour internship in the area of special interest.

Students working toward this degree must have a 2.500 or higher grade point average in the major and in the area of specialization for graduation. In addition, students are required to meet minimum standards in the area of cardiovascular fitness, strength, and flexibility in the semester preceding the internship. Students must obtain Standard Red Cross First Aid certification.

Prior to making application for graduation, students must have completed a proficiency examination in writing.

Program for BS in Education Degree with a Major in Physical Education with Selected Specialization

Semester  Hours
General Education  24
Language, Arts, and Culture  24
ENGL 101, 102  6  
COMM 120 and 130  6
Regional Cultures  3
Literature (200 level)  6
Humanities  6  
Art, Music, Drama, or Philosophy  
(except Logic)  3
Social Studies  12
History  3
Sociology  3
Psychology  3
Economics  3
Math  3
Science  8
Biol. 124-125  8

Total 35

Core Requirements  
HEAL 110, 205; PHED 105, 107, 108, 151  
(or 152 or 153)

Major Requirements  29
PHED 300, 303, 304, 308, 316, 350, 490  
Electives in HEAL, PHED, or PRLS* at 300 level or higher  6

Specialization  24
Taken in any one discipline or program outside of Physical Education. Fifteen hours must be in 300/400 level courses. Examples: business, communications, gerontology, etc.

Electives  9

Total Hours  129

*PRLS: Prefix for Park, Recreation, and Leisure Studies curriculum.

Sample Schedule
Major in Physical Education with Selected Specialization

Semester  Hours
First Semester  
BIOL 124 4  
ENGL 101 3  
COMM 120 3  
PHED 151 (152, 153)* 2  
History 3  
Total 15  

Second Semester  
BIOL 125 4  
ENGL 102 3  
COMM 130 3  
PHED 303 3  
Humansities 3

Total 16

Sample Schedule
Program for Teacher Certification
in Physical Education

First Semester  
BIOL 124 4  
ENGL 101 3  
HIST 121 or 122 3  
HEAL 110 3  
PHED 106 3  

Second Semester  
BIOL 125 4  
ENGL 102 3  
COMM 100 or 120 3  
PHED 314 3  

Total 15  

Third Semester  
EDUC 302 3  
PHED 300, 303, 304, 306, 308, 316, 365, 371, 403, 450, 460, 472  
Electives 9

Fourth Semester  
EDUC 301 3  
PHED 303 3  
PHED 316 2  
PHED 315 2

Total 16

Fifth Semester  
EDUC 313 3  
Social studies 3  
Art/music/drama 3  
Reg. cult. 3  
HEAL 205 3  
PHED 313 4

Sixth Semester  
Mathematics 3  
Social studies 3  
PHED 304 (Spring only) 3  
PHED 306 3  
PHED 365 (Spring only) 3

Total 17

Seventh Semester  
PHED 308 3  
PHED 450 (Fall only) 3  
PHED 403 (Fall only) 3  
Elective 3  
PHED 460 (Fall only) 3  
Math 1

Eighth Semester  
Professional sem. (Spr. only) 3
EDUC 436 12

Total 16

*May substitute equivalent hours in foreign language.

*Must be course or courses with MATH prefix.

*May earn up to four credits in Directed Field Experience (EDUC 444-447).

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Admission to the Teacher Education Program

The program in teacher education is accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should apply for admission to the teacher education program during or upon completion of the spring semester of the junior year if all requirements are met. To be considered for admission to the teacher education program in health education, students must meet the following requirements:

1. Have completed or be in the process of completing 60 semester hours, six of which must have been taken at George Mason University before applying.
2. Have a grade point average of 2.500 or above in all courses attempted at any institution of higher education or 2.800 (or above) for the most recently completed 30 hours.
3. Have completed the following courses with a grade point average of 2.500 (or above) and a minimum grade of C in each: EDUC 301, 302, 313. Deficiencies may be corrected by repeating the courses in accordance with University regulations.
   a. Health education majors must have successfully completed or be currently enrolled in the following courses: BIOL 103-104, 124-125, 185; CHEM 106; HEAL 110, 120, 205, 220, 315 and one of the following three courses: HEAL 310, 325, or 330.
4. Have requested and received a recommendation from the Health and Physical Education Department.
5. Have submitted three endorsements from faculty members evaluating the student’s suitability for teaching. One of those endorsements must be from a member of the Department of Education and one from a faculty member in the Department of Health and Physical Education. Appropriate forms are available from the Coordinator of Field Experiences.
6. Have demonstrated proficiency in written and oral communication. See “Admission to Student Teaching” in the Department of Education section of the catalog.

Student Teaching Admission

1. The same minimum grade point average options of 2.500 and 2.800 for the most recently completed 30 hours must be maintained for admission to student teaching. Students are directed to review “Admission to Student Teaching” in the Department of Education section of the catalog.
2. Students are required to have a grade point average of 2.500 or above in the major and in the professional courses PHED 206, 371, and 402 with a minimum grade of C or better in each.
3. Undergraduate and post-baccalaureate students should be admitted to the Teacher Education program prior to enrollment in HEAL 420 and 440. These courses are required for admission to student teaching.
4. Prior to student teaching the student should have a current certificate in American Red Cross Standard First Aid. Specific requirements for the degree of Bachelor of Science in Education with a major in health education are as follows:

Program for Teacher Certification in Health Education

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<thead>
<tr>
<th>Language Arts and Culture</th>
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<td>English Composition</td>
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<tr>
<td>Oral Communication/Select One</td>
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<tr>
<td>COMM 100 or 120</td>
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<td>Literature Select One</td>
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<tr>
<td>ENGL 203, 204, 205, or 206</td>
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<td>Humanities/Select One</td>
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<td>Psychology (PSYC 100, 215)</td>
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<td>Sociology</td>
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<td>History</td>
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<td>Anatomy and Physiology (BIOL 124-125)</td>
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<td>Introductory Microbiology (BIOL 185)</td>
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<tr>
<td>Mathematics</td>
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<td>Physical Education Activities</td>
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<td>Personal Health (HEAL 110)</td>
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<td>HEAL 420, 440</td>
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<td>HEAL 120, 205, 220, 310, 315, 325, 330, 430, 460</td>
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<td>Electives*</td>
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<td>Total Hours</td>
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*May include elective credit for Directed Field Experiences EDUC 444-447.
### Sample Schedule for Teacher Certification in Health Education

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<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
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<td>PSYC 100</td>
<td>Sociology</td>
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<td></td>
<td>HEAL 110</td>
<td>HEAL 120</td>
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<td></td>
<td>SOCI 101</td>
<td>HIST 121 or 122</td>
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<td>PHED 100 series</td>
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<tr>
<td>Third Semester</td>
<td>BIOL 124</td>
<td>BIOL 125</td>
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<tr>
<td></td>
<td>CHEM 106</td>
<td>MATH 252</td>
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<td>MATH 254</td>
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<td>COMM 100 or 125</td>
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<td>HEAL 205</td>
<td>HEAL 220</td>
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<td>BIOL 185</td>
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<td></td>
<td>HEAL 315</td>
<td>HEAL 310</td>
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<td>Anthropology or regional culture or foreign language</td>
<td>Anthropology or regional culture or foreign language</td>
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<td>HEAL 440</td>
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<td></td>
<td>PHED 100 series</td>
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<tr>
<td></td>
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</tbody>
</table>

### Bachelor of Science in Education Degree in Health Education with Community Health Specialization

This degree is designed to prepare students for health education careers in health agencies, industry, and other non-school community settings. The coursework includes a general education component which provides a broad base in behavioral, social, and natural sciences. The professional sequence in health education includes a 12-semester-hour internship with seminar and is supplemented by additional study in support discipline(s) of psychology, government, and sociology.

Students planning to pursue this degree program must present a 2.00 or higher grade point average in all courses and a 2.50 or higher grade point average in health education courses completed prior to applying for admission to the program. Applications to major in this program should be submitted to the Health and Physical Education Department upon completion of 45 semester hours (must include Personal Health and Community Health courses). All students must be certified in standard first aid prior to graduation.

**Requirements for the Bachelor of Science Degree in Education Community Health Education**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Language Arts and Culture</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td>English (6)</td>
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<tr>
<td></td>
<td>ENGL 101, 102 Composition and Introduction to Literature (3, 3)</td>
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<tr>
<td></td>
<td>Oral Communication (6)</td>
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<td>COMM 130: Introduction to Small Group Discussion (3) or COMM 100: Introduction to Communication (3)</td>
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<tr>
<td></td>
<td>COMM 300: Public Communication (3) or COMM 302: Mass Communication (3)</td>
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</tbody>
</table>

### Social and Behavioral Sciences

#### Required Core Courses (19)

- ANTH 114: Introduction to Cultural Anthropology (3)
- PSYC 100: Basic Concepts in Psychology (3)
- GOVT 241: Introduction to Public Administration (3)
- HIST 121 or 122: Formation of American Republic/Development of Modern America (3, 3)
- SOCI 101: Introduction to Sociology (3)
- SOCI 221: Statistics for the Behavioral Sciences (4)
- Support Discipline: Choose 15 Hours (with Adviser’s approval)

#### No. 1
- PSYC 220: Personality Theory
- PSYC 231: Social Psychology
- PSYC 310: Developmental Psychology
- PSYC 325: Abnormal Psychology
- PSYC 423: Group Psychotherapy

#### No. 2
- GOVT 302: Political Parties and Interest Groups
- GOVT 357: Introduction to Public Planning
- GOVT 358: Public Policy Analysis
- GOVT 401: Public Policy Making
- GOVT 411: Citizen Participation and Local Politics

#### No. 3
- SOCI 240: Social Services in Society
- SOCI 306: Demographic Analysis
- SOCI 390: Medical Sociology
- SOCI 441: Sociology of Aging

#### Natural Science

#### Biology (20)

- BIOL 103: Man and His Environment (4)
- BIOL 104: Man and His Environment (4)
- BIOL 124: Human Anatomy and Physiology (4)
- BIOL 125: Human Anatomy and Physiology (4)
- BIOL 185: Introductory Microbiology (4)

#### Required Courses (16)

- Physical Education Activities (6)
- EDUC 325: Production and Utilization of Instructional Materials (3)
- SOCI 303: Sociological Research Methodology (4)
- PHED 397/398 or EDUC 397/398 or Nursing 397/398: Fundamentals of Aging I or II (3)

#### Major (35)

- HEAL 110: Personal Health (3)
- HEAL 120: Community Health (2)
- HEAL 315: Foundations of Health Education (3)
- *HEAL 323: Community Health Programs (3)
- HEAL 420: Organization of the School Health Program (3)
- HEAL 430: Seminar on Contemporary Health Problems (3)
- HEAL 440: Health Education Methods (3)
- *HEAL 450: Epidemiology (3)
- HEAL 460: Internship and Seminar (12)

#### Electives (12)

- Health Education (Choose one from the list below) (3)
  - HEAL 205: Principles of Accident Causation and Prevention (3)
  - HEAL 220: Dimensions of Mental Health (3)
  - HEAL 310: Drugs and Health (3)
  - HEAL 325: Health Aspects of Human Sexuality (3)
  - HEAL 330: Nutrition (2)
- Other (Choose 9 hours from any department)

**Total** 129

*New courses.*

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The undergraduate and graduate programs are accredited by the Virginia State Board of Nursing and by the National League for Nursing.

### Department of Nursing Coursework

This department offers all coursework designated NURS in the Course Dictionary of this catalog.

### Requirements for the Degrees

#### Undergraduate

**Bachelor of Science with a Major in Nursing**

The Bachelor of Science degree with a major in nursing is designed to meet the challenge of changing and increasingly demanding health care delivery service. Graduates are prepared to function as professional nurses in hospitals, nursing homes, community health agencies, other health-related agencies, and in the home.

Emphasis is placed on early detection of potential health problems, care of individuals, families and population groups, health maintenance in ambulatory services, and enlarged responsibilities for nurses.

#### Degree Requirements

Candidates for the degree must present at least 122 semester hours of work. Specific requirements for the degree of Bachelor of Science with a major in nursing are as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>122</td>
</tr>
<tr>
<td>Electives</td>
<td>58</td>
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<tr>
<td>Biology</td>
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<tr>
<td>Chemistry</td>
<td>21-23</td>
</tr>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>8</td>
</tr>
</tbody>
</table>

---

### Bachelor of Science Degree in Park, Recreation, and Leisure Studies

Included in the Course Dictionary of this catalog are introductory and selected upper-level courses in park, recreation, and leisure studies (PRLS). Students interested in pursuing the Bachelor of Science Degree in park, recreation, and leisure studies (planned for initiation in Fall 1982) should contact the Department of Health and Physical Education for counseling prior to enrollment in PRLS courses.

### Master of Education Degree in Secondary Education

A student earning a Master of Education degree in secondary education may select physical education as a field of study. Certification at the collegiate professional level in secondary physical education is required. The applicant must possess a baccalaureate degree in physical education. For information, see the Master of Education in Secondary Education section of the Department of Education in this catalog.

## Nursing

### Faculty

**Professors:** Cohelan (Chairman), D. Walker  
**Associate Professors:** Allinger, Baldwin, Billingsley, Carty, Counts, Harper, Liu, Silva, Smith  
**Assistant Professors:** Bednash, Bennett, Boland, Boyd, Connelly, Feeg, Hall, Harris, Hayes**, Jenkins, Joseph, Kopac, Kuhns, Lee**, Michael, Million, Mullin, Nowotny, Piemme, Pitts, Redmond, Schmadl, Sewall*, Shine, Vaughan*, L. Walker, Weed  
**Instructors:** Baker, Brower, Fisher, Neill, Rhome, Wright  
**Lecturers:** Barrett, Bore, Comisky, Dimino, Eckert, Eissler, Hoeffer, Langley, Ludington, McCarthy, Ortiz, O'Reilly, Reafs, Rigney, Roberts, Scott, Williams  

*On leave of absence Spring, 1981;  
**On leave of absence, 1980-81

### Requirements

The department provides opportunity for credit by examination in several courses for students presenting some evidence of previous training. Questions should be directed to a faculty adviser in the department.

Registered nurses may obtain a maximum of 30 hours of credit toward the baccalaureate degree by successful per-
formance on Proficiency Exams. This is in addition to the University-wide regulation of a maximum of 30 hours of credit which may be granted to all students on the basis of examinations administered to candidates presenting some evidence of qualification. Questions should be directed to the R.N. adviser in the department.

Students are required to obtain annual health examinations and immunizations beginning with registration for their first clinical course. They are also responsible for their own uniforms and transportation. Students are required to purchase personal liability insurance through the University and are billed for this insurance each semester (or summer session) of enrollment in clinical nursing courses. Registered nurse students who are assigned to clinical agencies in Virginia are required to be licensed in Virginia.

Completion of the program may require attendance in one or more summer sessions because of limited laboratory facilities.

**Special Quality Standards in the Major Field**

Because knowledge, skills, and behavior patterns in the major field of this program are so vital to the health and perhaps even the survival of individuals or groups of human beings served, failure or borderline achievement cannot be tolerated. Therefore, the faculty of the department has established, with approval of the University faculty and administration, the following special major field quality standards which go beyond the general University quality standards printed elsewhere in this catalog:

**Acceptance into Junior Standing in Nursing**

Acceptance into Junior Standing in Nursing is competitive. The number of applicants accepted is determined by the availability of resources such as faculty, classrooms, and clinical agencies in the community.

Permission to register for NURS 301, 302, 311, 312, 321, 322 requires prior acceptance into Junior Standing in Nursing. Application must be made during the semester in which the student will be completing the prerequisites for the Junior-level courses. If completion of prerequisite courses is planned for a summer session, application must be made in the preceding spring semester.

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.

Students applying for credit by examination for Junior-level courses are to submit applications no later than the last Thursday of the month. Applications are not to be submitted until prerequisites for Junior courses have been satisfied.

A committee of nursing faculty will recommend to the department chairperson applicants judged on the basis of (1) cumulative grade point average in all courses (wherever taken) which are prerequisites for NURS 301, 302; and (2) performance in NURS 262, the first University clinical course. The student has the right to appeal.

**Additional Academic Grade Standards**

A final nursing course grade of less than C prohibits further progression in the sequence of required nursing courses until that course is repeated and a satisfactory grade earned. (The sequence is as listed in the following "Sample Schedule for Nursing Majors.") For a grade of C or better in a course which includes clinical instruction, a final grade of C or better must be earned in both laboratory and lecture portions.

A nursing course in which a grade of less than C is earned may be repeated once. Upon earning a grade of C or better the student may resume progress in the sequence of required courses.

Failure to earn a grade of C or better in a course being repeated or earning a grade of less than C in a second nursing department course results in suspension of one's eligibility to progress in the sequence of required nursing courses.

A student so suspended may, after the subsequent academic period, whether fall semester, spring semester, or sum-

**Sample Schedule for Undergraduate Nursing Majors**

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<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>ENGL 101</td>
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<td>PSYC 100</td>
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<td>BIOL 125</td>
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<td>Physical education</td>
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<td>15</td>
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<td>NURS 321</td>
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<tr>
<td>NURS 312</td>
<td>NURS 322</td>
</tr>
<tr>
<td>Electives</td>
<td>Statistics</td>
</tr>
<tr>
<td>15</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 411</td>
<td>NURS 450</td>
</tr>
<tr>
<td>NURS 426</td>
<td>NURS 470</td>
</tr>
<tr>
<td>NURS 431</td>
<td>NURS 476</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>15</td>
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</tr>
</tbody>
</table>

**Graduate**

Master of Science in Nursing

The graduate program in nursing is designed to prepare nurses for a variety of leadership roles in the health care delivery system. The nursing major in administration prepares nurses to function in mid-level management positions in hospitals, nursing homes, and community health agencies. The nursing major in Long-Term Care and Gerontological Nursing prepares nurses to give and manage long-term care of individuals, families, and groups, including the elderly, chronically ill, and others with self-care limitations. A variety of health care settings is utilized.

**Departmental Entrance Requirements**

In addition to fulfilling the entrance requirements of the Graduate School for degree status, the applicant is normally expected to (1) be a graduate of an accredited baccalaureate program accredited by the National League for Nursing; (2) have obtained a cumulative grade point average of 3.000 (on a 4.000 scale) in the last two years of undergraduate work or last 60 credits of undergraduate work; (3) have completed satisfactorily a course in research or its equivalent; (4) have completed satisfactorily a course in statistics or its equivalent; (5) hold an active Registered Nurse License; (6) submit Graduate Records Examination (GRE) aptitude scores; (7) submit three letters of recommendation, one from an academic source, one from last immediate administrative superior or equivalent, and one from applicant's choice; (8) students majoring in Nursing Administration at the Middle Management Level must have two years work experience in nursing; (9) students majoring in Long-Term Care and Gerontological Nursing must demonstrate proficiency in physical assessment skills.
An applicant may be admitted to provisional status if (1) a graduate of a baccalaureate nursing program located outside the United States; (2) a graduate of a baccalaureate nursing program not accredited by the National League for Nursing; (3) a registered nurse graduate of a non-nursing major equivalent to the George Mason University nursing program; (4) a graduate with an undergraduate grade point average of 2.700 to 2.999 on a 4.000 scale in the last two years of undergraduate work or last 60 credits of undergraduate work. Students with provisional status must complete twelve credits of graduate work, six in graduate nursing courses, with a grade point average of 3.000 on a 4.000 scale in these courses to be considered for degree status.

Applicants who qualify for degree status, but who are not applicants for a degree at George Mason University, may be admitted in a non-degree status. Non-degree status is not intended to be used in a qualifying program for graduate degree status. Should resources (faculty, clinical, facilities) be limited, preference will be given respectively to students with degree status, students with provisional status, and then to students with non-degree status. Provided that adequate Department of Nursing resources are available, students with non-degree status are eligible for enrollment only in NURS 755, NURS 759, and nursing electives. In addition, non-degree students must meet any course prerequisites and must have permission of the instructor to take courses.

Departmental Degree Requirements

Students must meet all the degree requirements of the Graduate School. In addition, the master's program in nursing requires 36 semester hours of graduate credit.

Core Courses ........................................ 9 credits
Nursing Major Areas ................................ 12 credits
  1. Nursing Administration at the Middle Management Level
  2. Long-Term Care and Gerontological Nursing
     Thesis or Non-Thesis 1. Research Project (non-thesis) ............... 3 credits
     OR
  2. Thesis ........................................ 3-6 credits
     Nursing Electives ................................ 6 credits
     Related Discipline Electives ..................... 6 credits

Sample Schedule for Full-time Nursing Students

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 755</td>
<td>3</td>
</tr>
<tr>
<td>NURS 759</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 755 or 773</td>
</tr>
<tr>
<td>NURS 768 or 778</td>
</tr>
<tr>
<td>NURS 797, 798, or 799</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Departmental Course Prerequisites

NURS 755 is co- or prerequisite to NURS 759 and prerequisite to NURS 790. NURS 759 is co- or prerequisite to NURS 790. Any course in the nursing major areas (Long-Term Care and Gerontological Nursing and Nursing Administration), and to the thesis or non-thesis option. First-level courses in the nursing major areas are prerequisite to second-level courses in the nursing major areas.

Departmental Scheduling of Nursing Majors

1. NURS 763, 765 and NURS 773, 775 will be offered Fall Semester 1981.
2. NURS 766, 768 and NURS 776, 778 will be offered Spring Semester 1982.

Placement in practicum experiences will depend upon availability of appropriate clinical resources and preceptors. Students are to meet to the health examination immunization requirements imposed by the agencies to which they are assigned for practicum experience. Students are also required to be licensed (or in the process of obtaining licensure) in the jurisdiction in which they are assigned for their practicum experience. They are also responsible for their own transportation and any uniform requirements of the agency to which they are assigned. Students are required to purchase liability insurance through the University and are billed for this insurance each semester of enrollment in practicum courses.

Continuing Nursing Education

Continuing education is an important commitment of the Nursing Department at George Mason University and activities are planned so that individuals can grow personally and professionally.

The Department of Nursing, in cooperation with the George Mason University 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 Department of Nursing utilizes the wealth of available resources in the Northern Virginia 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 Nursing Department or the Division of Continuing Education.

Gerontology Certificate Programs

The Department of Nursing participates in the graduate and undergraduate certificate programs. For more information see "Certificate Programs" in this catalog.
School of Business Administration

Aims
The basic philosophy of the School of Business Administration is reflected in these goals:
1. To present degree and non-degree programs that serve the needs of the citizens of Northern Virginia.
2. To attract, maintain, and support a multidisciplinary business administration faculty that meets the various career, intellectual, and developmental needs of its students.
3. To encourage a balanced faculty orientation toward teaching, research, scholarship, and community service that recognizes individual strengths and preferences while advancing the academic excellence of the University as a whole.
4. To structure graduate and undergraduate programs with a focus on preparing students for professional careers which are responsive to community needs based on continuous assessments, interdisciplinary resources, and coordination with other institutions.
5. To foster an atmosphere of open communication among students, faculty, and community which contributes significantly to the professional development of students and faculty.

Administration
The administrative office for the School of Business Administration is located in Room 4611, Robinson Hall:
Lloyd M. DeBoer, Dean
Edward D. Meares, Assistant Dean for Graduate Program
Ben F. Sands, Jr., Assistant Dean for Undergraduate Program

School of Business Administration Coursework
The School of Business Administration offers all coursework designated ACCT, BUAD, BULE, DESC, FNAN, INF5, MGMT, MKTG, and REUD in the Course Dictionary of this catalog.

Sample Schedules
The sample schedules for students accepted to Junior Standing are illustrative schedules only. Courses need not be taken in the precise sequences or semesters indicated, except as prerequisites or other necessities prescribe. The sample schedule for pre-business students should be completed in the sequence shown if at all possible.

Requirements for the Degree
Undergraduate
Bachelor of Science Degree
The programs in business administration offered by the University culminate in a Bachelor of Science (BS) degree with majors in accounting, business administration, decision sciences, finance, management, or marketing. A minimum of 122 hours of coursework is required.

The areas of concentration in the majors are designed to meet the needs of students with highly diverse interests and career goals: careers in business or government, graduate work, or studies which will support their current occupation or profession. Each of the faculties (Accounting / Business Legal Studies, Decision Sciences, Finance / Real Estate and Urban Development, Management, and Marketing) has developed groups of required and optional courses pertaining to specific areas of concentration within each major.

All students, including those previously enrolled in a degree program at another institution, must complete at least 30 semester hours in this degree program following acceptance to Junior Standing. Of these 30 semester hours, at least 18 must be in the required and elective semester hours of concentration in a major, and 3 semester hours must be in the policy course (BUAD 498).

Degree Requirements
The following requirements must be met by all degree applicants.

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
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<tbody>
<tr>
<td>Business Core Courses</td>
</tr>
<tr>
<td>Accounting (ACCT 201, 202)</td>
</tr>
<tr>
<td>Applied Statistical Analysis (DESC 202)</td>
</tr>
<tr>
<td>Computer Information Systems (INF5 201)</td>
</tr>
<tr>
<td>Business Decision Models (DESC 301)</td>
</tr>
<tr>
<td>Business Law (BULE 301, 302)</td>
</tr>
<tr>
<td>Finance (FNAN 301)</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
</tr>
<tr>
<td>Marketing (MKTG 301)</td>
</tr>
<tr>
<td>Business Strategy and Policy (BUAD 498)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
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</table>

<table>
<thead>
<tr>
<th>English Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Communication (COMM 100 or 130 recommended)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities (ART 101, 111, 113, 115, 221, 222, 223, 225, 320, 321, 322, 325, 326, 327, 328, 330, 331, 332; or DANC 101; or THR 160, 251, 252, 253; or MUSI 101, 103, 104, 105, 106, 107; or Philosophy; or Religion)</td>
</tr>
</tbody>
</table>

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http://catalog.gmu.edu
Spring Semester. Failure to comply with this requirement will mean that the student, if admitted, would enter the School as a pre-business student and would be expected to apply for acceptance to Junior Standing in the semester following the semester admitted. Upper-level, non-core business courses taken during the first semester of attendance in such a case may be presented on the application for graduation as general elective credit only.

Students are encouraged to submit an application for acceptance to Junior Standing as soon as they become eligible. In the case of a full-time student in residence, this should be no later than the beginning of their fourth semester. In the case of a part-time student or student intending to transfer, this should be no later than the beginning of the semester in which the requirements for acceptance will be completed. Note that "semester" does not include summer terms.

All business administration students newly admitted to the University are classified as pre-business. A student readmitted to the University who previously was pursuing a degree in the School of Business Administration is classified as pre-business unless in their previous enrollment they had been accepted to Junior Standing. The programs for pre-business students are administered by the Assistant Dean for Undergraduate Program.

Upon acceptance to Junior Standing, students must complete the requirements for the degree as declared majors in accounting, business administration, decision sciences, finance, management, or marketing. The programs of business administration majors are administered by the Faculty Chairmen of the School of Business Administration and the Assistant Dean for Undergraduate Program.

A minimum of 30 hours of coursework must be completed following acceptance to Junior Standing. Of these 30 hours, 18 must be in the upper-level business electives required for a concentration in a major offered by the School of Business Administration, and 3 must be in BUAD 498: Business Strategy and Policy. No upper-level (courses numbered 300 or 400) business credits other than those designated "Business Core Courses" will be accepted for graduation, except for general elective credit, unless taken in residence following acceptance to Junior Standing. This restriction applies only to courses taken in the Fall 1981 and succeeding semesters.

The decision to accept a student to Junior Standing is based on grades received in all coursework completed by the student at George Mason University and/or another college or university, including that completed during the semester of application.

Selection of students for acceptance to Junior Standing in the School of Business Administration is determined on a competitive basis as to the quality of academic work and the courses presented by the student on the application. Special consideration is given to grades earned in the courses specified in eligibility requirement #2 above and any other courses offered by the School of Business Administration that students may have completed prior to acceptance.

Students are expected to file an application for acceptance to Junior Standing in the School of Business Administration by the deadline established for the semester at the end of which they will have met the eligibility requirements. The deadline for this application in a given semester is on or before February 1 or October 1. Applications received after these dates will be returned. Students have the right to appeal a denial of acceptance to Junior Standing.

Students planning to transfer to George Mason University from another institution and who have completed or will complete the requirements for acceptance to Junior Standing by the end of their current term should take action to make application on or before the appropriate deadline. A student planning to transfer to George Mason University in, e.g., the Fall Semester, is required to request acceptance to Junior Standing on or before the deadline for application in the preceding semester.

Acceptance to Junior Standing in Business Administration

The selection of applicants for acceptance to Junior Standing in the School of Business Administration is competitive and is limited to a number based on the resources available to the School and an appropriate share of projected total University enrollment.

To make application for acceptance to Junior Standing in the School of Business Administration, students must meet these eligibility requirements:

1. Completion of 60 or more hours at George Mason University, or by acceptable transfer credit by the end of the semester in which application is made.
2. Completion of these courses or equivalent with a grade of C or better in each course: ENGL 101 and 102; ECON 103 and 104; MATH 108 and 109; ACCT 201 and 202, INF 5202; and DESC 202 by the end of the semester in which application is made.
3. For the 1981-82 academic year only, students in residence who will complete the Mathematics-Statistics requirements by taking DESC 202 will be allowed to present MATH 109 in their applications for acceptance to Junior Standing in lieu of DESC 202. Such students are expected to complete DESC 202 in the following semester.

The decision to accept a student to Junior Standing is based on grades received in all coursework completed by the student at George Mason University and/or another college or university, including that completed during the semester of application.

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3. For the 1981-82 academic year only, students in residence who will complete the Mathematics-Statistics requirements by taking DESC 202 will be allowed to present MATH 109 in their applications for acceptance to Junior Standing in lieu of DESC 202. Such students are expected to complete DESC 202 in the following semester.

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Change in Mathematics-Statistics Sequence
A change in the mathematics-statistics sequence for the School of Business Administration became effective with the 1980 Fall Semester. The required sequence of MATH 107, MATH 108, DESC 205, DESC 206 was replaced by the required sequence of MATH 108, MATH 109, DESC 202, DESC 301. Students who have completed the old sequence are not required to complete the new sequence. Students who have only completed one to three courses of the old sequence should consult the table below for the courses they must complete in order to finish the mathematics-statistics sequence.

<table>
<thead>
<tr>
<th>Have Completed</th>
<th>Must Complete</th>
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<tbody>
<tr>
<td>MATH 107</td>
<td>MATH 108, 109, DESC 202</td>
</tr>
<tr>
<td>MATH 107, 108</td>
<td>MATH 109, DESC 202</td>
</tr>
<tr>
<td>MATH 108</td>
<td>MATH 109, DESC 202, 301</td>
</tr>
<tr>
<td>MATH 107, 108, DESC 205</td>
<td>DESC 202</td>
</tr>
</tbody>
</table>

Students who will complete the required mathematics-statistics sequence by taking DESC 202 may take courses with a prerequisite of DESC 301 following completion of DESC 202.

Accounting/Business Legal Studies

Faculty
Associate Professor: Floyd (Accounting/Business Legal Studies)
Assistant Professors: Jones (Faculty Chairman) (Business Legal Studies), Bressler (Accounting), Cofinberger (Business Legal Studies), McIlvaine (Accounting), Millsapugh (Business Legal Studies), E. Samuels (Business Legal Studies)
Instructors: Ingram (Accounting), Reisig (Accounting), Steele (Accounting), Swanson (Accounting)

Lecturers: Bartholomew (Accounting), Berkowitz (Accounting), Bryan (Accounting), Bryant (Accounting), Bueter (Accounting), M. Carlson (Accounting), T. Carlson (Accounting), Dabney (Business Legal Studies), Dawson (Business Legal Studies), Doehring (Accounting), Donovan (Accounting), Feinberg (Accounting), Fox (Business Legal Studies), Gray (Accounting), Gutterlet (Accounting), Hogue (Business Legal Studies), Jennings (Accounting), Krassen (Business Legal Studies), LeForge (Business Legal Studies), Le Rosen (Accounting), Mehal (Accounting), Michaud (Accounting), E. Miller (Accounting), J. Miller (Accounting), Muldoon (Accounting), Musick (Accounting), Norcio (Accounting), O'Rourke (Accounting), Pape (Accounting), Patterson (Accounting), Pope (Business Legal Studies), Potts (Accounting), Quigley (Accounting), Ritzert (Accounting), Rosenbaum (Accounting), J. Samuels (Business Legal Studies), Schoen (Accounting), Slavitt (Accounting), Smallwood (Business Legal Studies), Stephens (Business Legal Studies), Stokes (Business Legal Studies), Swift (Accounting), Williams (Business Legal Studies), Woehrle (Business Legal Studies)

The accounting faculty offers a major in accounting with four areas of concentration designed to prepare students for careers in accounting and related fields. In addition to the general degree requirements for the BS degree, students desiring to major in accounting must complete 18 hours in upper-level courses. Within the major, students must choose an area of concentration as shown below:

Concentration in General Accounting

Required Courses:
ACCT 311 Cost Accounting, ACCT 331 Intermediate Accounting I, ACCT 352 Intermediate Accounting II.

Elective Courses:
Three or more courses selected from: DESC 352 Methods and Models of Management Science, ACCT 312 Accounting Systems, ACCT 351 Federal Taxation, ACCT 352 Advanced Federal Taxation, ACCT 333 Advanced Accounting, ACCT 461 Auditing, ACCT 411 Advanced Managerial Accounting, ACCT 471 Institutional and Governmental Accounting, ACCT 491 Accounting Seminar.

Concentration in Management Accounting

Required Courses:
ACCT 311 Cost Accounting, ACCT 312 Accounting Systems, ACCT 411 Advanced Managerial Accounting.

Elective Courses:

Concentration in Public Accounting

Required Courses:
ACCT 311 Cost Accounting, ACCT 331 Intermediate Accounting I, ACCT 332 Intermediate Accounting II, ACCT 461 Auditing.

Elective Courses:
Two or more courses selected from: ACCT 351 Federal Taxation, ACCT 333 Advanced Accounting, ACCT 471 Institutional and Governmental Accounting, ACCT 491 Accounting Seminar.

Concentration in Government Accounting

Required Courses:
ACCT 311 Cost Accounting, ACCT 312 Accounting Systems, ACCT 471 Institutional and Governmental Accounting.

Elective Courses:
Three or more courses selected from: DESC 352 Methods and Models of Management Science, ACCT 331 Intermediate Accounting I, ACCT 332 Intermediate Accounting II, MGMT 371 Government and Business, ACCT 411 Advanced Managerial Accounting, MGMT 311 Organizational Behavior and Administration, ACCT 491 Accounting Seminar.

Note: Students may take additional accounting and business legal studies courses as well as other courses offered by the School of Business Administration to satisfy all or any of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Accounting)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>3</td>
</tr>
<tr>
<td>DESC 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>FNAN 301</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 301</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>MKTG 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Accounting area of concentration 6</td>
</tr>
<tr>
<td></td>
<td>History or government 3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting area of concentration 6</td>
<td>BUAD 498 3</td>
</tr>
<tr>
<td>ECON upper-level elective 3</td>
<td>Accounting area of concentration 6</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Electives 6</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

(italics indicate graduate faculty.)
Business Administration

The faculty of the School of Business Administration, with the Assistant Dean for Undergraduate Program, offers a major in business administration with four interdisciplinary areas of concentration. In addition to the general degree requirements for the BS degree, students desiring a major in business administration must complete 18 hours of upper-level courses. Within the major, students must choose an area of concentration as shown below.

Concentration in General Business Administration

Required Courses:
ACCT 311 Cost Accounting, DESC 352 Methods and Models of Management Science, FNAN 401 Advanced Financial Management, MGMT 311 Organizational Behavior and Administration, MKTG 471 Marketing Management.

Elective Courses:
One or more upper level non-core courses offered by the School of Business Administration.

Concentration in Operations Management

Required Courses:
ACCT 311 Cost Accounting, DESC 352 Methods and Models of Management Science, MGMT 461 Operations Management.

Elective Courses:
Three or more courses selected from either Group A or Group B.


Concentration in Financial/Accounting Information Systems

Required Courses:

Elective Courses:
Two or more courses selected from: ACCT 311 Cost Accounting, ACCT 471 Institutional and Governmental Accounting, FNAN 321 Financial Institutions, INFS 311 Database Management.

Concentration in Accounting Information Systems

Required Courses:

Elective Courses:
Three or more courses selected from: ACCT 311 Cost Accounting, ACCT 333 Advanced Accounting, ACCT 411 Advanced Managerial Accounting, ACCT 461 Auditing, FNAN 401 Advanced Financial Management, INFS 312 Computer Hardware and Operations.

Note: Students may take additional courses offered by the School of Business Administration to satisfy all or any of the 15 hours of "General Elective" requirements for graduation.

Decision Sciences

Faculty
Professor: Roberts*
Associate Professors: Greenberg, Ruth, Siff (Chairman)
Assistant Professors: Baum, Mitchell, M. Oblik*, Parent
Instructors: Garlan*, Quitmeyer, Schank
Adjunct Instructors: Chamberlain, Gardner
Lecturers: Bryant, Carlson, Gardner, Gholson, Harris, Holroyd, Hwang, Langston, Millar, Onash, Pinto, Pugh, Rubin, Sheehan, Travers, Weed, Wenker

* On leave of absence Spring, 1981.
** Fall, 1980, only.

The decision sciences faculty offers a variety of courses and programs that deal with the application of the modern technologies of computer information systems and management science to practical problems of both business and governmental organizations. The faculty is also responsible for the undergraduate core courses in data processing, statistics and quantitative analysis.

The faculty offers a major in decision sciences with concentrations in the areas of general decision sciences, management science, and information systems. In addition to the general degree requirements for the BS degree, students desiring to major in decision sciences must complete 18 hours in upper-level courses. Within the major, students must choose an area of concentration as shown below.

Concentration in General Decision Sciences

Required Courses:
DESC 352 Methods and Models of Management Sciences, INFS 411 Management Information Systems.

Elective Courses:

Concentration in Management Science

Required Courses:

Sample Schedule for Students Accepted to Junior Level Standing (Business Administration)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fifth Semester</td>
<td>BULE 301 3, DESC 301 3, FNAN 301 3, MKTG 301 3</td>
</tr>
<tr>
<td></td>
<td>area of concentration 15</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>BULE 302 3, ECON 306 or 310 3, History or government 3</td>
</tr>
<tr>
<td></td>
<td>area of concentration 15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Business administration 6, ECON upper-level elective 3, Electives 6</td>
</tr>
<tr>
<td></td>
<td>area of concentration 6</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>BUAD 498 3, Business administration 6, Electives 6</td>
</tr>
<tr>
<td></td>
<td>area of concentration 6</td>
</tr>
</tbody>
</table>

GEORGE MASON UNIVERSITY

http://catalog.gmu.edu
Elective Courses:

Concentration in Information Systems

Required Courses:
INFS 211 COBOL (strongly suggested), INFS 312 Computer Hardware and Operation, INFS 313 Computer Language and Data Structure, INFS 411 Management Information Systems.

Elective Courses:
Three or more courses selected from: INFS 311 Database Management, DESC 352 Methods and Models of Management Science, BUAD 535 Computer Simulation, ACCT 312 Accounting Systems or MGMT 461 Operations Management or MKTG 451 Marketing Information Systems.

Only one of these three may be counted toward an elective in this program. If more than one is taken, the additional coursework must be applied to the "General Elective" requirement.

Note:
1. Students may take additional decision science courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.
2. DESC 301 Business Decision Models may be considered equivalent to DESC 351 Methods and Models of Management Science I (which is no longer offered) for degree requirements of earlier catalogs in which DESC 351 was required. This substitution can be effected only if DESC 301 is not used to complete the required 12 hours mathematics-statistics sequence.

Sample Schedule for Students Accepted to Junior Level Standing (Decision Sciences)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301 3</td>
<td>BULE 302 3</td>
</tr>
<tr>
<td>DESC 301 3</td>
<td>ECON 306 or 310 3</td>
</tr>
<tr>
<td>FNAN 301 3</td>
<td>Decision sciences area 6</td>
</tr>
<tr>
<td>MGMT 301 3</td>
<td>of concentration 6</td>
</tr>
<tr>
<td>MKTG 301 3</td>
<td>History or government 3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision sciences area of concentration 6</td>
<td>BUAD 498 3</td>
</tr>
<tr>
<td>Economics upper-level elective 3</td>
<td>Decisions sciences area 6</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Of concentration 6</td>
</tr>
<tr>
<td></td>
<td>Electives 6</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Finance/Real Estate and Urban Development

Faculty
Associate Professors: Johnston (Faculty Chairman) (Finance), Hysom (Real Estate and Urban Development)
Assistant Professors: Coffinberger (Real Estate and Urban Development), Ford (Finance), Grimshaw (Finance), J. Jones (Real Estate and Urban Development), D. Obliak (Finance), Pierce (Finance), L. Samuels (Real Estate and Urban Development)
Acting Assistant Professor: D. Kim (Finance)
Lecturers: Batt (Finance), Bonner (Real Estate and Urban Development), Buckley (Real Estate and Urban Development), Friar (Finance), Kevorkian (Finance), King (Real Estate and Urban Development), Kirks (Real Estate and Urban Development), LaRosa (Finance), C. Moore (Real Estate and Urban Development), Pagett (Real Estate and Urban Development), Rickey (Finance), Shaikh (Finance)

The finance and real estate and urban development faculty offers a major in finance with five areas of concentration designed to prepare students for professional careers in finance as well as in real estate and urban development. In addition to the general degree requirements for the BS degree, students desiring to major in finance must complete 18 hours in upper-level courses.

Within the major, students must choose an area of concentration as shown below.

Concentration in General Finance

Required Courses:

Elective Courses:
Three or more courses selected from: ACCT 351 Federal Taxation, FNAN 411 Investment Analysis and Portfolio Management, FNAN 421 Money and Capital Markets, FNAN 491 Seminar in Finance, REUD 201 Introduction to Real Estate and Urban Development.

Concentration in Real Estate and Urban Development

Required Courses:

Elective Courses:

Concentration in Investments

Required Courses:

Elective Courses:

Concentration in Financial Institutions

Required Courses:
FNAN 321 Financial Institutions, FNAN 421 Money and Capital Markets, REUD 301 Introduction To Real Estate and Urban Development.

Elective Courses:
Three or more courses selected from: ACCT 351 Federal Taxation, FNAN 311 Principles of Investments, FNAN 401 Advanced Financial Management, FNAN 491 Seminar in Finance, REUD 301 Introduction to Real Estate and Urban Development.

Concentration in Real Estate and Urban Development

Required Courses:
REUD 301 Introduction to Real Estate and Urban Development, REUD 411 Real Property Appraisal, REUD 412 Real Estate Finance, REUD 421 Real Estate Law.

Elective Courses:
Two or more courses selected from: ACCT 351 Federal Taxation, FNAN 311 Principles of Investments, FNAN 321 Financial Institutions, FNAN 421 Money and Capital Markets, REUD 413 Real Estate Investment, REUD 431 Real Property Management, REUD 432 Residential Development.

Note: Students may take additional finance and real estate and urban development courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

SCHOOL OF BUSINESS ADMINISTRATION

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Concentration in Small Business Management

Required Courses:
- MGMT 311 Organizational Behavior and Administration, MGMT 351 Small Business Management, MGMT 461 Operations Management.

Elective Courses:
- Three or more courses selected from: MGMT 321 Personnel Administration, MGMT 341 Business Communication, MGMT 381 Management Problem Solving and Decision Making, MGMT 491 Seminar in Management Theory, ACCT 311 Cost Accounting, INFS 411 Management Information Systems, MKTG 311 Sales Management, MKTG 332 Retail Management.

Note: Students may take additional management courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Management)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>DESC 301</td>
<td>DESC 301</td>
</tr>
<tr>
<td>FNAN 301</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>MGMT 301</td>
<td>MGMT 301</td>
</tr>
<tr>
<td>MKTG 301</td>
<td>History or government</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
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<td>3</td>
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<td>3</td>
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<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Finance area of</td>
<td>BUAD 498</td>
</tr>
<tr>
<td>concentration</td>
<td>6</td>
</tr>
<tr>
<td>ECON upper-level</td>
<td>Finance area of</td>
</tr>
<tr>
<td>elective</td>
<td>concentration</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Marketing

Faculty
- Professors: DeBoer (Dean), Tongren
- Associate Professor: Entrikin (Faculty Chairman)
- Instructors: Rishell, Feik
- Lecturers: Cramer, Hoelzel, B. Jones, Mason, McNallen, Rahn

The marketing faculty offers a major in marketing with six areas of concentration designed to prepare students for careers in marketing and related fields. In addition to the general degree requirements for the BS degree, students desiring to major in marketing must complete 18 hours in upper-level courses. Within the major, students must choose an area of concentration as shown below.

Concentration in General Marketing

Required Courses:
- MKTG 311 Sales Management, MKTG 313 Advertising Management, MKTG 471 Marketing Management.

Elective Courses:

Concentration in Marketing Management

Required Courses:
- MKTG 351 Marketing Research I, MKTG 471 Marketing Management.

Elective Courses:
- Four or more courses selected from: MKTG 311 Sales Management, MKTG 313 Advertising Management, MKTG 331 Distribution Systems, MKTG 333 Industrial/Government Marketing, MKTG 451 Marketing Information Systems, MKTG 491 Marketing Seminar.
Concentration in Marketing Research

Required Courses:
- MKTG 351 Marketing Research, MKTG 451 Marketing Information Systems.

Elective Courses:
Four or more courses selected from: MKTG 312 Consumer Behavior, MKTG 313 Advertising Management, MKTG 331 Distribution Systems, MKTG 333 Industrial/Government Marketing, MKTG 471 Marketing Management, MKTG 491 Marketing Seminar.

Concentration in Retail Management

Required Courses:
- MKTG 312 Consumer Behavior, MKTG 332 Retail Management, MKTG 471 Marketing Management.

Elective Courses:
Three or more courses selected from: (One must be in Marketing Area.) ACCT 331 Intermediate Accounting, MGMT 311 Organizational Behavioral, MKTG 351 Marketing Research I, MKTG 313 Advertising Management, MKTG 331 Distribution Systems, MGMT 351 Small Business Management, MKTG 491 Marketing Seminar.

Concentration in Industrial and Government Marketing

Required Courses:
- MKTG 311 Sales Management, MKTG 333 Industrial/Governmental Marketing.

Elective Courses:
Four or more courses selected from: (Three must be in marketing area.) ACCT 471 Industrial and Governmental Accounting, MGMT 371 Government and Business, MKTG 313 Advertising Management, MKTG 331 Distribution Systems, MKTG 351 Marketing Research I, MKTG 451 Marketing Information Systems, MKTG 491 Marketing Seminar.

Concentration in Sales Management

Required Courses:
- MKTG 311 Sales Management, MKTG 471 Marketing Management.

Elective Courses:
Four or more courses selected from: MKTG 312 Consumer Behavior, MKTG 313 Advertising Management, MKTG 331 Distribution Systems, MKTG 332 Retail Management, MKTG 333 Industrial/Government Marketing, MKTG 351 Marketing Research I, MKTG 391 Marketing Seminar, MKTG 451 Marketing Information Systems.

Note: Students may take additional marketing courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Marketing)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>DESC 301</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>FNAN 301</td>
<td>Marketing area of concentration</td>
</tr>
<tr>
<td>MGMT 301</td>
<td>History of government</td>
</tr>
<tr>
<td>MKTG 301</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing area of concentration</td>
<td>BUAD 498</td>
</tr>
<tr>
<td>ECON upper level</td>
<td>Marketing area of concentration</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

MBA Entrance Requirements

In addition to fulfilling the entrance requirements for the Graduate School, applicants for the MBA program should meet the following minimum entrance requirements:
1. A bachelor's degree from an accredited institution. (No application is processed until all official transcripts are forwarded from the institutions attended.)
2. A grade point average of 2.75 on a 4.000 scale for the last 60 semester hours of upper-level coursework, with a grade of C or better in courses applied against the foundation requirements or exceptional compensatory qualifications. A resume or letter explaining exceptional qualifications should be included with the application if appropriate.
3. Three letters of recommendation from professors or other persons directly knowledgeable of the applicant's professional and academic competence.
4. A satisfactory score (normally 500 or higher) on the Graduate Management Admissions Test (GMAT). The GMAT should have been taken within 7 years of applying for admission.
5. The School of Business Administration will accept admission to the MBA program for the Fall and Spring terms only.

Admission to the MBA degree program is on a competitive basis. The admissions decision is based on grades in prior academic coursework, performance on the GMAT, recommendations, other professional and personal qualifications, and work experience. These criteria and those which follow are applied flexibly to assure that people with unusual qualifications are not denied admission. Coursework taken as an Extended Studies enrolllee does not per se qualify a student for admittance into the MBA program.

Graduate

Master of Business Administration

The MBA program is designed to provide an advanced level of professional education in the several functional areas of business administration. The program is designed to serve:
1. Individuals who have recently earned the baccalaureate degree in business administration and who wish to continue their education at the master's level.
2. Individuals who have recently earned the baccalaureate degree in a discipline other than business administration and who wish to develop master's level skills in business administration.
3. Persons employed in business and government who hope to further their professional careers by earning an advanced degree in business administration.
4. Students who intend to continue toward the DBA or PhD degree.

The MBA program is designed to promote both an understanding of the major functional areas of business enterprise and to provide an opportunity for in-depth specialization in one of several specialty areas. Nearly all courses are offered in the evening to facilitate part-time study. The MBA program involves between 36 and 60 semester hours of graduate coursework. The exact number of credit hours required is based on evaluation of the academic record at the time of application to the program. Generally, applicants are given credit for foundation courses if they have completed six hours of undergraduate coursework in finance, marketing, management, law, or an equivalent graduate course. The minimum MBA program is 36 hours.

<table>
<thead>
<tr>
<th>Coursework</th>
<th>Thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Courses</td>
<td>0-24 hours</td>
</tr>
<tr>
<td>MBA Core Courses</td>
<td>21 hours</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>15 hours</td>
</tr>
<tr>
<td>Total</td>
<td>36-60 hours</td>
</tr>
</tbody>
</table>

SCHOOL OF BUSINESS ADMINISTRATION 117

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MBA Degree Requirements

A candidate must fulfill all of the degree requirements of the Graduate School and the following specific academic requirements of the MBA program:

1. Foundation. Each candidate must have completed the equivalent of the foundation courses or take them at George Mason University. These courses provide a common body of knowledge for students wishing to pursue graduate work at the MBA level. There are 24 hours of graduate foundation coursework. Some of these may be satisfied by academic coursework in the student's background; this is decided upon admission to the program, as described in item (2) in the Entrance Requirements section above. Normally, an undergraduate degree in business administration fulfills most foundation course requirements. Coursework previously taken elsewhere that is submitted for satisfaction of foundation course requirements must have been completed at a level consistent with policies of the undergraduate business administration program at George Mason University. Students who feel that they have mastered the substance of any of the foundation courses may demonstrate their mastery of a given course by taking and passing the challenge exam for that course, during the first semester after being accepted into the MBA program, either on a degree or provisional basis.

The foundation courses are:

- ECON 502: Economic Analysis 3
  (offered by the Economics Department)
- BUAD 600: Accounting and Reporting 3
- BUAD 610: Financial Management 3
- BUAD 620: Marketing Concepts and Processes 3
- BUAD 630: Computer Systems for Management 3
- BUAD 640: Statistical Foundation for Business Decision Making 3
- BUAD 650: Legal Concepts and Trends Affecting Business 3
- BUAD 660: Management Theory and Practice 3

Completion of all foundation coursework is prerequisite to courses at the next level, the MBA core.

2. MBA Core. Each candidate must complete the following MBA core courses unless, in the opinion of the School of Business Administration, the candidate has had equivalent work at the graduate level elsewhere:

- BUAD 601: Managerial Accounting 3
- BUAD 611: Cases in Financial Administration 3
- BUAD 621: Cases in Managerial Marketing 3
- BUAD 641: Quantitative Methods of Managerial Analysis 3
- BUAD 661: Cases in Organizational Behavior 3
- BUAD 797: Business Policy 3
- BUAD 798: Seminar in Business Research 3

(See note below on Thesis option.)

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3. Electives. Electives provide the MBA student with the opportunity for limited specialization in one of several areas offered by the School of Business Administration. Each candidate must complete at least two graduate courses in one of the areas. Areas currently available are:

- Accounting
- Administrative Management
- Financial Management
- Information Systems
- International Business
- Management Science
- Managerial Economics
- Marketing Management and Research
- Real Estate and Urban Development

15 from above electives

4. Thesis of Coursework-Research Seminar Option. On completion of 30 hours of MBA core or elective courses, the student may elect to fulfill the requirement for BUAD 798 Seminar in Business Research, and one elective course, by completing a thesis. Six credit hours may be earned by electing the thesis option.

Special School Regulations

1. Provisional students and non-degree students contemplating degree status must complete 9 of their first 12 graduate hours from among MBA foundation courses if they have not had the foundation coursework, or from core courses if all foundation course requirements are satisfied.

2. No more than 12 semester hours of MBA foundation, core, or elective credits may have been earned through enrollment in non-degree status or through Extended Studies enrollment prior to acceptance in degree status.

3. A maximum of six semester hours of graduate credit in approved 500-level graduate courses may be authorized; however, these courses must be taken after entry into the program and normally are taken prior to the related MBA core courses.

4. A maximum of six hours of elective credit in another graduate program of this University may be allowed provided they are in a related field and have prior approval of the Assistant Dean, Graduate Programs, School of Business Administration.

5. Subject to general transfer policies of the Graduate School, up to six hours of graduate coursework may be transferred from other institutions. However, to be considered for transfer, such work must have been completed within five (5) years prior to the date of admission to the Graduate School of George Mason University.

6. In all cases, students must complete a minimum of 24 hours of graduate coursework at George Mason University while in degree status.

7. Required foundation courses must be completed prior to initiation of core courses, although there may be an overlap (normally limited to three hours) when a student is completing the foundation sequence. Core courses should be completed prior to taking electives.

8. No credit is granted for work done in absentia.

Program of Study

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation</strong></td>
<td>0-24</td>
</tr>
<tr>
<td>ECON 502: Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 600: Accounting and Reporting</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 610: Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 620: Marketing Concepts and Processes</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 630: Computer Systems for Management</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 640: Statistical Foundations for Business Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 650: Legal Concepts and Trends Affecting Business</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 660: Management Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td><strong>MBA Core</strong></td>
<td>21</td>
</tr>
<tr>
<td>BUAD 601: Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 611: Cases in Financial Administration</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 621: Cases in Managerial Marketing</td>
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</tr>
<tr>
<td>BUAD 641: Quantitative Methods of Managerial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 661: Cases in Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 797: Business Policy (after completion of 27 semester hours of core and elective courses, except BUAD 798)</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 798: Seminar in Business Research (after minimum of 30 hours of core and elective courses)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

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At least six hours from one of the following specialty areas:
Accounting: BUAD 702, 703, 704, 705, 706, 707, 708, 709
Administrative Management: BUAD 563, 762, 763, 764, 765, 767, 769, 778
Financial Management: BUAD 703, 712, 713, 715, 719, 782, 783, 784, 785, 786
Information Systems: BUAD 732 and at least one course from 535, 733, 734
International Business: BUAD 775, 776, 778
Management Science: BUAD 742 and at least one course from 535, 743, 744, 772
Managerial Economics: BUAD 772, 773, and 744
Marketing Management and Research: BUAD 722, 724, 725, 726, 727
Real Estate and Urban Development: BUAD 782, 783, 784, 785, 786

**Thesis Option**
BUAD 799: Thesis
(Substitute for BUAD 788 and one elective course)

**Total Hours** ............................................ 36-60
George Mason University's commitment to continuing education was formalized in 1973 when the Office of Extended Studies was created to facilitate the development and administration of continuing education and community service. 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 over 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 inaugurated the Bachelor of Individualized Study (BIS) degree program and initiated the award of Continuing Education Units (CEU's) 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.

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; the Extended Studies Enrollment procedure; off-campus credit instruction; contract courses; undergraduate guest matriculant enrollment; senior citizen enrollment; community services; and noncredit courses. Academic programs offered through the Division of Continuing Education originate in the appropriate colleges and schools of the University and are subject to official University regulations and procedures. The Dean of the Division of Continuing Education serves as the academic dean of all students enrolled in programs administered by the Division.

Administration
Robert T. Hawkes, Jr., Dean
Sally J. Reithlingshoefer, Assistant Director

Extended Studies Enrollment

Procedure

Although qualified students may seek formal admission to any undergraduate or graduate degree program on a full- or part-time basis, the Division of Continuing Education provides an alternative enrollment procedure that meets the specialized needs of continuing education students.

Students Served

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 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 achieving these needs, students earn credit that can be later applied to a degree program.

Enrollment Procedures

Prior to each semester, professional academic counselors assist over 3,000 students in selecting courses appropriate to career goals, advise students about requirements for courses and programs, approve course selections, inform students as to 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 and enrollment services are available to the public throughout the entire year in the Division of Continuing Education, East Building, Room 132 from 9:00 a.m. to 7 p.m., on Monday through Thursday and from 9 a.m. to 4 p.m. on Friday. During non-registration times, career and academic counseling services are available on a walk-in basis, and appointments are not needed. During pre-semester registration periods, counseling services are limited to course approval only, and appointments are required.

Enrollment Requirements

Prospective enrollees are required minimally to supply unofficial evidence of their academic background during their first visit to the Division of Continuing Education. High school transcripts and evidence of graduation are required of those who have no previous college coursework. 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 (3.000) in all graduate courses. Students who do not meet these criteria during two consecutive periods of enrollment are not permitted to register again as Extended Studies enrollees.

Credits Applicable to a Degree Program

If an Extended Studies enrollee wishes to apply for admission to a degree program, the regular graduate or undergraduate admissions procedures take effect, almost as if the student were applying for transfer. Extended Studies enrollees may apply for formal admission at any time. The Office of Admissions applies the same criteria for admission of these students as for students transferring from other institutions. If accepted for admission into a degree program and when 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. All University tuition, fees, and regulations apply to Extended Studies enrollees.

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, 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.

During its evening hours of operation, Monday through Thursday, the Division performs many of the daytime functions of the deans' offices, the Admissions office, the Registrar's office, the Cashier, and the departmental offices. 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.

Nursing Continuing Education

The Department of Nursing, in cooperation with the University's Division of Continuing Education, offers opportunities for noncredit courses representing a variety of subjects focusing on the concerns of nurses and health care consumers. Among recent offerings have been a Public Workshop for Health Professionals and "Drug Therapy for the Elderly: Nursing Implications." 

When planning and presenting continuing education program activities, the Department of Nursing utilizes the wealth of available resources in Northern Virginia and the Washington Metropolitan area. Nationally recognized nursing consultants are frequent guests on campus.

Comments and suggestions for programming from the health care community are welcomed and encouraged. One may be placed on the mailing list to receive notice of specific activities scheduled throughout the academic year by contacting either the Division of Continuing Education or the Department of Nursing.

Senior Citizens Enrollment

The Division of Continuing Education coordinates 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 $5,000 are entitled to enroll in courses offered for academic credit on a space-available basis without payment of tuition and fees.

Additionally, 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. Tuition, however, may be charged for those courses which are designed exclusively for senior citizen groups. Interested senior citizens should contact the Division at (703) 323-2436.

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. 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 are urged to contact the Graduate School to make arrangements for taking graduate courses.

During the summer terms, however, both undergraduate and graduate guest matriculants should contact the Office of the Registrar to arrange for coursework.

Off-Campus Credit Instruction

The basic purpose of off-campus credit instruction is to offer University classes at sites convenient to the residential communities and places of employment in Northern Virginia. Presently, the Division of Continuing Education administers more than 120 courses in 15 disciplines at over 20 off-campus locations.

Off-campus credit coursework is aimed at the continuing education student. As an aspect of continuing and lifelong education, the off-campus courses often fulfill certain necessary prerequisites for advanced degrees. For instance, several sections of the graduate foundation requirements for the Master of Business Administration are located at various off-campus sites. Students may fulfill these courses off campus, and then take those courses at the campus which require the use of special facilities, such as a computer.

Courses are located off-campus where there seems to be a logical need or presumed interest, and at times that are convenient for working adults. As off-campus credit instruction expands, the Division will attempt to respond to students enrolled at the Northern Virginia Community College campuses who wish to continue their studies into a bachelor's program, and to undergraduate and graduate students who are located in U.S. government or business facilities in Northern Virginia. The University offers both graduate and undergraduate coursework in the following:

- Accounting
- Business Administration
- Cartography
- Communications
- Economics
- Education
- English
Finance
Foreign Languages
Health and Physical Education
Nursing
Psychology
Public Administration
Currently only undergraduate coursework is offered off-campus in:
Decision Sciences
Geography
Government
Library Science
Marketing
Mathematics
Sociology

All off-campus courses are approved by the appropriate college or school in the University and are fully applicable as resident credit to 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 on-campus. The University insists that its faculty and students adhere to all regulations of the off-campus facility, such as smoking, parking, and security regulations.

Students who wish to register for an off-campus course may do so in the Division at the time they are approved to take the course. In addition, a general registration for all courses is 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. These contract courses are approved by the appropriate college or school of the University and are offered for credit to these organizations.

A contract course may also be offered on a non-credit basis. It is specifically designed for a particular audience, and no academic credit is given. Contract courses may be offered on a single occasion to suit a specific need. At that time, students may receive CEU's or some other recognition of achievement.

The Division of Continuing Education Managerial Awareness Program provides quality training and education to professional managers and potential executives who are moving into positions requiring broad managerial talent. The programs are structured to provide credit, CEU, or noncredit offerings. The noncredit offerings are conducted in a variety of formats: seminars, colloquia, short courses, conferences, and institutes in a variety of educational environments. Programs can be arranged onsite at the organization, in Washington metropolitan area settings, or on any of George Mason's three campuses. Program offerings are reasonably priced and conveniently designed not to take participants away from their jobs for substantial lengths of time.


Contact the Coordinator of Off-Campus Instruction at (703)323-2494 for specific data pertaining to offerings.

Community Service Activities

Northern Virginians have expressed the need for continuing education in the areas of professional and community-oriented conferences, workshops, seminars, and institutes. The Division of Continuing Education has encouraged the academic departments of the University to work with public agencies to offer one- and two-day conferences, conducted by University faculty and other experts, to provide educational opportunities of interest.

Most community service seminars, conferences, workshops, programs, and institutes are held in the Student Union, a facility which includes classrooms, conference rooms, and banquet facilities. Because Community Services has access to all University resources and facilities, its activities have been expanded to include short conferences in business, education, and health-related fields.

CEU's are awarded for participation in previously designed activities in the community service area. The CEU is a way of measuring participation in an organized educational experience, under reliable sponsorship, capable direction, and qualified instruction. One CEU represents 10 contact hours of participation in a continuing education experience that qualifies for CEU's. Students who successfully complete the activity receive a Continuing Education Unit certificate of award, and a record of that participation is maintained by the University.

Noncredit Courses

In addition to conferences, workshops and institutes, the Division of Continuing Education offers a variety of non-credit short courses. Each semester a brochure is mailed to Northern Virginians listing these noncredit courses. Short courses, such as beginning calligraphy, gemstone study, foreign affairs, and exercising for older Americans are offered, along with a wide variety of other courses for fun and fact. There are currently 500 people enrolled in noncredit courses, many of whom are senior citizens. CEU's are awarded to students who successfully complete qualified noncredit short courses.

Bachelor of Individualized Study Degree Program

The Degree Program

The Bachelor of Individualized Study (BIS) degree program offers mature Northern Virginians an academically sound program which provides an alternative to traditionally structured baccalaureate degrees. It provides each student, guided by a George Mason University academic adviser, an opportunity to formulate a course of study which complements individual needs and interests. The choices in any given instance are interdisciplinary, individualized, and interdisciplinarily, without a major subject as required traditionally.

The Bachelor of Individualized Study (BIS) degree is conferred by George Mason University in partial fulfillment of its service obligation to Northern Virginians.

The student in the BIS may fulfill an individualized program of study by calling upon the undergraduate resources of the Consortium for Continuing Higher Education in Northern Virginia. The Consortium institutions include George Mason University, Northern Virginia Community College, Falls Church Regional Center of the University of Virginia, and Marymount College of Virginia.

Each course in the curriculum of each participating undergraduate Consortium institution are available, as appropriate, to help meet student program needs. In addition, a student may draw upon such nontraditional modes of instruction as newspaper, television, and correspondence courses, CLEP, USAFI, DANTES, and military-connected schools, and independent study for knowledge and progress toward completion of a program as agreed to by the academic adviser.

In acquiring credits toward a BIS degree, a student may proceed at a self-directed 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 BS or BA degree, or who is confronted with obstacles barring the pursuit of a more conventional degree.

The program recognizes the breadth of an adult student's background by providing for generous transfer of credits earned elsewhere and by providing procedures to translate knowledge gained from prior experiential learning or self-education into academic credits as appropriate. A maximum of four semester hours may be earned for prior experiential learning.

The design of a program of study is a joint venture between the adult student and the George Mason University academic adviser, and it reflects the individual student needs and interests. The requirements of the degree program add to its integrity. The student-developed core of individualized study prevents the degree from being merely an assemblage of credits. The general education requirement provides some experience in three broad areas of basic knowledge commonly integral to a university education, while allowing flexibility of course selection within these areas. The educational requirements also specify that the student successfully complete BIS 490 and six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102. A student must attain a minimum grade of C in order to have ENGL 101 (or 100), 102 fulfill degree requirements. The individualized study core may be an interdisciplinary or highly individualized selection of courses rather than the traditional major. Other features add to the program's flexibility: the absence of time limits attached to the validity of transfer credits or for program completion, a minimal number of hours (30) to be completed within the Consortium, and a general philosophical approach which respects the student by providing an opportunity to fashion an individualized curriculum.

Tuition and Fees

At George Mason, all University tuition and fees apply; for details, see the section of this catalog on tuition and fees. For information about costs at the other Consortium institutions, consult their appropriate publications.

Eligibility for the Program

The program is designed for mature students who have been out of high school at least eight years and who have indicated their commitment to adult continuing education by accumulating 30 semester hours of college-level credit acquired at any regionally accredited institution.

A minimum grade of C is required in each of the courses which constitute the 30 semester hours required for acceptance. At least 15 of the required 30 semester hours must be of conventional classroom instruction; the remaining 15 hours of the initial 30 may have been earned by CLEP exams, DANTES, USAFI, service-connected schools, correspondence courses, television and newspaper courses, or other nontraditional modes of imparting and measuring knowledge, and independent study administered by an accredited institution of higher learning. Additional hours earned by nontraditional methods may be applied after entry into the program. The hours presented for acceptance, however, may not include credits awarded by other colleges or universities for prior experiential learning by means other than by examination. Knowledge claimed on the basis of prior experiential learning must be validated by George Mason following acceptance into the program.

Application for Admission and Acceptance

A potential BIS student must first meet with the BIS Coordinator in the University's Division of Continuing Education. The applicant must also seek undergraduate admission to George Mason University through the Admissions Office. Concurrent with admission application to the University, a student's BIS application is evaluated by the BIS Coordinator along with the results of a personal interview. During the interview, the student is informed about the program and assisted with defining goals, plans, and career directions. An interview can be arranged by calling (703) 323-2342.

Once undergraduate admission is obtained, a BIS applicant is initially classified as a pre-BIS student. The program status is conditional, however, until the student has secured an educational contract with an appropriate adviser. If a student's request for BIS program status is denied, the student may decide to pursue a more conventional degree. However, the student may appeal the decision to the dean of the Division.

Requirements and Transfer

Transfer credits are accepted from institutions that are accredited by the appropriate regional association. The credits of a student transferring from a nonaccredited college are evaluated after the successful performance of the student has been established at George Mason.

It is theoretically possible for students after acceptance and academic approval to transfer all credit hours required for the program except for the three-credit-hour project (see "Project" below); but 30 of the total hours must be completed within the Consortium. Students must obtain written approval in advance from the dean in order to take coursework in the Consortium for credit toward the BIS degree.

A student theoretically may accumulate as many as 102 semester hours in this program by means other than normal enrollment in and attendance at conventional classes. Hence, the program accommodates various combinations of nonconventional and conventional work almost without internal limitation. Only 15 hours of conventionally earned credits and the three-hour project mentioned below—a total of 18 program hours—may not be acquired by nontraditional methods.

Counseling and Advising

After a student is accepted into the BIS program, the BIS Coordinator arranges program planning and academic advising. A student planning a program at any member institution in anticipation of the BIS degree may be admitted after accumulating 30 semester hours of coursework. Conversely, it is theoretically possible that a student might, under certain circumstances, delay entry by continuing to select courses at any Consortium school, transferring to George Mason only to complete the required project. In this case, however, the courses selected before entry must contain 30 semester hours of work that is acceptable to the George Mason adviser as constituting an individualized core of study appropriate to the student's needs or interests. The degree program does not require any fixed amount of coursework to be completed at any one participating institution, except for the Bachelor of Individualized Study project.

A student with 33 semester hours or less remaining to complete the degree is required to have an official educational contract. A student who upon acceptance into the program has less than 33 semester hours remaining to complete the degree must secure an official educational contract prior to completion of any additional coursework.

The BIS Coordinator is responsible for general orientation, for a BIS acceptance decision, for counseling students about program procedures and requirements, and for coordinating examinations used to validate knowledge gained through nontraditional means. Professional counselors can refer each accepted BIS student to one or more potential advisers from George Mason's full-time faculty. However, it is the BIS student's responsibility to find an adviser and secure an educational contract. The adviser works with the student to develop an educational contract and supervises the student's academic program, especially the "Individualized Study Core."
The selected academic adviser is deemed permanent for the duration of the program. However, a change may be made if there is a significant change in the student's primary focus.

Credits Earned for Prior Experiential Learning

The BIS program is designed for adult students, most of whom will have acquired experience and knowledge through work, reading, and travel. However, no credit is granted within the program for prior experiential learning per se (including military service, regardless of the length of service, rank attained, or duties performed). Academic credit for knowledge gained through self-instruction, work, or other life experiences is granted only when the student’s possession of academically relevant information has been validated. Students who wish to qualify for credit based on their experience and knowledge should see the BIS Coordinator to be advised on appropriate presentation.

Validation can be accomplished by evidence presented to the faculty adviser in a student “portfolio” or by examination—by a nationally prepared and normed test, an end-of-course examination, or a specially prepared local examination. A student receives full course credit by scoring in the 50th percentile or higher on the appropriate nationally prepared examination or by scoring 60 percent or higher on the appropriate local examination.

If no examination can be devised to validate knowledge for which credit is sought, the academic adviser may assemble a committee of three persons qualified to evaluate the knowledge and fix the credit to be granted. Such a committee is used only as a last resort. The prior experiential learning must be explicit enough to be validated with reasonable objectivity and precision. A committee may grant credit not to exceed four semester hours; no student, however, may be awarded more than four semester hours of credit for prior experiential learning except by examination.

Requirements within the BIS

Three distinctive phases are involved in the BIS program but are not sequentially related.

1. General Education. While this degree program is designed to meet the widest possible range of individualized educational objectives, there are three general areas of knowledge that cannot be wholly omitted from university education: humanities, social and behavioral sciences, and science and mathematics. In order to gain substantial exposure to the arts and sciences, the student must earn credit equivalent to six semester hours in each of these three general areas. In addition, six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102, with a minimum grade of C in each, are specifically required. Courses need not be in a single discipline within a given area, and those selected may also count, if appropriate, as parts of the individualized study core. Transfer credits and credits obtained by extra-classroom means may be used to satisfy the areas of study. The list of general areas and disciplines follows:

   **Area A: Humanities**
   - English
   - Fine and Applied Arts
   - Humanities
   - Language
   - Literature
   - Music
   - Philosophy
   - Religion
   - Speech

   **Area B: Sciences and Mathematics**
   - Astronomy
   - Biology
   - Botany
   - Chemistry
   - Computer Science
   - Geology
   - Mathematics

   **Area C: Social and Behavioral Sciences**
   - Anthropology
   - Economics
   - Geography
   - History
   - Linguistics
   - Political Science
   - Psychology
   - Regional Cultures
   - Sociology

2. Individualized Study Core. The adult student, with an academic adviser, designs an individualized study core of at least 30 semester hours, with at least 12 of the 30 hours of upper-division level or its equivalent as measured by the curriculum of George Mason. The core consists of a pattern of study selected according to the objectives and interests of the student. It may be developed across traditional disciplinary lines in order to provide a thematic program, drawing upon the resources of several disciplines—e.g., environmental studies, regional studies, public administration. The student may also opt for a more traditional approach by concentrating in one discipline. When designing the pattern of courses, the student may draw upon the full curricular resources of the Consortium, plus nontraditional resources and/or modes of instruction as agreed upon by the student and the academic adviser. No more than six semester hours of D grades may be included in the concentration.

3. Project. At the beginning of the program, the student with the adviser designs a project directly related to the individualized study core to be completed during the program. The project may be integrative in character, or may augment study by providing an in-depth analysis of some work-related task or phase of study. Once the project proposal is approved by the academic adviser and accepted by the BIS Coordinator, actual work on the project begins at a time appropriate to the nature of the project and its relation to the student’s total program. In the semester in which completion of the degree program is anticipated, the BIS candidate should register for BIS 490: Bachelor of Individualized Study Project (3). The completed project must be submitted in accordance with a timetable and guidelines available through the BIS office.

The project is evaluated by a three-member committee consisting of the academic adviser and two other Consortium faculty members—one selected by the student and one chosen by the academic adviser. An acceptable project must have at least a grade of C. The three semester hours of credit earned upon successful completion of the project are in addition to the 12 hours of upper-division work required in the core.

When the work of BIS 490 is not completed within a semester, a mark of IP (In Progress) is entered on the record. IP is not treated as an unsatisfactory grade. BIS 490 is not subject to the time limit prescribed for IN; however, students inactive in the program for two or more years must reapply for acceptance into the program.

Summary

The student’s program is completed when the admitted and accepted student has:

1. accumulated the equivalent of 120 semester hours; 30 of these hours must be completed within the Consortium;
2. met the general university requirement for upper-level course credits;
3. successfully completed six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102, with a minimum grade of C in each;
4. presented work equivalent to six semester hours of credit in each of the following areas: humanities, sciences and mathematics, social and behavioral sciences;
5. finished an individualized core of study equivalent to at least 30 semester hours of credit, at least 12 of which must be upper division, with no more than six semester hours of D grades; and
6. successfully completed BIS 490: Bachelor of Individualized Study Project with at least a grade of C for three semester hours credit.

University Courses

Committee on University Curriculum Matters
John M. Smith, Chairperson (Department of Mathematics)
Douglas G. Mose (Department of Chemistry)
Josephine F. Pacheco (Department of History)
Amelia A. Rutledge (Department of English)
Raleigh F. Steinhauer (School of Business Administration)

On January 26, 1977, the Faculty Senate of George Mason University voted to establish a new category of courses, University Courses. University Courses were first offered during the Spring 1978 semester.

University Courses are special academic offerings which are interdisciplinary, in-depth presentations of broad interest. Proposals for University Courses are developed by faculty, usually by several acting together. After review and approval by the University Faculty Standing Committee on Curriculum Matters, these courses are administered by the Office of the Vice President for Academic Affairs. Unless specific prerequisites are indicated, the courses are open to all students.

University courses, as shown below, are designated UNIV. Full descriptions may be found in the Course Dictionary of this catalog.

UNIV 401: Visions of the End in America (3). Offered Spring 1978.
UNIV 402: Myths of the Twilight Years (3). Offered Spring 1978, Spring 1979.
UNIV 404: Mythology and the Twilight (3). Offered Fall 1978.
UNIV 403: Myths and Legends (3). Offered Fall 1978.
UNIV 405: Mythology of the Modern Mind (3). Offered Fall 1978.
UNIV 408: The Nature of Time (3). Offered Fall 1979.
UNIV 409: Japan: The Living Tradition (3). Offered Fall 1979.
UNIV 410: Assassination and Terrorism as Political Weapons (3). Offered Fall 1980.
UNIV 411: Electronic Communication (Television) and the Representation of Reality (3). Offered Fall 1980.
UNIV 412: Family Law (3). Offered Fall 1980.
UNIV 413: Life in the Universe (3). Offered Fall 1980.
UNIV 414: Feminist Perspectives on Sexual Liberation (3). Offered Spring 1981.
UNIV 416: Intelligence in the Universe (3). Offered Fall 1981.
UNIV 417: Energy Alternatives for the Eighties (3). Offered Fall 1981.
UNIV 418: Corporate-Government Relations in the International Environment (3). Offered Fall 1981.

Certificate Programs

The Faculty Senate, acting on advice from the committee on University Curriculum Matters, has established guidelines for the offering of certificate programs by the various units of the University. Not meant as substitutes for degree programs, these certificate programs are special sequences of credit study, the completion of which is signified by the awarding of a certificate. Their use may be significant to individuals who already hold degrees and/or who are greatly interested in the fields in which these certificates are offered.

Each of the colleges and schools of the University has the ability to devise certificate programs, following the University guidelines.

Certificate Programs in Gerontology

Committee
Catharine Kopac (Department of Nursing) (Chairman)
Roberta Greene (Social Work Program)
Doreen Harper (Department of Nursing)
Douglas McAdam (Department of Sociology)
Jeanne Mellinger (Department of Psychology)
Mary Montebello (Department of Education)
Frederick Schack (Department of Health and Physical Education)

The certificate programs in gerontology are designed both 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 counseling, recreation, social services, nursing, and administration.

Students who wish to enter the certificate program may obtain an application form from any of the participating departments and should submit the completed form to Ms. Catharine Kopac, Department of Nursing. Inquiries concerning the programs should be directed to the Division of Continuing Education, the Academic Advising Center, or the Office of the Graduate School.

Program Requirements

BA Level Certificate

The BA level certificate program in gerontology consists of 24 semester hours of courses. Students receiving the certificate must either hold baccalaureate degree or be receiving a baccalaureate degree from George Mason University at the time they receive the certificate. Students are required to have as prerequisites for the certificate program eight hours of biology or anatomy or physiology and three hours of psychology or sociology.

The 24 semester hours required in the certificate program are divided as follows:

1. Six semester hours in introductory gerontology courses: Fundamentals of Aging I and II (croslisted as EDUC 397, 398; NURS 397, 398; PHED 397, 398; PSYC 397,398; SOCI 397,398) (3, 3)
2. Six semester hours in a practicum in gerontology:
   - NURS 485, 486 (3, 3)
   - PHED 445 (3, 3)
   - PSYC 421, 422 (3, 3); 548, 549 (3, 3); or 750 (3, 3)
   - EDUC (to be arranged)
3. A minimum of six semester hours selected from the following courses:
   - NURS 486: Health Maintenance and Health Aspects of Aging (3)
   - PHED 470: Leisure and Recreation Programming for Older Adults (3)
   - PSYC 415 (514): Psychological Factors in Aging (3)
   - SOCI 441: Sociology of Aging (3)
4. Three to six hours of elective courses selected from the following:
   - Gerontology Undergraduate Electives:
     - EDUC 440, 441; NURS 494, 495, 499; PHED 499; PSYC 460; SOCI 499: Reading and Research in Gerontology (1-3)
     - NURS 480: Coping With Death and Dying (3)
     - SOCI 350: Sociology of the Life Cycle (3)
SOCW 483: Social Work with the Aging and Their Families (3)*

Gerontology Graduate Electives:
EDUC 598, NURS 798, PSYC 796: Research in Gerontology (3)
NURS 635: Gerontologic Nursing I (3)
NURS 636: Gerontologic Nursing II (3)
PHED 530: Exercise Physiology and Fitness Programs for Older Adults (3)
PSYC 614: Psychology of Aging (3)
PSYC 786: Functional Assessment and Treatment in Gerontology

Cognate Electives:
EDGC 654, 655, 606
EDUC 525, 526
HEAL 220, 330
PHED 618
PSYC 326, 728
PUAD 502, 503
SOCI 390, 550, 551

* May be taken if student has prior interviewing skills.

To qualify for the certificate, a student may present all courses applicable to the certificate in which satisfactory grades have been received and up to six hours in which D grades have been received.

Master's Level Certificate in Gerontology

Students who either hold a master's degree or are enrolled in a master's degree program at George Mason University may apply to enter the master's level certificate program in gerontology. This certificate program combines theoretical and applied course work in aging with the student's graduate curriculum in one of several departments. Students applying to the master's level certificate program must be in graduate degree status or hold a master's degree in education, psychology, nursing, sociology, social work, recreation, recreational therapy, or physical therapy. Students who already hold master's degrees must choose an an area of specialization for two of their gerontology courses and their practicum.

Application to the certificate program should be made to the Graduate School office. The student is required to have as a prerequisite to the program an undergraduate or graduate survey course in aging. Requirements for the graduate certificate are 18 hours of graduate courses as follows:

Two graduate level courses in aging in the major or area of specialization 6
Two graduate level courses in aging outside the major 6
Practicum in gerontology 6
18

Coursework for Gerontology Certificate Programs

Descriptions of all courses applicable to these programs, as indicated in the above requirements, are listed alphabetically (by prefix) in the Course Dictionary of this catalog.

Certificate Program for Psychology Technicians

Inquiries should be directed to Dr. Carol Erdwins of the Department of Psychology.

Purpose of Program

The psychology technician program includes a sequence of courses which provides the theoretical background and behavioral skills necessary for successful performance at the paraprofessional or introductory level in many human service settings and agencies. Completion of this program enhances the graduate's ability to perform in settings such as group homes, sheltered workshops, and activity centers for emotionally disturbed children and adults; training centers for mentally retarded persons; adolescent treatment programs; and residential facilities for juvenile offenders and the aged.

Program Content

This certificate program consists of 24 semester hours in psychology beyond the introductory level course (PSYC 100, which is a prerequisite to all other courses). These hours include:

PSYC 220: Personality Theory 3
PSYC 325: Abnormal Psychology 3
PSYC 326: Therapeutic Communication Skills 3
PSYC 322: Behavior Modification 3
One of the following: 3
PSYC 211 (310): Developmental Psychology
PSYC 313 (210): Child Psychology
PSYC 314 (215): Adolescent Psychology
PSYC 397: Fundamentals of Aging I
One of the following: 3
PSYC 320: Psychological Tests and Measurement
PSYC 414: Behavior Disorders of Childhood
PSYC 420: Clinical Methods of Psychology
PSYC 423: Group Psychotherapy Techniques
PSYC 421, 422: Undergraduate Practicum in Psychology
6
Total: 24

Descriptions of each of these courses may be found in the Course Dictionary of this catalog. It is important to note that some of these courses are prerequisites to others and need to be taken in the suggested sequence. Specifically, PSYC 220 is a prerequisite to PSYC 322, 325, and 423; PSYC 325 is a prerequisite to PSYC 326, 414, and 420; and both PSYC 325 and 326 must be completed before beginning the practicum (PSYC 421, 422). This practicum is ordinarily taken during the student's senior year; it offers the student an opportunity to gain work experience under supervision in a variety of human service agencies. The work placement is for approximately eight to ten hours per week with a minimum of 240 hours during the two semester.

Program Requirements

The psychology technician program is open to persons who are majoring in or have previously completed a BA or BS 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 coursework.

Completion of the Program

The psychology technician certificate is awarded upon completion of the 24 semester hours listed above with no more than two unsatisfactory grades (D) and a minimum grade of B in each semester of the practicum. The certificate is awarded after completion of and in conjunction with the baccalaureate degree unless the student has previously completed this degree with a major in one of the three specified disciplines.

Coursework for Psychology Technician Certificate Program

Descriptions of all courses applicable to this program, as indicated in the above requirements, are listed (in alphabetical order) in the Course Dictionary of this catalog.
Certificate in the Teaching of English as a Second Language
For information on this certificate program see the Department of English section of this catalog.

Certificate Program in Cartography (Undergraduate)
The certificate program in cartography provides specialized training and skills to students who need to apply methods of spatial data collection, analysis, and display in their major field of study. The program is open to students from all disciplines, but it should be particularly useful to those in the natural and social sciences who need to employ the techniques of cartographic communication and cartometric analysis. Persons who are preparing to enter or are already employed in the fields of commercial art, computer science, engineering, environmental science, geology, oceanography, photogrammetry, and surveying should find the certificate program particularly useful.

Rapid changes are occurring within the field of cartography in terms of new products (e.g., orthophotomaps, digital terrain models, and color CRT displays), new technology (e.g., automated map digitizing and plotting, satellite sensor systems, screenless lithography) and new methods (geocoding, area sampling, terrain analysis). Educators and practitioners alike from many disciplines need to keep pace with these new developments. The certificate program develops both the traditional skills of map compilation, generalization, and reproduction, as well as automated skills. This is accomplished through hands-on experience with the on-campus facilities of the cartography laboratory, and through field trips to various private mapping firms and government mapping agencies in the Washington, D.C., area. The certificate program provides training in the following specific subject areas: map interpretation, cartometric analysis, small-scale compilation, cartographic design, photogrammetric compilation, aerial photograph interpretation, planning of aerial photography; automated digitizing; automated map production using line-printer, plotter, and CRT display; manual drafting and scribing, lettering, statistical mapping, and map reproduction.

Students interested in entering the certificate program should contact Dr. Carleton W. Cox, Certificate Program Adviser, Department of Public Affairs.

Program Requirements
The certificate program in cartography consists of 24 semester hours of courses. Students receiving the certificate must either hold a baccalaureate degree or be receiving a baccalaureate degree from George Mason University at the time they receive the certificate. Only those courses in which the student earns a grade of C or better will be counted towards the certificate program.

The 24 semester hours required in the certificate program consists of the following: (No more than 12 hours may be completed at the 100 level. At least 12 semester hours must be completed at the 300-400 level.)

1. Fifteen semester hours of required courses:
   - GEOG 110: Maps and Map Reading (3)
   - GEOG 310: Cartography (3)
   - GEOG 411: Introduction to Computer Cartography (3)
   - GEOG 412: Aerial Photography Interpretation (3)
   - GEOG 413: Photogrammetry (3)
2. At least nine hours of elective courses approved by the Certificate Program Adviser. Students may select from all of the groups listed below:
   a. Geography and cartography electives:
      - GEOG 102: Physical Geography (3)
      - GEOG 103: Cultural Geography (3)
      - CART 551: Thematic Cartography (3)
      - CART 579: Remote Sensing (3)
   b. Mathematics and computer science courses:
      - CS 261: Computers and Their Uses (3)
      - CS 262: An Introduction to Computer Statistical Packages (3)
      - MATH 110, 111: Finite Mathematics (3, 3)
      - MATH 108: Introduction to Calculus with Business Applications (3)
   c. Other elective courses:
      - ART 309, 310: Graphic Design (3, 3)
      - ART 311, 312: Basic Letterpress Typography (3, 3)
      - ENGR 181: Engineering Graphics I (3)
      - GEOL 204: Geomorphology (3)

Certificate Program in Environmental Management (Undergraduate)
The certificate program in environmental management is designed primarily for students with a natural science background who want to learn more about the problems and techniques of environmental management, who may be seeking employment in the field, and who wish to add an applied or administrative component to their training. Professionals who are already employed in the field but who lack credentials or training for advancement may also find the certificate program desirable.

The certificate program provides basic knowledge of the kinds of environmental problems which exist at the local, national, and international levels. In addition to increasing the student's knowledge about the environment, the certificate program affords students the opportunity to learn how and why alternative policies or strategies for environmental management are developed and how they are administered, what methods and procedures are available to analyze and monitor environmental problems, and how different individuals and groups who are concerned about the environment can interact in a constructive and effective manner. The certificate program does not function as simply a way to continue study within one of the natural sciences. It is a comprehensive addendum to the student's degree program that will significantly complement the basic degree by providing the student with training in problem solving and managerial skills.

Students interested in entering the certificate program should contact Dr. G. Harry Stopp, Certificate Program Adviser, Department of Public Affairs.

Program Requirements
The certificate program in environmental management consists of 24 semester hours of courses. Students receiving the certificate must either hold a baccalaureate degree in one of the natural sciences, or be receiving a baccalaureate degree in one of those disciplines from George Mason University at the time they receive the certificate. Students are required to have as prerequisite for entering the certificate program a two-semester laboratory science sequence in biology, chemistry, or geology. Only those courses in which the student receives a grade of C or better will be counted towards the certificate program.

The 24 semester hours required in the certificate program consists of the following: (No more than 12 hours may be completed at the 100 level. At least 12 semester hours must be completed at the 300-400 level.)

1. Fifteen semester hours of required courses in the Management Core:
   - GEOG 303: Conservation of Resources and Environment (3)
   - GEOG 403: Problems in Environmental Management (3)
   - GOVT 241: Introduction to Public Administration (3)
   - GOVT 357: Introduction to Public Planning (3)
   - ENGL 310: Technical and Report Writing (3)
2. At least nine hours of elective courses approved by the Certificate Program Adviser. Students must elect at
least six hours from Group A and at least three hours from Group B.

A. Environmental Management Electives (at least six hours):
   - BIOL 230: Man and the Biology of the Sea (3)
   - BIOL 307: Ecology (4)
   - BIOL 449: Marine Ecology (3)
   - CHEM 106: Chemistry in a Changing World (4)
   - GEOG 102: Physical Geography (3)
   - GEOG 206: Introduction to Meteorology and Climate (3)
   - GEOL 204: Geomorphology (3)
   - GEOL 205: Introduction to Oceanography (3)
   - GEOL 301: Structural Geology (3)
   - GEOL 302: Sedimentation (3)
   - GOVT 358: Public Policy Analysis (3)
   - GOVT 401: Public Policy Making (3)
   - PHYS 201: Energy and the Environment (3)

B. Environmental Tool Electives (at least three hours):
   - CS 261: Computers and Their Uses (3)
   - CS 262: An Introduction to Computer Statistical Packages (3)
   - GEOG 411: Introduction to Computer Cartography
   - GEOG 412: Aerial Photograph Interpretation (3)
   - MATH 252: Introductory Statistics (2)
   - MATH 255: Applications of Statistics to Public Administration (1)
Course Dictionary

This dictionary is a comprehensive list of all credit courses—undergraduate and graduate—offered by the University. Courses are listed in alpha-discipline order beginning with “Accounting” and ending with “Vietnamese.” The computer name for courses is included with each heading (i.e., Accounting ACCT); except where obvious (i.e., English), the department offering the courses is also cited in the heading. The following computer names are used.

- Accounting: ACCT
- American Studies: AMST
- Anthropology: ANTH
- Art: ART
- Astronomy: ASTR
- Biology: BIOL
- Business Administration: BUAD
- Business Legal Studies: BULE
- Cartography: CART
- Chemistry: CHEM
- Classics: CLAS
- Communication: COMM
- Computer Science: CS
- Dance: DANC
- Decision Sciences: DESC
- Economics: ECON
- Education: EDUC
- Education: Administration/Supervision: EDAS
- Education: Elementary/Secondary: EDCI
- Education: Guidance/Counseling: EDGC
- Education: Reading: EDRD
- Education: Special Education: EDSE
- Engineering: ENG
- English: ENGL
- European Studies: EUST
- Finance: FNAN
- Foreign Language: FRLN
- French: FREN
- Geography: GEOG
- Geology: GEOL
- German: GER
- Government and Politics: GOVT
- Greek: GREE
- Health Education: HEAL
- History: HIST
- Information Systems: INF
- Italian: ITAL
- Japanese: JAPA
- Korean: KORE
- Latin: LATN
- Latin American Studies: LAS
- Library Science: LSCI
- Management: MGMT
- Marketing: MKTG
- Mathematics: MATH
- Medical Technology: MITCH
- Music: MUSI
- Nursing: NURS
- Operations Research: OR
- Park, Recreation, and Leisure Studies: PRLS
- Philosophy: PHIL
- Physical Education: PHED
- Physics: PHYS
- Portuguese: PORT
- Psychology: PSYC
- Public Administration: PUB
- Public Affairs: PUAF
- Real Estate and Urban Development: REUD
- Regional Cultures: LAC
- Religion: RELI
- Russian: RUSS
- Social Work: SW
- Sociology: SOCI
- Spanish: SPAN
- Statistics: STAT
- Theatre: THR
- University: UNIV
- Vietnamese: VIET

Course Numbering System

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 prerequisite to the second semester. Students may not take the second semester of a hyphenated course unless they have received either transfer credit for the equivalent 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 prerequisite to the second semester.

3. The credit in semester hours is shown in parentheses in each course description (3).

Graduate

1. Courses numbered 500 to 999 are graduate courses. Approved undergraduate courses may take graduate courses only at the 500-999 level for the completion of an undergraduate degree or for reserve graduate credit. As currently specified, upper-level undergraduate courses may be applied toward a master’s degree.

2. The Graduate School began a new course numbering system in 1980-81; with the 1981-82 academic year the new system is fully in place. Therefore, a graduate course now may carry a different number. Additional credit may not be received for a course under a different number if all requirements have been completed and a satisfactory letter grade has been earned in the course under its original number. Graduate students are required to determine prior to registration that they have not completed a subject in a prior semester under a different number. Both in the Course Dictionary and in the departmental sections of the catalog, for one year after the change the new number is accompanied by the old number in parentheses. Thus, 791 (591) means that the old course number was 591, and the new course number is 791. Students also may check with the department offering the coursework to be certain that they are not repeating a graduate course for which they already have credit.

3. General Numbers for Graduate Courses

   500-599 Graduate courses open only to graduate students (admitted to master’s or doctoral programs) and other bachelor’s degree holders, and to approved advanced undergraduate students. Advanced undergraduate students who have secured the permission of the department offering the course may select from these courses to accumulate the hours necessary for the completion of an undergraduate degree.

   600-699 Graduate courses open only to graduate students (admitted to master’s or doctoral programs) and to other bachelor’s degree holders.

   700-799 Master’s level graduate courses open only to graduate students (admitted to master’s or doctoral programs). These numbers are used only for master’s level coursework.

   800-899 Doctoral level graduate courses open only to graduate students (admitted to master’s or doctoral programs). These numbers are used primarily for doctoral level (post-master’s) coursework.

4. Special Numbers for Graduate Courses (Courses with these numbers are reserved for the uses designated.)

   600-609 Limited applicability graduate credit courses. Courses intended for non-major professional development and not directly leading to a graduate degree. From courses with these numbers a limited number of hours may be applied to a graduate degree.

   798 Master’s project research. A course under the supervision of a graduate faculty member resulting in the final professional project to be submitted in partial fulfillment of the requirements for the professional master’s degree.
Master's thesis research. A course for research under the supervision of a graduate faculty member resulting in a master's thesis to be submitted in partial fulfillment of the requirements for the master's degree.

Doctoral project research. A course under the supervision of a graduate faculty member resulting in the final professional project to be submitted in partial fulfillment of the requirement for the professional doctoral degree.

Doctoral dissertation research. A course for research under the supervision of a graduate faculty member resulting in a doctoral dissertation to be submitted in partial fulfillment of the requirements for the doctoral degree.

Supervised practicum.

Internship.

Directed reading and research courses for master's and doctoral level students.

Independent reading and research courses for master's and doctoral level students.
Accounting Courses (ACCT)  
School of Business Administration  
Effective with Fall Semester 1981, non-core, 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 of Business Administration. An effective credit may be taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

201 Financial Accounting

A conceptual approach to the study of financial accounting and reporting practices, including financial control.

202 Managerial Accounting

Prerequisite: ACCT 201. Application of accounting reports and analyses for use by management in planning and controlling enterprise operations. Topics include statement analysis, resource flow statements, budgeting cost concepts and applications, and the role of income taxes in decision making.

311 Cost Accounting

Prerequisites: ACCT 201, 202, or permission of the instructor. Cost accounting provides data for three major purposes: (1) planning and controlling routine operations; (2) nonroutine decisions, policy-making and long-range planning; and (3) inventory valuation and income determination. Cost accounting is concerned chiefly with the measurement and control of costs. It identifies many complicating factors and alternative treatments that occur in financial and managerial accounting.

312 Intermediate Accounting I

Prerequisites: ACCT 201, 202, and INFS 201, or permission of the instructor. The study of modern concepts for accounting systems, including systems design and integration with other information systems. Emphasis is placed on automated systems, including evaluation of existing systems and the design and installation of new systems.

313 Intermediate Accounting II

Prerequisite: ACCT 331. A continuation of ACCT 331.

333 Advanced Accounting

Prerequisites: ACCT 201, 202, 331 and 332, or permission of the instructor. Detailed study of advanced accounting principles and theory applied to specialized problems in partnerships, ventures, consignments, installment sales, statements of affairs, receiv- er's accounts, realization and liquidation, reports and consolidation of parent and subsidiary accounts, and fund accounting.

351 Federal Taxation

Prerequisite: ACCT 201. Discussion of history, theory, and outlines of federal tax laws and regulations. Emphasis is placed on various theories of taxation and the effect of tax law changes on the financial position, and financial statements adjusted for price-level changes.

352 Advanced Federal Taxation

Prerequisite: ACCT 351 or permission of the instructor. Practical and theoretical training in the important provisions of federal income tax, advanced problems, tax case research, and preparation of income tax returns.

363 Advanced Managerial Accounting

Prerequisite: ACCT 311 or permission of the instructor. A study of the quantitative and behavioral aspects of managerial accounting as it relates to the organization and the attainment of its goals.

461 Auditing

Prerequisites: ACCT 331, 332, and DESC 202, or permission of the instructor. Audit objectives, reports, and procedures are presented as part of the independence of the public accountant's review along with the newer tools of statistical sampling and EDP. Professional ethics and legal liabilities are examined as part of the framework within which the CPA works.

462 Introduction to Governmental Accounting

Prerequisites: ACCT 201 and 202. Advanced study of accounting for governmental, not-for-profit, and other institutions, including fund accounting and budgetary control.

491 Accounting Seminar

Prerequisites: Senior standing and completion of ACCT 331 and 332. Advanced study of selected topics in accounting, including accounting systems, advanced accounting theory and practice, and topics selected from current accounting literature.

492 Corporate Accounting

Prerequisite: ACCT 491. May not be taken for credit toward an undergraduate degree in business administration. A rigorous study of accounting concepts and techniques with emphasis on corporate financial accounting and analysis including an introduction to advanced cost and financial accounting techniques. Three lecture hours, three laboratory hours.

American Studies (AMST)

201, 202 Studies in Popular Culture (3, 3) Aspects of popular culture and its significance in contemporary society. Topics may include the social and intellectual background of American culture; themes and techniques of film and television; the conventions of such media as television, film, comics, advertising, and westerns. The specific content of the courses varies from semester to semester. These courses may be repeated for credit with the permission of the Chairperson. American Studies Faculty. Students who elect to major in American studies may apply up to six hours of AMST 201, 202 in satisfying the requirements.

302 Introduction to American Studies

Prerequisite: Junior or senior standing. Seminars are limited to 15 students with permission given to American studies majors. Intensive study of a significant theme, motif, or idea in American culture. Subject is determined by the instructor conducting the seminar and may be obtained in advance.

401 Themes in American Civilization

Prerequisite: Junior or senior standing. Seminars are limited to 15 students with permission given to American studies majors. Application of American studies methods to materials drawn from two or more of the participating disciplines, or not examined in traditional disciplines. Subject is determined by the instructor conducting the seminar and may be obtained in advance.

403 American Studies Independent Study

Prerequisite: Junior or senior standing and permission of the College of Continuing Education. Intensive study of a period in the American past, integrating history, literature, music, art, architecture, philosophy, social sciences, technology, and popular and minority cultures of the period. Subject is determined by the instructor conducting the seminar and may be obtained in advance.

406 Peoples of the Pacific

Prerequisite: AMST 201 or permission of the instructor. A study of selected aspects of the contemporary cultures of the Island Asia culture region, with a focus on the native cultures of Indonesia, Borneo, and the Philippines. Fall semester.

207 Ethnology of the Middle East

Prerequisite: AMST 114 or permission of the instructor. An examination of selected aspects of contemporary cultures in the Middle East, emphasizing the effects of the oil boom on the organization and structure of societies in the interplay of ecological and historical factors. For non-Western credit.

208 Ethnology of Sub-Saharan Africa

Prerequisite: AMST 114 or permission of the instructor. An examination of selected aspects of contemporary cultures in Sub-Saharan Africa, with a focus on linguistic, ethnic and ecological diversity. Several traditional societies are studied as their cultural evolution and their emergent roles in modern African nation-states. For non-Western credit.

210 Peoples and Cultures of Selected Regions

Prerequisite: AMST 114 or permission of the instructor. An examination of selected aspects of contemporary cultures of a specific region, e.g., India, South Africa, Latin America.

220 Field School in Archaeology (3-5)

Prerequisite: AMST 120 or permission of the instructor. An intensive four-six week summer term on-site introduction to archaeological field methods, including field survey and excavation, and to the laboratory preparation, processing, and analysis of recovered artifacts. Lectures on method and theory in archaeology, on local culture history, and on specific research methods. Field team goes to a country of the instructor's choice and is accompanied by the field and laboratory work. The entire time is spent at one site, whose location may change each year. Credit hours are variable, depending on the site and the student's contributions.

299 Independent Study (1-3)

Prerequisite: AMST 114 or permission of the instructor. Individual study in anthropology on topic to be arranged in advance by a student and the Chairperson.

300 Civilizations

Prerequisite: Junior standing, including AMST 114, or permission of the instructor. A cross-cultural and trans-temporal examination of complex societies and civilizations, etc. Each case studies the course explores developmental schema for the rise, articulation, spread, and decline of historic and contemporary civilizations.

301 Social Organization and Kinship

Prerequisite: Junior standing, including AMST 114, or permission of the instructor. An examination of social organization, kinship, descent and kinship terminologies, in mainly non-Western cultures, emphasizing both the
meaning of specific cultural systems and cross-cultural similarities and differences.

312 Comparative Tribal Systems (3) Prerequisite: Junior standing, including ANTH 114, or permission of the instructor. An examination of the cultural and ecological contexts of political structures and the competition for power in selected societies. The course pursues a cross-cultural perspective to the study of political conflict, leadership, values, and symbolism.

313 Anthropological Perspectives on Religion (3) Prerequisite: Junior standing, including ANTH 114, or permission of the instructor. An examination of religion as a cultural system. Special topics include mythology, ritual, symbolism, and dogma. Cross cultural and prehistoric non Western material are emphasized. For non-Western credit.

315 Socialization Processes (3) Prerequisite: Junior standing, including ANTH 114, or permission of the instructor. An examination of selected aspects of the cultural transmission process in specific local cultures, selected from various world culture regions, e.g., Oceanic, sub-Saharan Africa, India.

322 Cultures in Comparative Perspective (3) Prerequisite: ANTH 114 or permission of the instructor. An historical and comparative examination of various theoretical orientations in cultural anthropology and an analysis of contrasting approaches to cultural data. Several cultures are studied in depth. For non-Western credit and toward the sociological major.

370 Ecological Anthropology (3) Prerequisite: Junior standing, including ANTH 114, or permission of the instructor. A broad examination of the relationship between the environment and culture and human behavior with a special emphasis on cultural ecological explanations in many parts of the world. Major topics include cross-culturally personal identity, mental illness, projective systems, cognition, and learning.

375 Ethnohistory (3) Prerequisite: Junior standing, including ANTH 114, or permission of the instructor. The use of ethnographic, archaeological, linguistic, and documentary data, in the light of anthropological theory, to interpret the past and processes of change among indigenous peoples throughout the world.

399 Issues in Anthropology (3) Prerequisite: Junior standing or permission of the instructor. This course provides an opportunity to explore topics of contemporary interest in anthropology. Topics change from one semester to the next and may in the future focus on sex roles, anthropology and ethics, primate social organization, and hunter-gatherer adaptations. Can be taken more than once for credit.

450 Qualitative Methods in Sociocultural Research (3) Prerequisite: Junior standing and six hours of anthropology or permission of the instructor. An exploration of some of the most useful of non-quantitative research techniques used in the social sciences. The course includes practice in the application of these techniques.

490 Classics in Anthropology (3) Prerequisite: Nine hours of anthropology including ANTH 332 and junior standing or permission of the instructor. An in-depth examination of the major theorists and their current work in anthropological theory and explanation. The course explores the merits of works which have become recognized as classics, assessing their impact on the field. Required for graduate students.

499 Independent Research (1-3) Prerequisite: Junior standing or nine hours of anthropology or permission of the instructor. Individual research in anthropology on a topic to be arranged in advance by a student and instructor.

610 Qualitative Research Methods (3) Prerequisite: Graduate standing or permission of the instructor. An examination of research involving observational techniques and procedures used in description and analysis of the patterns, configurations, ethos, eidos, structures, functions, and styles typical of whole societies and cultures, with an emphasis on unobtrusive methods, participant observation, long-term residence, choices of observer status-role, recording data, uses of technical equipment (e.g., tape recorders, video tape recorders), key informants, interviewing techniques, and ethical considerations in employing such methods and procedures.

616 Society, Culture, and Personal Character (3) Prerequisite: Junior standing or permission of the sociology or permission of the instructor. A trans-cultural (comparative) examination of the interrelations between social and cultural factors and individual personal character, with a focus upon the life history of individuals in particular social and cultural settings. Readings and discussions center upon theoretical, methodological approaches, and current research in study of social/cultural phenomena.

800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Education students admitted to study in anthropology. A program of studies designed by the graduate student’s academic director and approved by the student’s doctoral committee, which brings the student to participate in the current research of the discipline director and results in a paper acceptable to the department. The paper is presented in a subsequent DA Education seminar. Enrollments in this course are repeated according to each student’s program.

Art Courses (ART)

Art Appreciation (3) For non-art majors only. A general introduction to the principles of aesthetics in art through a study of painting, sculpture, and architecture; chronological, prehistoric to the present, or ideas approach variant.

103, 104 Introductory Drawing (3, 3) Foundation course in representational drawing and expressive pictorial design. Emphasis upon the figure and basic principles of one- and two-point perspective. Six hours per week.

105 Fundamentals of Design (3) Conceptual approach to art-making through two and three dimensional work and development of basic design elements gained through problems which employ a variety of media. Six hours per week.

106 Fundamentals of Design (3) Conceptual approach to art-making through two and three dimensions. Knowledge of basic art elements gained through problems which employ a variety of media. Six hours per week.

107, 108 Introductory Ceramics (3, 3) A beginning course that introduces the student to the potential of ceramics as a creative medium. Basic manipulation, throwing, glaze technology, and kiln operation are explored. Six hours per week.

111 Art and Architecture of Ancient Cities (3) A survey of the arts produced by the civilizations of Egypt, the Near East, and the Mediterranean world, and its influence on the development of modern art in the western tradition. Six hours per week.

112 History of Urban Design in Early Modern Europe (3) Prerequisite: None. The development of city planning from the Middle Ages to the ideal cities of the Renaissance; the effects of the baroque city and the new industrial city in the eighteenth century. Consideration is given to the placement of buildings and public monuments in the urban design.

113 French Symbolism and Stories in Western Art (3) A study of Classical and Christian themes and imagery in western art from early Greece to the modern era.

114 History of African Art (3) Highlights the variety of African art and art-making in different cultures in Africa producing artistic artifacts. Concentrates on the central and western sub-Saharan regions and proceeds geographically.

115 American Architecture (3) A study of the rise of American architecture from colonial times to the present, with special emphasis on the buildings in the Washington-Maryland area.

120, 121 Visual Thinking (3, 3) A studio primer which includes an introduction to drawing, sequential design, printmaking, and filmmaking imagery. Satisfies non-major Humanities requirement. Six hours per week.

201, 202 Introductory Painting (3, 3) A basic course in the fundamentals of painting. Structural and conceptual approach in various mediums, including oil, acrylic, and tempera. Six hours per week.

203, 204 Intermediate Drawing (3, 3) Prerequisite: ART 103 and 104 or permission of the instructor. An intermediate course in drawing. Emphasis on advanced exploration of technical approaches. Original compositions from the figure and nature supplemented by problems of personal and expressive drawing. Six hours per week.

205, 206 Printmaking—Relief and Intaglio (3, 3) The first semester (205) covers relief methods of printmaking: colorgraphs, wood and linoleum block, wood engraving, lithography, and silkscreen. The second semester (206) covers metal intaglio, engraving, etching; aquatint, soft and lift ground. Six hours per week.

207, 208 Color (3, 3) (Same as THR 207, 208) The first semester (207) covers the color wheel as pigment and color theory and its application, using aqueous paints and color paper. The second semester (208) covers theories of color in light and their application using a variety of light sources and color mixing media. Six hours per week.

211, 212 Intermediate Design (3, 3) Prerequisites: ART 103 or 104, 105, 106, or equivalent, or permission of the instructor. A continuation of projects in the structural tradition. Further explorations into materials and processes which affect art-making. Six hours per week.

215 Introductory Sculpture (3, 3) A basic course in the fundamentals of realizing volumes, masses, and planes based on the use of clay and molding plaster. Techniques of subtraction, addition, and basic manipulation processes are explored. Six hours per week.

220 Survey of Far Eastern Art (3) Prerequisite: None. A study of the art of India, China, Japan, Southeast Asia, Korea, and Indonesia from the Bronze Age through the eighteenth and nineteenth centuries. Six hours per week.

221 Survey of Western Art (3) A survey of Western art as expressed through architecture, sculpture, and painting. The first semester covers prehistoric to Renaissance; the second semester covers Renaissance to the present.

227 History of Design (3) Prerequisite: A 100-level or above course in an art history or studio art or permission of the instructor. A survey of the role of design in the arts from antiquity to the present.

301, 302 Intermediate Painting (3, 3) Prerequisite: ART 201, 202, or permission of the instructor. A continuing study of painting in the structural or formal tradition. Individual approaches to subjects, objects, and painting situations are encouraged. Choice of media. Six hours per week.

303, 304 Advanced Drawing Studio (3, 3) Prerequisites: ART 103, 104, 203, 204, or permission of the instructor. Students in advanced drawing are encouraged to develop an independent approach to studio work. Projects are developed individually according to student directions and needs. Six hours per week.

305, 306 Intermediate Printmaking (3, 3) Prerequisites: ART 103, 104, 203, 204, or equivalent, or permission of the instructor. This course is an extension of the basic printmaking course now implemented. Whereas the basic course focuses on the isolated processes of printmaking (relief and intaglio), this course extends these processes by creating relationships between the individual techniques and by stressing individual and unique solutions to the medium.

309, 310 Graphic Design (3, 3) Prerequisites: ART 103, 104, 105, 106 or equivalent, or permission of the instructor. This course introduces and develops the concepts of commercial graphic design and its applications. The course stresses individual solutions to typical problems confronted by the graphic artist; newspaper layout, advertising, layout, book design. The course is taught as a series of studio problems.

311, 312 Basic Letterpress Typography (3, 3) Prerequisites: ART 103, 104, 105, 106, 107 or 208 or equivalent, or permission of the instructor. This course introduces students to the letterpress and it’s graphic applications. The course stresses individual solutions to typical problems confronted by the graphic artist; newspaper layout, advertising, layout, book design. The course is taught as a series of studio problems.

315, 316 Intermediate Sculpture (3, 3) Prerequisite: ART 215, 216, or permission of the instructor. Continued exploration of sculptural problems with University Catalog 1981-1982
George Mason University
http://catalog.gmu.edu
emphasis on employing different techniques and materials to reach formal solutions. The student is shown the potentiality of a number of methods—e.g., welding, wood construction—and their specific qualities and range of possibilities. Six hours per week.


321 Greek Art (3) Prerequisite: Sophomore standing. A study of the history of ancient Greek architecture, sculpture, and painting.

322 Roman Art (3) Prerequisite: Sophomore standing. A study of the history of Roman architecture, sculpture, and painting.

323 Ancient Painting (3) Prerequisite: Sophomore standing or a 100 or 200-level art history course. A study in depth of ancient wall painting, its functions and uses, in the Mediterranean area.

330 History of American Art (3) Prerequisite: Sophomore standing. A history of the architecture, painting, and sculpture produced in the United States from the Colonial period until the present day, emphasizing the historical nature of the objects studied and their relation to European prototypes.

331 History of Nineteenth-Century Art (3) Prerequisite: Sophomore standing. A study of western painting, sculpture, and architecture from the Neoclassical period to 1900.

332 History of Twentieth-Century Art (3) Prerequisite: Sophomore standing. A study of western painting, sculpture, and architecture from 1900 to the present.

333 History of Photography (3) Prerequisite: ART 101, 222, 223. The course traces the development of photography from its origins in France in the nineteenth century to the present.

335 (225) History of Modern Architecture (3) Prerequisite: Sophomore standing. A study of modern architecture in its historical context.

340 Color Slide Photography (3) Prerequisite: Permission of the instructor. A study of 35mm photography in terms of camera manipulation, basic optics and sensitometry, 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 (one roll of 20 exposures per assignment)

341, 342 (213, 214) Black and White Photography I, II (3, 3) Prerequisite: ART 340. Photography taught as both technical craft and a way of seeing. Course includes a wide range of assignments as well as ideas relating to photographic image.

350 (325) Medieval Art (3) Prerequisite: Sophomore standing. Architecture, sculpture, and painting from early Christianity through the Gothic in the Byzantine Empire and Western Europe.

353 (326) Early Renaissance Art in Italy (3) Prerequisite: Sophomore standing. Architecture, sculpture, and painting in Italy from ca. 1300 to 1500.

354 Northern Renaissance Art (3) Prerequisite: Sophomore standing. Architecture, painting, and sculpture in France, Germany, and the Netherlands from ca. 1300 to 1600.

355 (327) High Renaissance Art in Italy, France, and Spain (3) Prerequisite: Sophomore standing. The development of the High Renaissance style in architecture, painting, and sculpture in Italy and its transformation through Mannerism.

356 (328) Baroque Art in Italy, France, and Spain (3) Prerequisite: Sophomore standing. Architecture, sculpture, and painting in Southern Europe from ca. 1600 to 1750.

357 Northern Baroque Art (3) Prerequisite: Sophomore standing. Architecture, painting, and sculpture in Belgium, England, Germany, and the Netherlands from ca. 1650 to 1750.

373 Art for the Elementary School (4) Prerequisite: None. For non-art majors only. Problems of teaching art for the non-specialist classroom teacher in terms of the children's art, the role of art in the school curriculum, and personal understanding of art. Students who have taken LAC 273 or LAC 373 cannot take this course.

399 Special Topics in the History of Art (3) A study of art history by topics, such as women in art, art patronage, art criticism. The topics change each time the course is offered.

401, 402 Advanced Painting (3, 3) Prerequisite: ART 201, 202, 301, 302, or permission of the instructor. Geared toward developing sophisticated visual perception and technical control. Contemporary ideas are investigated and presented in a historical context. Studio experiences are supplemented with slide lectures and field trips to District resources.

403 Methods of Research in Art History (3) Prerequisite: Two courses in art history at the 300 level or permission of the instructor. Investigation of the different approaches to art history research. ART 411, 412 Advanced Design (3, 3) Prerequisite: ART 105, 106, 211, 212. Continuation of intermediate design ideas and specialization into three-dimensional or twodimensional design theories and practices. Six hours per week.

415, 416 Advanced Sculpture (3, 3) Prerequisite: ART 215, 216, 315, 316 or equivalent, or permission of the instructor. A sculpture course designed to extend and broaden concepts and techniques gained from the intermediate level courses. Six hours per week.

455 Advanced Studies in Renaissance and Baroque Art (3) Prerequisite: Sophomore standing. A study of the development of the Baroque style in France, Germany, and the Netherlands from the early Baroque of Michelangelo and Rembrandt to the late Baroque of Boucher and Watteau. The course involves the development of a work in book form from conception to execution. Materials to be selected and evaluated are introduced as well as basic typographic techniques. Six hours per week.

481, 482 Bookmaking (3, 3) Prerequisite: ART 205, 206, or permission of the instructor. The course follows the development of a work in book form from conception to execution. Materials to be selected and evaluated are introduced as well as basic typographic techniques. Six hours per week.

491, 492 Advanced Studio Problems (2-4, 2-4) Prerequisite: Junior or senior standing in art, permission of the instructor and art faculty and of the department chairperson. Study proposal submitted prior to registration. This course provides the opportunity for the individual student to develop advanced skills and concepts in drawing, painting, sculpture, and other media.

493, 494 Independent Study in Art History (3, 3) Prerequisite: Junior or senior standing in art, permission of the instructor and art faculty and of the department chairperson, plus nine hours in art history beyond ART 221, 222. Intensive study of a particular aspect of Renaissance or Baroque Art. Topics may be mono­ graphical or thematic, such as a study of art theory or narrative art of a particular time; concentrated on the arts of a particular area of the world beyond Europe.

495, 496 Independent Study in Art History (3, 3) Prerequisite: Senior standing in art, permission of the instructor and department chairperson. Study proposal submitted prior to registration.

497 Greek Sculpture (3) Prerequisite: ART 321 or 322. An intensive study of Greek sculpture from early Greek art to post-Parthenon, with emphasis on freestanding and architectural sculpture in Ancient Greece, taking into consideration works in bronze, stone, and terracotta.

498 Twentieth-Century American Painting (3) Prerequisite: ART 330. The course involves the development and interrelationships in twentieth-century American painting including stylistic, sociological, and symbolic developments from the turn of the century to the present.

501, 502 Graduate Drawing and Painting (3, 3) Prerequisites: Undergraduate degree in art or education with 3 units of BAFA or equivalent. Independent drawing and painting workshop with emphasis on individual development.

506, 506 Graduate Printmaking Studio (3, 3) Prerequisites: Undergraduate degree in art (BA or BFA) or permission of the instructor. Independent printmaking workshop with emphasis on individual projects and development.

600 Study for the Doctor of Arts in Education (variable credit) Open only to DA Ed students admitted to study in art. A program of studies designed by the student's discipline director and approved by the student's doctoral committee. Course work is individualized. The student designs the activity of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student's program.

### Astronomy Courses (ASTR) Physics

#### 103 Astronomy (3)
A descriptive introduction to the principles and topics of modern astronomy. The origin of life, the earth, the planets and the sun, the stars, galaxies, quasars, and the nature of space radiation are discussed. The contemporary ideas of cosmology and the origin of the universe, including the pertinent ideas of the general theory of relativity, are also considered. This course is not intended for physics majors.

#### 105, 106 Introduction to Modern Astronomy (4, 4)
A laboratory course in astronomy for non-science majors. Topics include astronomical instruments, coordinates and time, celestial mechanics, astrophotography, planets, satellites, comets and meteoroids, the sun, magnitudes and distances of the stars, blackbody radiation, colors and temperatures of stars, spectral classification and the H-R diagram, double stars, variable stars, novae and supernovae, gaseous nebulae and dense clouds, the Milky Way galaxy, galaxies and clusters of galaxies, General Relativity, black holes, quasars, cosmology, and the universe. This course can be used to fulfill the eight-hour laboratory science requirement and is not intended for physics majors. Three lecture hours, two laboratory hours.

#### 328 Introduction to Astrophysics (3)

#### 428 Relativity and Cosmology (3)
Prerequisites: PHYS 303, 305 or permission of the instructor. Special relativity, four dimensional space-time, general relativity, non-euclidean geometries, geodesic and field equations, tests of general theory of relativity, black holes, cosmology, models of the universe, 3K blackbody radiation, big bang cosmology, thermodynamics and the universe. Three hours lecture.

#### 505 Fundamentals of Astronomy (3)
Prerequisite: Graduate standing or permission of the instructor. This course places particular emphasis on the connection of astronomy to other disciplines as well as the recent developments in the research areas, its origins and past history and the origin of the life. Ancient, Renaissance, and modern astronomers. Basic physics. Tools of the astronomer. The solar system, the sun, stars, our galaxy, clusters of galaxies, the universe. The origin, past, and future of the universe. Extraterrestrial life. Recommended for teachers of general science. Three hours per week.

### Biology Courses (BIOL)

#### 103 Man and His Environment (4)
Biology for non-science majors. Emphasizes biological problems facing modern man. Topics include theories of the origin of earth, life, the planets and the sun, the stars, galaxies, quasars, and the nature of space radiation are discussed. The contemporary ideas of cosmology and the origin of the universe, including the pertinent ideas of the general theory of relativity, are also considered. This course is not intended for physics majors.

#### 104 Man and His Environment (4)
Prerequisite: BIOL 103. The sequential seminar to BIOL 103. Three lecture hours, three laboratory hours. This course may only be combined with BIOL 113 for the fulfillment of the eight-hour laboratory science requirement. Students who have taken BIOL 113, 114: Biological Science are not eligible to take this course. BIOL 104 may not be repeated.

### ANTH-BIOL

135
113 Biological Science (4) An introductory course for prospective science majors and preprofessionals in the life sciences. The study of living organisms—their structure, function, development, heredity, interrelations, evolution, and diversity—and of ecological principles. Three lecture hours, three laboratory hours. Students who have previously passed BIOL 103 or 104, and 105, should consult the undergraduate coordinator of the Department of Biology before enrolling. Fall, Spring, Summer Term A.

114 Biological Science (4) Prerequisite: BIOL 113. The sequential seniors are BIOL 113. Three lecture hours, three laboratory hours. Fall, Spring, Summer Term D.

124-125 Human Anatomy and Physiology (4-4) An introduction to the structure and function of the major organ systems of the human body and their integrated function. Three lecture hours, three laboratory hours. Designed for nursing majors. Open to dance and physical education majors. A prerequisite course must be taken in the sequence 124-125. This course will not satisfy the natural science requirement in the College of Arts and Sciences. Not available for biology major credit.

151 An Introduction to Biology (4) An introduction to basic biological concepts and use of these concepts in understanding human life and the biosphere. The laboratory emphasizes observation, experimental procedures with ready-made, and framed familiarity with local plants and animals. Open only to elementary education majors. Three lecture hours, three laboratory hours. Fall, Spring.

185 Introduction to Biology (4) Prerequisites: Human anatomy and physiology or eight credits of biological science or permission of the instructor. The study of the functions and structure of the major organ systems of the human body, their interrelations, and evolution. Emphasis is placed upon human hereditary diseases, genetic counseling, and development of genetic technology to improving the quality of life. Three lecture hours, three laboratory hours. Summer Term C.

311 General Genetics (4) Prerequisites: Cell Biology and junior standing or permission of the instructor. A study of the basic principles of heredity and the major vertebrate groups. Three lecture hours, three laboratory hours. Fall, Spring, Summer Term C.

312 Biostatistics (4) Prerequisite: Eight credits of biological science or permission of the instructor. Application and analysis of biological data using experimental designs, descriptive statistics, parameter and non-parametric inferential statistics, and correlation-regression techniques. Three lecture hours, one laboratory hour.

320 Comparative Chordate Anatomy (4) Prerequisite: Eight credits of biological science or permission of the instructor. A comparison of the anatomy and morphology of the major chordate groups. The laboratory involves observation of the vertebrates, invertebrates, and some fungi. Three lecture hours, three laboratory hours. Spring.

321 Comparative Vertebrate Anatomy (4) Prerequisite: Eight credits of biological science or permission of the instructor. A study of the vertebrate classes, orders, and families with emphasis on the relationship of man to other vertebrates. Three lecture hours, three laboratory hours. Fall.

322 Patterns of Animal Development (4) Prerequisites: Eight credits of biological science and junior standing or permission of the instructor. A study of the concepts of vertebrate organization, reproduction, embryogenesis, and organ system development. Provides background for further study of animal structure and function. Three lecture hours, three laboratory hours. Spring.

324 Introductory Animal Behavior (4) Prerequisite: Eight credits of biological science or permission of the instructor. A comparison of the anatomy and morphology of the major chordate groups. The laboratory involves observation of the vertebrates, invertebrates, and some fungi. Emphasizes function, development, and evolution of behavior. Field investigations and laboratory projects are conducted. Three lecture hours, three laboratory hours. Fall.

326 Animal Physiology (4) Prerequisites: Eight credits of biological science and CHEM 211-212. A general consideration of animal function, both invertebrate and vertebrate. Emphasis is placed on the common life problems that animals face and the variety of methods for solving them. Three lecture hours, three laboratory hours. Fall, Spring.

335 Comparative Zoology (4) Prerequisite: Eight semester hours of credit in 100-level biology or permission of the instructor. Survey of the invertebrate phyla, excluding insects, to show the morphology, phylogeny, and ecological adaptations of groups. Three lecture hours, three laboratory hours. Fall.

336 Insect Biology (4) Prerequisite: Eight semester hours of credit in 100-level biology or permission of the instructor. A study of the insects, their classification, structure, and function. Three lecture hours, three laboratory hours. Summer Term A.

337 Comparative Embryology (4) Prerequisite: Eight semester hours of credit in 100-level biology or permission of the instructor. A study of the developmental biology of the major vertebrate groups. Some topics are included in the study of the invertebrates. Three lecture hours, three laboratory hours. Spring.

341 Phyiology (4) Prerequisites: Cell biology or permission of the instructor. An introduction to the biology of algae. Topics covered include photosynthesis, metabolism, and related phenomena. Three lecture hours, three laboratory hours. Fall.

342 Plant Morphology (4) Prerequisite: Eight credits of biological science or permission of the instructor. A study of the development and organs, tissue systems, and life cycles of plants, with phylogenetic comparisons between plants, animals, and fungi and continued with vascular plants. Three lecture hours, three laboratory hours. Spring.

343 Mycology (4) Prerequisites: Cell biology or permission of the instructor. An introduction to the biology of the fungi, including a consideration of morphology, taxonomy, growth and development, ecology, and economy. Three lecture hours, three laboratory hours. Fall of even-numbered years.

344 Taxonomy of Flowering Plants (4) Prerequisite: Eight semester hours of credit in 100-level biology or permission of the instructor. A study of the classification and identification of flowering plants (Angiosperms) with emphasis on the local flora. Three lecture hours, one laboratory hour. Spring.

345 Plant Communities (4) Prerequisite: Eight semester hours of credit in 100-level biology or permission of the instructor. A study of plant associations and formations and their successions in North America. Three Saturday field trips are included. Three lecture hours, one laboratory hour. Fall.

361 Microbiology (4) Prerequisite: Cell biology or permission of the instructor. An introduction to the biology of microorganisms with an emphasis on bacteria and viruses. Topics include classification, metabolism, genetics, immunology, host-parasite relationships, and ecology. Three lecture hours, three laboratory hours. Fall, Spring.

372 Animal Distributions (3) Prerequisites: Eight semester hours of credit in 100-level biology or permission of the instructor. A study of the life history of mammals, including regulation of the internal environment and systems, and of the effects of temperature, reproduction. Three lecture hours, three laboratory hours. Spring.

400 Field Biology (4) Prerequisite: BIOL 113, 114 and junior or senior standing, or permission of the instructor. Field studies in biology emphasizing ecology and behavior. Topics vary, but include the design of field manipulations, data collection and analysis, and an introduction to the organisms of the chosen study site. Field studies are implemented during a required field trip to the chosen study site. Students bear the cost of the field trip(s). Two lecture hours, six laboratory hours.

411 Heredity and Society (3) Prerequisites: BIOL 103, 104, and junior or senior standing, or permission of the instructor. A study of plant anatomy or permission of the instructor. Three lecture hours, one laboratory hour.

425 Mammalian Physiology (4) Prerequisites: Animal physiology and cell biology. A study of the functions of mammals, including regulation of the internal environment and systems, and of the effects of temperature, reproduction. Small mammals and humans are subjects for observations of these activities in the laboratory. Three lecture hours, three laboratory hours. Spring.

440 Field Biology (4) Prerequisite: BIOL 113, 114 and junior or senior standing, or permission of the instructor. Field studies in biology emphasizing ecology and behavior. Topics vary, but include the design of field manipulations, data collection and analysis, and an introduction to the organisms of the chosen study site. Field studies are implemented during a required field trip to the chosen study site. Students bear the cost of the field trip(s). Two lecture hours, six laboratory hours.

441 Plant Anatomy (4) Prerequisites: Eight credits of biological science and junior standing, or permission of the instructor. A study of plant cells and tissues, their derivation and development. Embryological development is included. Emphasis is on the angiosperms. Three lecture hours, three laboratory hours. Fall.

442 Development in Flowering Plants (3) Prerequisites: Plant anatomy or permission of the instructor. The role of cyto-differentiation in developmental sequences of flowering plants. Topics covered include germination, flowering, senescence, fruiting, and tuber and bulb formation. The environmental and hormonal influences on these processes is also discussed. Three lecture hours. Spring of odd-numbered years.

446 Environmental Physiology (3) Prerequisite: Animal physiology or permission of the instructor. The physiological responses of animals to environmental factors. Topics examined include physiological rhythms; changes in physiology during acclimation or adaptation to new environments; and the effects of temperature, moisture, pH, light, and other environmental factors on the physiology of animals. Emphasis on vertebrates. Three lecture hours.

449 Marine Ecology (3) Prerequisite: Ecology or permission of the instructor. The plants and animals of marine environments and the physical and chemical conditions that affect their existence. Three lecture hours. Spring of even-numbered years.

451 Virology (3) Prerequisites: Cell biology and genetics or permission of the instructor. Fundamental concepts of the nature of viruses, virus classification, cultivation, and biochemistry. Replication of
533 (555) Selected Topics in Plant Biology (3) Prerequisites:8 semester hours of credit in Introductory Biology, one upper-division course in botany, and permission of the instructor. A problem in contemporary botany and biochemistry or molecular biology of the plant kingdom. Three lecture hours, three laboratory hours.

534 Speciation and Field Studies in Flowering Plants (3) Prerequisites: A course in taxonomy or permission of the instructor. A study of speciation in flowering plants and the evolutionary significance of their economic and cultural importance. Topics include: principles of evolution, systematics, plant ecology, and animal behavior. Three lecture hours, two laboratory hours, three-eight hours.

464 Plant Physiology (4) Prerequisite: Cell biology or permission of the instructor. A study of the physiology of plant cells and their functions in the plant kingdom. Topics include: cell structure, cell division, plant development and its regulation, and tropic responses to environmental stimuli. Three lecture hours, three laboratory hours. Spring of even-numbered years.

465 Histology (4) Prerequisite: Eight credits in biological science and junior standing, or permission of the instructor. A study of the microscopic structure of the tissues and organs of animals with emphasis on the vertebrates. Three lecture hours, three laboratory hours. Fall.

471 Evolution (3) Prerequisite: General genetics or permission of the instructor. A study of the process of evolution and the role of natural selection in the evolution of patterns in the properties of populations, and population differentiation. Three lecture hours. Spring.

495, 496 Special Readings in Biology (1-2) Prerequisite: Permission of the instructor. Topics in biology; two credits for the former, six credits for the latter. Three credits in the study of a specific area of biology. Fall, Spring.

497, 498 Special Problems in Biology (1-4) Prerequisite: Enrollment is restricted to senior majors in biology with permission of the instructor and the department. Topics in advanced areas of biology. Three lecture hours, six laboratory hours. Spring of odd-numbered years.

513 (531) Food, Energy, and Insects (3) Prerequisite: A second-year course in biology or permission of the instructor. The history and future of man's competition with insects in the fields of agriculture and medicine. Three lecture hours.

514 (527) Human Evolution and Ecology (3) A materialistic study of the evolution of man and his prehistoric, historic, and contemporary relationship with the natural environment. Three lecture hours.

519 (521) Origin of the Cultivated Plants and Their Impact on Man and Society (3) Prerequisite: One upper-division botany course, BIOL 311 or equivalent, or permission of the instructor. The geographic origins and cultural spread of the world's major crops and the impact of their cultivation. Three lecture hours. Fall.

520 (544) Systematics in Complex Angiosperm Families (3) Prerequisites: BIOL 344 or 534 or permission of the instructor. A study of the morphology and classification of the more complex families, such as Poaceae, Cyperaceae, and Asteraceae. The laboratory emphasizes identification of specimens and acquaintance with taxonomic literature. One lecture hour, six laboratory hours. Spring.

529 (484) Vertebrate Paleontology (4) Prerequisite: A course in vertebrate zoology or comparative anatomy or invertebrate paleontology, or permission of the instructor. A study of the evolution of the vertebrates. Emphasis is placed on major adaptive radiations. Two lecture hours, six laboratory hours. Fall of even-numbered years.

530 Selected Topics in Vertebrate Zoology (3) Prerequisites: Courses in Vertebrate Zoology or Comparative Anatomy and Ecology, or permission of the instructor. A review and discussion of a specific area of vertebrate zoology. The topics will depend on the interest of the instructor and the availability of appropriate course material. One lecture hour, one laboratory hour. Fall of odd-numbered years.

531 (526) Paleocology (4) Prerequisite: Two of the following or their equivalents: BIOL 307, 320, 342, 471, 529, or GEO 201, or permission of the instructor. A study of the origin and evolution of life on earth, with emphasis on the interactions among microorganisms, plants, and animals. Three lecture hours, four laboratory hours. Spring.

532 (533) Animal Behavior (3) Prerequisite: BIOL 324 or permission of the instructor. A study of the ecological aspects of animal behavior. Three lecture hours.

534 Environmental Behavior (3) Prerequisite: BIOL 324 or permission of the instructor. A study of the ecological aspects of animal behavior. Three lecture hours.

535 (444) Paleobotany (4) Prerequisites: Plant morphology or anatomy or vertebrate or invertebrate paleontology. A study of the evolution of fossil plants through the ages. The emphasis is on the groups of plants, their history, and their extinction considered, including the selective factors responsible for these events. The laboratory focuses on plant structure and the techniques necessary to interpret it. Three Tuesday field trips are included. Three lecture hours, three laboratory hours. Fall of even-numbered years.

536 (480) Ichthyology (4) Prerequisites: Eight credits in biological science or permission of the instructor. An introduction to the study of fishes, their systematics, evolution, ecology, and behavior. Three lecture hours, three laboratory hours. Fall.

537 (483) Mammalogy (4) Prerequisite: Eight credits in biological science or permission of the instructor. A study of the evolution, systematics, phylogeny, ecology, and ethology of mammals. Emphasis is placed on field studies. Three lecture hours, six laboratory hours. Spring.

538 (482) Comparative Animal Physiology (4) Prerequisites: BIOL 301, Cell Biology; CHEM 313-314. Organic chemistry as an instructor for the course. An introduction to the techniques involved in electron microscopy and to the interpretation of electron micrographs of both plants and animals. Two lecture hours, six laboratory hours. Fall of odd-numbered years.

539 (487) Paleobotany (4) Prerequisite: Eight credits in biological science or permission of the instructor. A study of the evolution, systematics, phylogeny, ecology, and ethology of amphibians and reptiles. Emphasis is placed on field studies. Two lecture hours, six laboratory hours. Spring of even-numbered years.

560 Biological Ultrastructure (4) Prerequisites: BIOL 301, Cell Biology; CHEM 313-314. Organic chemistry as a prerequisite. A study of the ultrastructure of organisms with emphasis on the origin and evolution of the living organisms. Three lecture hours, two laboratory hours. Fall.

561 Comparative Animal Physiology (3) Prerequisite: A course in animal physiology and two semesters of biochemistry or permission of the instructor. A presentation of the major invertebrate and vertebrate systems. Emphasis is placed on the interactions among the major systems and the regulation of the body's functions. Three lecture hours, two laboratory hours. Fall.

572 (511) Human Genetics (3) Prerequisite: BIOL 311 or the equivalent. A study of the inheritance of man. Emphasis is on current problems, including genetic control of metabolic diseases, the effects of radiation on human genetics, and the genetic basis of environmental, and directed genetic change. Three lecture hours.

573 (517) Developmental Genetics (3) Prerequisite: BIOL 311 or the equivalent. A study of the genetic and environmental factors that influence the development of gene expression in animals. Three lecture hours.

574 (415) Population Genetics (3) General genetics or equivalent. A study of the genetic structure and dynamics of populations, both real and ideal. The effects of interactions between selection, mutation, mating systems, and sampling error. Application of genetics to the study of six-locus models of adaptation, natural selection, and evolutionary change. Quantitative inheritance, human populations, and population ecology. Three lecture hours.

575 (481) Genetic Analysis in Genets (3) Prerequisite: General genetics or equivalent or permission of the instructor. Different topics in different years. Among topics covered are molecular, developmen-
641 (541) Environmental Biology II (3) Prerequisite: A course in ecology or permission of the instructor. The biological effects of modern humans and their activities on the environment. Physiological responses from excessive heat, radiation, and overcrowding. Methods of identifying and controlling problems are considered. Three lecture hours.

642 (562) Cellular Aspects of Development (3) Prerequisites: A previous course in embryology or developmental biology or permission of the instructor. Readings and seminars utilizing the current literature in developmental biology. Emphasis is placed on major problems in the cellular control of morphogenesis, differentiation, regeneration, aging, and malignancy. The student becomes familiar with experimental organisms and systems of unique value in developmental biology. Three lecture hours.

655 (555) Environmental Hazards to Human Health (3) Prerequisite: A course in animal physiology or permission of the instructor. A study of the factors that influence human health resulting from the impact of man's industries and activities on the environment. Physiological effects of chemical pollutants of air, water, and food; problems from excessive heat, radiation, and overcrowding. Three lecture hours.

666 (568) Advanced Techniques in Molecular Biology (4) Prerequisites: BIOL 301, 311; CHEM 313-314, 461-462; or permission of the instructor. A study of the techniques of molecular biology. Experimental design, analysis, and characterization of biologically important compounds. Three lecture hours.

670 (512) Experimental Design and Analysis for the Life Sciences (3) Prerequisite: An undergraduate course in statistics (e.g., BIOL 312), or permission of the instructor. A course in advanced statistical methods, emphasizing the analysis of variance, and regression. Three lecture hours.

691 (591) Current Topics in Biology (1) One seminar hour each week. May be repeated for credit. Six seminar hours.

692 (529) Seminar in Environmental Biology (1) Prerequisite: BIOL 311 or permission of the instructor. Advanced study of current problems in environmental biology. Topics of discussion vary from term to term. Three seminar hours.

693, 694 Directed Studies in Biology (1-8) Prerequisite: Eight hours of required credit in biology and permission of the instructor. A student may select topics of special interest and study them in consultation with a professor. The student and professor select a program of study and a method of evaluation. Three to eight lecture hours.

695 (595) Seminar in Molecular, Cellular, and Organismal Biology (1) Prerequisite: Open only to degree students who are qualified for the specialization in molecular, cellular, and organismal biology, or by permission of the instructor. An intensive review and discussion of recent literature in a specialized area of molecular, cellular, or organismal biology. One seminar hour each week to be presented by students under the direction of a faculty member.

727 (527) Current Problems in Evolutionary Theory (3) Prerequisite: BIOL 311 or permission of the instructor. Advanced study of current problems in evolutionary theory. One seminar hour each week.

693 (593) Research in Biology (1-3) Prerequisite: Eight hours of graduate credit in biology and permission of the supervising instructor and chairperson, Department of Biology. The student may select a topic under the guidance of a faculty member. May be repeated to a total of three semester hours.

799 (599) Thesis (3-6) Prerequisite: Eight hours of graduate credit in biology and permission of the supervising instructor and chairperson, Department of Biology. Thesis based on a laboratory or field investigation conducted under the supervision of a member of the faculty. The number of semesters beyond two over which the thesis may be completed is at the discretion of the supervisor. Students who have taken BIOL 793 (593) receive three to five credits upon completion of the thesis. Two to six credits for BIOL 793 (593) may be counted toward the graduate degree. The number of credits for BIOL 799 (599) to be six. Students who do not take BIOL 793 (593) receive three to six credits upon completion of the thesis. Students who do not take BIOL 793 (593) receive three to six credits.

800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to study in biology. A program of studies designed by the student's discipline director and the graduate dean in consultation with the multidisciplinary committee which permits the student to participate in the current research of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollment in this course is repeated according to each student's program.

**Business Administration Courses (BUAD)**

Effective with Fall Semester 1981, non-core, upper-level (300-400 series) courses offered by the School of Business Administration may not be presented on an undergraduate degree plan. Those planning for an undergraduate program in Business Administration (except as general elective credit) if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

307 Introduction to International Business (3) A general overview of foreign trade from the viewpoint of business management. The historical dimensions of international business; political, economic, and social conditions essential for successful trading; the role of government in international trade; how international business policies are developed.

**Managerial Accounting and Policy (3) Prerequisite: BIOL 590 or equivalent.**
620 Marketing Concepts and Processes (3) Prerequisite: ECON 502, BUAD 600, or equivalent. A combination of text, cases, and discussion to provide the student with an understanding of the marketing system and involving the marketing areas of product development, pricing, promotion, and physical distribution. Emphasis on the analysis of marketing situations and on data-based decision making.

621 Cases in Managerial Marketing (3) Prerequisite: BUAD 620, or equivalent. The application of qualitative and quantitative techniques in approaching various marketing situations. Emphasis on the use of marketing research, product planning, pricing, and target market determination. Case discussion; readings.

630 Computer Systems for Management (3) Study of computers and their effect on management process. Focus on batch analysis, design, implementation, and use of computer information systems. Both hardware and software. Lecture and laboratory.

640 Statistical Foundation for Business Decision Making (3) Prerequisites: Six credits of college mathematics. The use of statistical methods as scientific tools in the analysis of practical problems in business decision making. Topics covered include: descriptive statistics, probability theory, probability distribution, sampling and sampling techniques, decision hypothesis testing: elementary decision theory; time series analysis; linear regression and correlation; the analysis of variance.

641 Quantitative Methods of Managerial Analysis (3) Prerequisite: BUAD 640 or equivalent. Scientific approach to managerial decision making. Systems analysis and model development, using statistical decision theories. Linear programming, and other methods, are applied to business problems. Lecture and laboratory. (See School of Business Administration, Special Regulations.)

650 Legal Concepts and Trends Affecting Business (3) Presentation of principles necessary for comprehension of legal concepts affecting a business environment. Special emphasis is placed on contracts, the Uniform Commercial Code, business corporations, such as corporations and partnerships, and government regulations.

660 Management Theory and Practice (3) Development, theories, and practice of business management. Particular emphasis is given to the evolution of management theory and the application of current theoretical concepts to managerial operations. Implications of these theories in practice are explored.

661 Cases in Organizational Behavior (3) Prerequisite: BUAD 660 or equivalent. Study and application of principles of individual and group behavior to the solution of problems in organizations. Emphasis on relationships with superiors and subordinates in formulating and accomplishing personnel policies. Case discussion, readings, and research. (See School of Business Administration, Special Regulations.)

702 Financial Accounting Theory (3) Prerequisite: BUAD 601. Theoretical and conceptual foundations examined. Current literature and theories studied to provide coverage of postulates, assumptions, and standards underlying measurement criteria and practices of financial accounting. Lecture and discussion.

703 Federal Taxation and Business Planning (3) Prerequisite: BUAD 601. An examination of the tax effects of federal tax policy, business enterprises. Consideration of organizations, acquisitions, mergers, spinoffs, and other devices, from viewpoint of profit planning, cash flow, and tax deterrents. Effect of tax problems of corporations. Lecture and discussion.


705 Accounting Systems (3) Prerequisite: BUAD 601. The study of modern concepts for accounting systems. Includes accounting systems design and integration with other information systems. Case analysis and discussion.

706 Advanced Auditing Theory and Practice (3) Prerequisite: BUAD 601. The study of generally accepted auditing standards and the theory supporting them. Application of auditing techniques including statistical sampling. Legal liability of the auditor, role of the auditor in securities regulation, and auditing in a computerized environment. Emphasis on the use of financial research, product planning, pricing, and target market determination. Case discussion; readings.


708 Seminar in Controllership (3) Prerequisite: BUAD 601. The study of the nature and scope of the controller's function in public or private organizations, its relationship to top management, and the evaluation of performance. Lecture and case study.

711 Long-Term Financial Management (3) Prerequisite: BUAD 610. Provides an in-depth analysis at the advanced graduate level of capital budgeting and long-term asset financing. Capital budgeting and financing techniques for the fixed asset portion of the balance sheet are considered. Lecture, discussion, and research.

712 Security Analysis (3) Prerequisite: BUAD 611. The analysis of equity securities and debt instruments given the effects of the financial market hypothesis and modern capital market theory. Lecture, discussion, and research.

713 Portfolio Analysis (3) Prerequisite: BUAD 610, 640. Examination of the theory and mathematical techniques utilized in the management of investment portfolios. Emphasis on both classical portfolio theory and contemporary applications; case analysis; research.

714 Financial Institutions (3) Prerequisite: BUAD 611. A consideration of the allocation of funds process accomplished by the various financial markets. Both money and capital markets are discussed, including the organization, relative efficiency, and interaction between the various market segments. Lecture, discussion, and case study.

715 Financial Markets (3) Prerequisite: BUAD 611. A discussion of the activities of financial institutions as intermediaries within the financial markets. Both organizational and regulatory forces are considered in terms of their influences upon the management of these institutions. Lecture, discussion, and research.

716 Current Topics in Finance (3) Prerequisite: BUAD 611. Topics of current or recent interest in the area of finance, including industrial, governmental, international, or institutional applications. Primary emphasis upon techniques and methods of financial practice and influences of new legislation. Readings, discussions, and research.

722 Marketing Seminar (3) Prerequisite: BUAD 621. Selected problems in contemporary marketing. Developing new market segments, independent research, analysis, and case studies; marketing games. Lecture, discussion, and laboratory.

723 Marketing Strategy (3) Prerequisite: BUAD 621. An examination of the several types of promotional and marketing strategies employed by both profit and nonprofit organizations. The approach is to develop basic issues in promotional strategy, then to focus on managerial issues and problems encountered, and the application of strategies and their implementation. Lecture, discussion, and research.

726 Advanced Consumer Behavior (3) Prerequisite: BUAD 621. The application of behavior theory to consumers of goods and services, and the relationship of this theory to consumer behavior models. Research in practical applications.

727 Purchasing and Materials Management (3) Prerequisite: BUAD 621. Principles and practices of procurement and management for private firm, within the broader context of an industrial materials management system. Governmental procurement practices examined to a limited degree. Case discussion, research.

732 Computer-Based Information Systems (3) Prerequisites: BUAD 601, 630, and 641. This course examines the organization, development, evaluation, and management of computer-based information systems from the perspective of both users and developers. The knowledge of computer capabilities and the information processing needs in different practical areas are used as the basis for the project selection involving one of the phases of analysis/design, implementation, or evaluation of management information is required. Lecture, cases, and discussion.

733 Merchandising and Resource (3) Prerequisite: BUAD 630. Managerial involvement with the computer resource is examined from a variety of viewpoints from management of the facilities themselves, through higher-level analysis via steering committee membership, to participation in the resource through the role of the user. Case discussions are used to develop an understanding of the information needs necessary for the implementation of the computer resource.

734 Analysis and Design of Computer Systems (3) Prerequisite: BUAD 630. A comprehensive coverage of the computer systems life cycle with emphasis on information requirements analysis, feasibility studies, system design, equipment selection, and the implementation process. Student teams are assigned to system development projects to work with users to define system requirements and to prepare implementation plans.

742 Management Science (3) Prerequisite: BUAD 641. Introduction to operations research techniques and their applications in strategic decision making. Computer simulation, Markov processes, queuing theory, inventory models, PERT and CPM, mathematical programming, Research, lecture, and laboratory.

751 Special Seminar in Management Science (3) Prerequisite: BUAD 742. Focuses on the problems of model development and implementation involved in the practice of operations research in managerial decision making. Lecture, discussion, and research.


763 Seminar in Labor Management Relations (3) Prerequisite: BUAD 660. The U.S. labor movement and its regulation. Governmental and non-governmental legal and administrative setting surrounding labor relations and recent rulings by regulatory bodies. Executive orders and political forces influencing unions in the public sector. Emphasis on negotiations, labor contracts, and conflict resolution at both the collective bargaining and individual levels. Emphasis on legal, international, or institutional applications. Primary emphasis upon techniques and methods of financial practice and influences of new legislation. Readings, discussions, and research.

764 Organization Analysis and Development (3) Prerequisite: BUAD 661. Application of analytical reasoning and skills to practical problems in business administration. Designed for students in all traditional areas of business to enhance their abilities to confront contemporary management challenges, and develop new perspectives on decision making. Problem structure, analysis and solution implementation, emphasizing contemporary approaches to decision analytic techniques. Lecture and course.

765 Strategic Planning and Control (3) Prerequisite: BUAD 641, 642. Management and information systems. A study of the relationship of strategic planning and control. Emphasis on the design, implementation, and evaluation of the corporate framework of a strategic planning system. Emphasizes the methodological "how to do it" aspects of strategic decision making, planning, and control. Lecture, reading, discussion, case analysis, and project.

766 Business in its Social Environment (3) Prerequisite: BUAD 661. An examination of the major forces in society, especially the federal government, that impact on private enterprise. Emphasis on organizational effectiveness and the private sector response to internal and external factors for change.

767 Small Business Ventures and the Entrepreneur (3) Prerequisite: BUAD 661. A study of small business and its economic, competitive, and social environment. Lectures, case studies, and research are utilized to illustrate and develop solutions to potential
problems of initiating, organizing, and managing a small business.

766 Seminar in Current Management Problems (3) Prerequisite: BUAD 661. Examination of selected problems currently facing managers. Emphasis is on development of practical solutions to these problems through application of the firm's management decisions, discussion, case analysis, and action exercises.

772 Managerial Economics (3) Prerequisites: ECON 302, BUAD 621. The use of economic theory and attitudes to solve managerial problems. Managers' decisions in light of changing business situations and decisions. Production levels, price determination, costs, competition, profits, supply/demand. Lecture, cases, and discussion.

773 Managerial Economics II (3) Prerequisite: BUAD 772. The application of economic analysis to business management; government economic policy; the use of national economic statistics; interpreting economic trends and developments; forecasting. Current economic problems and their effect on business. Lecture, cases, and discussions.


776 International Business Management (3) Prerequisite: BUAD 775. Analysis and discussion of problems in international business. Emphasis on international market entry and expansion; financial considerations in the international context; and operating policies and procedures of multinational companies. Lecture.

777 International Accounting (3) Prerequisite: BUAD 601. An introduction to the principles, practices, and techniques used by multinational enterprises in international trade and finance. Topics covered include: financial and managerial accounting, auditing, foreign currency translations, and U.S. tax policy toward the multinational firm.

782 Land Use Planning and Private Development (3) Prerequisite: BUAD 610 or permission of the instructor. Focuses on (1) the examination of the public comprehensive land use planning and land use control processes at the local, regional, state, and federal levels in the United States and selected other countries; (2) the private development process; and (3) the interaction and relationship between the public planning agencies and principals and professionals in the private development field.

783 Real Estate Investment Analysis (3) Prerequisite: BUAD 610 or permission of the instructor. Designed to improve the understanding of the real estate investment decision making process and the various skills required to function effectively in the investment environment.

784 Real Estate Market Analysis (3) Prerequisite: BUAD 610 or permission of the instructor. Examines the analytical tools of market analysis in real estate and sources of data; and studies specific problems and techniques that apply to each of the analyses of various types of real estate investment opportunities.

785 Mortgage Markets and Finance (3) Prerequisite: BUAD 610 or permission of the instructor. A course in mortgage banking with special emphasis on the primary and secondary mortgage markets, mortgage instruments, and the financial environment and techniques of financing real estate of all kinds.

786 Cases in Mortgage Finance (3) Prerequisite: BUAD 785. Provides the student an opportunity to put knowledge of mortgage financing to practical use by studying and preparing actual cases for submission to a mortgage lender.

786 Independent Study and Directed Readings (3) Prerequisite: Foundation and core courses. By special arrangement with professor and approval of the assistant dean for the graduate program.

787 Business Policy (3) Prerequisite: Completion of 27 graduate semester hours beyond the foundation coursework. Examines entrepreneurial functions in business, emphasizing decision making and problem-solving, the role of strategy, and the function of top management of the firm which the firm will operate. Students learn how to identify the goals, corporate strategy, organizational structure leading to reaching these goals, and major policies to implement the corporate strategy. Cases, readings, and discussions.

789 Seminar in Business Research (3) Prerequisite: Completion of 30 graduate semester hours beyond the foundation coursework. Study of research design and research papers written by the School of Business Administration may not be repeated on an undergraduate degree application for any major in the School (except as general elective credit) if taken prior to or following the Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

301 Business Law (3) A survey of the more important general principles of law that apply to the daily activities of business operations; discussion of concepts and principles relating to the law of contracts, bailments, agency, sales, negotiable instruments, partnerships, bankruptcy, and secured transactions. Lecture.

302 Business Law II (3) Prerequisite: BULE 301. A continuation of BULE 301.

311 Environmental Business (3) The study of the nature, formation, and application of law and its use in the business decision-making process. The legal system and its approach to the fundamental principles of law and their application to basic business topics.

551 Thematic Cartography (3) Prerequisite: Graduate standing or permission of the instructor. Analysis of the nature of perceptual organization and visual systems in thematic map communication portrayal, graphic handling and analysis of data, research and application of maps. Focuses on the use of thematic maps and map projections.

554 History of Cartography (3) Prerequisite: Graduate standing or permission of the instructor. The history of cartographic portrayal of the earth from ancient times through the nineteenth century, with emphasis on the interrelation of human culture, technological development, and geographical knowledge as reflected in maps.

570 Remote Sensing (3) Prerequisites: Graduate standing or permission of the instructor. 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.

650 (550) Mapping Foundations (3) Prerequisite: BULE 650. An introduction to the basic concepts, methods, and techniques of topographic map preparation. Elements of the various subject fields within the field of cartography as they are applied in making digital data from research and compilation through production.

652 (552) Computer Applications in Cartography (3) Prerequisite: A course in FORTRAN and a course in Statistics or permission of the instructor. An advanced treatment of computer generation of spatial imagery.

653 Geographic Information Systems (3) Prerequisites: A course in computer science and graduate standing, or permission of the department. Sources of digital geographic information, methods of storage and processing for cartographic display and geographical analysis.

565 (566) Map Design (3) Prerequisites: GEOG 310 or equivalent, and graduate standing, or permission of the instructor. An examination of design, principles of graphic design, and technical aspects of planning map production.

660 Geodetic Cartography (3) Prerequisites: Geometric principles of Cartography and an understanding of the principles of design and layout. An examination of the principles of design and layout. An examination of the principles of design and layout.
advances and potential applications to trace metal determinations in environmental samples are stressed.

431 Chemical Thermodynamics (3) Prerequisite: CHEM 331, 332. Applies the laws of thermodynamics to problems in chemistry. Topics surveyed include gas phase reactions, solutions, phase transitions and equilibria, electrochemical cells, free energy and chemical spontaneity.

432 Spectroscopy and Structure (3) Prerequisite: CHEM 331, 332. An introduction to modern theories of atomic and molecular structure. The most recent consumer products, including drugs and agricultural requisites: natural products, and biologically active compounds.

433 Physical Chemistry (3) Prerequisites: CHEM 211-212, MATH 113, 114. May be fulfilled with PHYS 341 or 250. This course and CHEM 332 constitute a year-long survey of physical chemistry covering topics such as thermodynamics, equilibria, kinetics, solution properties, elementary quantum theory, electrochemistry, atomic and molecular structure, and nuclear chemistry. Three lecture hours.

432 Physical Chemistry II (3) Prerequisite: CHEM 331. Three lecture hours.

435 Physical Chemistry for the Life Sciences (3) Prerequisite: CHEM 211-212. This course deals with the classical topics of physical chemistry with an emphasis on those topics related to biological sciences. Rigorous mathematical approaches to the theory of physicochemical processes are avoided. Topics covered include gas laws and kinetic theory, structure of solutions, and thermodynamics of kinetics and chemical equilibria. Where possible, examples applicable to the life sciences are used.

436 Physical Chemistry Laboratory I (3) Prerequisite or corequisite: CHEM 331. Quantitative experimental study of physical chemical principles. This course and CHEM 337 constitute a year-long laboratory to laboratory practices and theories of experimental physical chemistry. Three laboratory hours, one hour recitation.

437 Physical Chemistry Laboratory II (3) Prerequisite: CHEM 331. Continuation of CHEM 336. Three laboratory hours, one hour recitation.

434 Fundamental Inorganic Chemistry (3) Prerequisite: CHEM 211-212. The descriptive chemistry, including chemical properties, reactions, and reaction mechanisms, of inorganic elements and compounds. Topics include main group and transition elements, organometallic compounds, and bioinorganic chemistry.

435 Special Topics in Organic Chemistry (3) Prerequisite: CHEM 331 and CHEM 431. An advanced seminar course in synthetic and mechanistic organic chemistry with particular emphasis on selected topics such as heterocyclic, natural products, and biologically active compounds. Topics are selected to provide the best applications of organic chemistry to consumer products, including drugs and agricultural chemicals.

436 Instrumental Analysis (4) Prerequisite: CHEM 314, 321, 331, or permission of the instructor. A study of the application of physicochemical methods to analytical chemistry, i.e., the quantitative study of chemical reactions by the use of modern analytical instrumentation. It is an introduction to the theory and practice of spectroscopy: ultraviolet-visible, and infrared absorption spectroscopy, electrical methods of analysis, gas chromatography; non-aqueous studies; and ion exchange. Two lecture hours, six laboratory hours.

437 Selected Topics in Analytical Chemistry (3) Prerequisite: CHEM 422. A study of the principles and applications of currently used methods of analysis. Selected topics include differential pulse polarography, anodic stripping voltammetry, atomic absorption, fluorescence, emission spectrometry, neutron activation, and spark source mass spectrometry. The most recent
plied in case study analysis. The case studies include advertisements, speeches, and individuals involved in persuasive activities. Researchers have advanced the conceptual basis for debate are examined. The course does not require tournament participation.

261 Theories of Argumentation (3) The critical analysis of argumentation. Emphasis on reasoning, with special attention to the concept of deductive and inductive forms of reasoning. Failures in reasoning, tests of evidence, and the models for such analysis.

Public Communication (3) Prerequisite: Three hours of 100- or 200-level credit, or junior standing. An investigation of the theories and principles of public communication with emphasis on methods of persuasion, speaker-listener alignments in the public setting, and measurements of effective public communication.

301 Interpersonal Communication (3) Prerequisite: Three hours of 100- or 200-level credit, or junior standing. An investigation of the theories and principles of interpersonal communication with emphasis upon models of communication, verbal and nonverbal message systems, and analysis of communicative relationships.

302 Mass Communication (3) Prerequisite: Three hours 100- or 200-level credit, or junior standing. An investigation of the theories and principles of mass communication covering the history and development of mass media, the techniques and effects of advertising, the characteristics unique to the various types of mass media, the responsibility of the media to the public, and the role of the media in contemporary society. Three hours per week.

310 Advanced Oral Interpretation (3) Prerequisite: COMM 110. An advanced course in the principles and theories of oral interpretation. Practice with advanced problems in solo interpretation including the lecture-recital.

326 Rhetoric of Social Movements and Political Controversy (3) Prerequisite: Three hours of communication credit or permission of the instructor. An analysis of the historical roots of political movements and political forces of the contemporary era from a communicational perspective with special emphasis on political leadership, pressures for social/political change, and transformations in the communicative environment. Three hours per week.

332 Nonverbal Communication (3) Prerequisite: Three hours of communication credit. An investigation of the theory, principles, and methods of analysis of nonverbal communication. Emphasis is given to such dimensions as physical behavior, facial expression, personal space and territoriality, physical appearance, vocal cues, and environment.

335 Organizational Communication (3) Prerequisites: COMM 100, 130, or 301, or permission of the instructor. An investigation of the theory, practice, and methods of analysis of communication within organizations. Emphasis is placed upon the techniques, structure, interactional formats, mechanisms for modification, and career paths in organizational communication.

340 Forensics Seminar in Creative Arts (1, 1, 1) Prerequisite: Four credits COMM 140 or junior standing, and audition. Intensive work in various types of creative forensic events—rhetorical criticism, epide­mic, informative, persuasive, extemporaneous, after­dinner, and impromptu speaking. May be taken four times for credit. Three hours per week.

341 Forensics Seminar in Re­Creative Arts (1, 1, 1) Prerequisite: Four credits COMM 141 or junior standing, and audition. Work in various types of re­creative forensic events—dramatic duo, mixed interpretation, poetry and prose interpretation, dramatic pairs, original poetry. May be taken four times for credit. Three hours per week.

342 Forensics Seminar in Debate: Affirmative Strategies (1, 1, 1) Prerequisite: Four credits COMM 142 or junior standing, and audition. Intensive work in the theory and practice of negative strategies in intercollegiate debate. Work in affirmative research, case construction, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

343 Forensics Seminar in Debate: Negative Strategies (1, 1, 1) Prerequisite: Four credits COMM 143 or junior standing, and audition. Intensive work in the theory and practice of negative strategies in intercollegiate debate. Work in negative research, case construction, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

345 Television Broadcast Operations (3) Prerequisite: Computer Science Courses 211 or permission of the instructor. An analysis of the history and development of television broadcasting. Production of public affairs programs for broadcast over area radio stations. Three hours per week.

350 Mass Communication and Public Policy (3) Prerequisites: COMM 100, 302, or permission of the instructor. An investigation of the manner in which public issues are communicated via the various channels of mass communication. Emphasis is placed upon regulations designed to minimize the influence of mass media on public decision making, and manipulation of the media by pressure groups, political parties, and the media. Three hours per week.

351 Journalism (3) Principles of and practice in news writing, editing, and layout. Includes a review of the history of American journalism.

353 Broadcast Journalism (3) Prerequisite: COMM 351 or permission of the instructor. An investigation of the unique writing style used by the journalist in the electronic media. Emphasis is placed on practicing concise, conversational, and timely news writing. Practice in the techniques of mixing the words of the reporter and pure reporting, with an emphasis on the use of the electronic media. Three hours per week.

355 Television Broadcast Operations (3) Prerequisite: COMM 353 or permission of the instructor. An investigation of the major elements of television production. Familiarization with the tools of production is stressed. Production of video programs through practice in television production environment. Three hours per week.

399 Special Topics in Speech Communication (3) Prerequisite: Permission of the instructor. Exploration of the theory and practice of speech communication by topics, such as the basis for speech production, American rhetoric, communicative function. The topics change each time the course is offered. Three hours per week.

400 Research Methods in Communication (3) Prerequisite: Junior standing or permission of the instructor. An examination of the primary research methods used in communication research. Production of a research study in which students work in groups to complete a project. Three hours per week.

411 Readers Theater (3, 3) Prerequisite: COMM 110. A study of the development and current context of group communication of literature. Adaptation of literary works to speech application in direction and performance.

420 Theories of Communication Interaction (3) Prerequisite: Junior standing or permission of interaction. An examination of the major theories of interpersonal communication, both traditional theoretical and contemporary social science theories are examined.
161 Introduction to a Programming Language (1)
Prerequisite: Knowledge of high school algebra will be assumed. This course allows the student to learn and use a widely used computer language. It will help the student to become proficient in programming, in applications of the computer, or in the structure of a computer.

264 Computer Science II (3) Prerequisite: CS 111.
A discussion of basic data structures and algorithms including arrays, structures, stacks, queues, lists, networks, trees, greedy algorithms, divide and conquer algorithms and basic recursion theories. A second high-level language is taught. Students who have received credit for CS 264 may not receive credit for this course.

212 Computer Science III (3) Prerequisite: CS 211.
A continuation of the study of basic algorithms and data structures including scheduling, packing, traveling salesperson problem, maximum flow, matrix operations, and sorting algorithms. An introduction to file organization, including files, data bases, DBMS, and report generation. A third high-level language is taught.

224 Computers and Their Uses (3) Prerequisite: MATH 101 or pass the math proficiency test, or three semester hours in mathematical sciences.
An introduction to data processing, including the organization of a computer system; the organization and structure of computer programs; and the organization of types and data. This course provides a thorough understanding of a computer's capabilities and limitations. Topics covered include interconnection models of a high-level programming language (FORTRAN) and an introduction to the use of a computer package for statistical analysis of data (SPSS). Emphasis is placed on the user-to-programmer interaction of top-down structured programming needed for new development and use of larger computer programs.

262 An Introduction to Computer Statistical Packages (3) Prerequisite: CS 161 and a course in statistics. An introduction to the use of computer packages in the statistical analysis of data. Topics covered include data entry, checking, and manipulation as well as the use of computer statistical packages for analysis of data.

311 (364) Assembly Language Programming (3) Prerequisite: CS 212.
Symbolic assembly language and computer structures: arithmetic and logical operations, machine representations of numbers, character sets, and instructions; input-output and data conversion; addressing techniques; assembler directives; subroutine linkage; macro processing. Students who have received credit for CS 364 may not receive credit for this course.

331 Automata and Formal Languages (3) Prerequisite: CS 311 and MATH 305. An introduction to the theory of grammars, formal languages, and abstract machines. Detailed study of finite state machines, Chomsky's hierarchies of grammars and languages, transducers and acceptors, deterministic and non-deterministic machines. Special attention is given to parsing, compressions and context-free grammars and their application in the design of software, such as compilers and text processors.

333 Comparative Programming Languages (3) Prerequisite: CS 212.
This course gives a comparative survey of several widely used programming languages. The student acquires a broad base of experience in the languages covered and the strengths and weaknesses of each. Most emphasis is placed on FORTRAN, COBOL, and PL/I.

365 Computer Systems Architecture (3) Prerequisite: CS 311.
A thorough discussion of 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) Prerequisite: CS 311.
A study of the nature of file organization and the design of file systems. Examination of sequential and direct file structure on tape and direct access devices.

381 Software Development (3) Prerequisite: CS 311.
A formal approach to techniques in software design and development. The course includes a discussion of formal models of structured programming, segmental, top-down design and documentation. Students organize, manage, and develop a large scale software project, working in teams.

431 Theory of Computation (3) Prerequisite: CS 311 and MATH 305; CS 331 is strongly recommended.
This course is an introduction to the theory of computability, Turing machines, computable functions, unsolvable decision problems and Godel's Incompleteness Theorem, computational complexity.

465 Data Structures and Algorithm Analysis (3)
Prerequisite: CS 311 and COSC 326 (or permission of instructor). This course is designed to further develop the knowledge, skills, and appreciation of data structures and algorithms. Topics covered include the selection of methods for data manipulation in the environment of a data base management system.

468 Computer System Programming (3) Prerequisite: CS 311. Introduction to assemblers, compilers, system structures, operating systems, and machine architecture.

499 Special Topics in Computer Science (1-3)
Prerequisites: Junior standing; permission of the instructor; specific prerequisites vary with the nature of the topic. Special topics courses for non-numerical algorithms which act on data structures. Use of algorithm analysis and design criteria in the selection of methods for data manipulation in the environment of a data base management system.

Topics in Computer Science (3) Prerequisite: CS 311.
An exploration into the creation of spontaneous movement experiences. Emphasis is placed on encouraging freedom of self-expression and creative awareness.

311 Dance Courses (3, 3, 3, 3) Prerequisite: DANC 126 or permission of the instructor.
Dance classes in the style of jazz, contemporary, modern, and ballet, which are designed to further develop the knowledge, skills, and appreciation of dance forms. These classes may be taken for credit four times for credit.

213 Intermediate Jazz Techniques (3, 3, 3, 3) Prerequisite: DANC 131 or permission of the instructor.
This course is designed to further develop the knowledge, skills, and appreciation of modern dance. Emphasis is placed on technique and creating dance form. This may be taken for credit four times.

214 Beginning Modern Dance (3, 3, 3, 3) Prerequisite: DANC 141 or permission of the instructor.
This course offers students wishing to continue their training in ballet the opportunity to pursue their studies at the intermediate level. Emphasis is placed on increasing technical proficiency and understanding the importance of the appreciation of dance forms. This may be taken for credit four times.

251 Dance Composition I (3) Prerequisite: DANC 125 or permission of the instructor.
A study and practice of dance composition with a focus on movement, space, and time. Emphasis is placed on the construction of simple compositional forms in dance as they apply to the solo performer.

252 Dance Composition II (3) Prerequisite: DANC 251 or permission of the instructor.
An exploration into the elements of complex compositional forms in dance as they apply to group forms. Experience in composing and performing duets, trios and small groups, and support for various dance forms. Emphasis is placed on the construction of simple compositional forms in dance as they apply to the solo performer.

305 Dynamic Alignment (3) Prerequisites: Six hours prior work in dance classes. Additional course in anatomy and biology recommended. This course deals with structural anatomy and specific ways that movement is applied to the correct development of dance technique. Emphasis is placed on learning the minimum stress upon the body. To this end, knowledge gained from the texts as well as the use of imagery for connecting inefficient muscle patterns, as well as relaxation techniques, are taught. Three hours per week.

327 Advanced Modern Dance (3, 3, 3, 3, 3) Prerequisite: DANC 125.
This course seeks to provide the advanced dance student the opportunity for continued training. Emphasis and importance are on the attainment of high quality technical and performance skills. This course may be taken for credit four times.

341 Advanced Ballet (3, 3, 3, 3, 3) Prerequisite: DANC 125 or permission of the instructor.
This course is designed to further develop the knowledge, skills, and appreciation of modern dance. Emphasis is placed on the development of the student's personal technique and appreciation of dance forms. This may be taken for credit four times. Six hours and fifteen minutes per week.

350 Advanced Dance Improvisation (3) Prerequisites: DANC 125 or permission of the instructor. A course in dance composition which provides an opportunity for intensive study of and practice gained from dance improvisation. Each student is responsible for creating as well as directing advanced problems in dance improvisation. Three hours per week.

360 Choreography (3) Prerequisite: DANC 252 or permission of the instructor.
A course in dance composition and dance and presentation of the student's work. Performance/laboratory course dealing with the study of ballet at the advanced level incorporating the styles and techniques of the French, Russian, and Danish schools. Emphasis is placed on alignment and body placement as well as virtuosity. This course may be taken for credit eight times. Three hours per week.

370 Dance Performance (3, 3, 3, 3) Prerequisite: Permission of the instructor.
Practical experience in the areas of performance, production, and/or repertory through participation in the production of student performances or special guest artist programs. May be taken for credit four times.
Three hours per week.
390, 391 Dance History (3, 3) Prerequisite: DANC 101 or 6 hours of prior work in dance. A lecture course in the history of dance in America, emphasizing dance in a historical perspective.

355 Cases in Management Science (3) Prerequisite: DESC 352. The application of management science techniques to problems from such areas as marketing, finance, operations management, and labor relations. Computer methods and use of operations research are emphasized. The project formulation as well as solutions to the project are stressed.

420 Special Topics in Dance (3, 3) Prerequisites: 9 hours lower-level dance courses or permission of the instructor. In-depth exploration and presentation of topical studies in dance. May be taken twice for credit.

454 Teaching Principles of Modern Dance (3) Prerequisites: Six hours of prior work in dance technique and DANC 305. This course provides advanced dance students with the methods, principles, and background for teaching dance in the studio, classroom, and community settings. scrub to know advanced dance methods and teaching methodologies and to apply knowledge gained from previous courses in technique and the demonstration of their ability to teach a modern dance class.

Independent Study (3) Prerequisite: Permission of the instructor. May be taken only to dance majors with senior standing, graduate students in dance or theatre, or by special permission of the instructor. Individual research or a creative project in close consultation with an instructor. A student may select a topic of special interest only with the consent of the instructor. A minimum of 10 hours of credit is expected.

Economics Courses (ECON)

103 Contemporary Economic Principles and Issues (3) (May be taken after ECON 104). An introduction to contemporary economic issues and the study of national income, employment, price levels, government policy, and the growth and stability of the economy. A study of fiscal and monetary policy and government services.

104 Contemporary Economic Principles and Issues II (3) (May be taken before ECON 103). An introduction to contemporary economic issues and the study of national income, employment, price levels, government policy, and the growth and stability of the economy. A study of fiscal and monetary policy and government services.

150 The Urban Economy (3) A study of metropolitan economic activity. A problems-oriented course designed to develop a general understanding of the nature and applicability of economic concepts to metropolitan areas.

306 Intermediate Microeconomics (3) Prerequisite: ECON 103, 104. An examination of the theory and application of microeconomic concepts to other areas of economic life.

306 Intermediate Macroeconomics (3) Prerequisite: ECON 103, 104. An examination of the theory and application of macroeconomic concepts to other areas of economic life.

310 Money and Banking (3) Prerequisite: ECON 103 and 104 or permission of the instructor. An examination of the role of money and banking in the modern economy. Emphasis is placed on the role of money as a medium of exchange, a store of value, and a unit of account.

311 Intermediate Macroeconomics (3) Prerequisite: ECON 103 and 104 or permission of the instructor. An examination of the role of money and banking in the modern economy. Emphasis is placed on the role of money as a medium of exchange, a store of value, and a unit of account.

316 Economic Growth and Business Cycles (3) Prerequisite: ECON 310 or 311 or permission of the instructor. An examination of the role of money and banking in the modern economy. Emphasis is placed on the role of money as a medium of exchange, a store of value, and a unit of account.

320 Labor Problems (3) Prerequisite: ECON 103 and 104 or permission of the instructor. An examination of the role of money and banking in the modern economy. Emphasis is placed on the role of money as a medium of exchange, a store of value, and a unit of account.
croeconomic and macroeconomic models and the mis-
allocation of resources that results from policy pre-
scriptions. The models discussed show how economic
tools are developed from the unique a priori and
subjectivist approach of the Austrian economists:
Menger, Bohm-Bawerk, von Mises, and Nobel Laure-
ate Friedrich Hayek.

451 Economics of Inflation (3) Prerequisite: ECON 306, 311; MATH 109 and DESC 202; or permission of the instructor. This course examines various theories of inflation, the emphasis on the vertical microeconomic foundation of the price behavior models. Special attention is given to a study of the nature and causes of inflation on the basis of empirical results of major advanced countries. Additional material surveys patterns of worldwide inflation and the international transmission of inflation.

481 The Development of Economic Thought (3) Prerequisite: ECON 306 and 311 or permission of the instructor. An examination of the main developments in economic thought from 1500 to the present with emphasis on their historical origins, their impact on contemporary economics, and their theoretical validity.

495 Special Topics in Economics (3) Prerequi-
sites: ECON 306, 311, or permission of the instructor. The course covers areas of economics not normally included in regular course offerings. The subject matter varies depending on the interests of the instructor and/or the students. It may be repeated for credit as long as different topics are covered in each section. The topic for any given semester is listed in the class schedule.

497 Economic Research Workshop (3) Prerequi-
sites: ECON 306 and 311 (Intermediate Micro- and
Macroeconomics). MATH 109 and DESC 202 (Statistics). The workshops cover a variety of projects on topics proposed by the workshop instructor or in conjunction with other department courses, including research design, data collection, the use of program packages such as SPSS and EDA, data processing and analysis, culminating with the preparation of a substantial paper.

498 Seminar in Economics (3) Prerequisite: ECON 306 and 311, or permission of the instructor. This seminar is designed to give the students an immediate and in-depth view of the more important current economic problems and is studied and discussed in seminar form.

499 Independent Study (1-3) Prerequisite: Open only to economics majors with senior standing and with the permission of the department and the instructor. Individual study of a selected area of economics. A directed research paper is required.

Departmental Course Prerequisites

ECON 306 and 311, or their equivalents, are prerequi-
sites for all graduate courses except ECON 500 and
502. Additional prerequisites are noted for some courses. With the permission of the instructor, prerequi-
sites may be waived.

500 Current Issues in Economics (3) Sp, Su (B)
Prerequisite: Graduate standing or permission of the instructor. Open only to students with no formal background in economics. Topics include supply and demand, the operation of a free market system, stock and bond markets, and the role of the U.S. in the world economy. Current economic problems are discussed. This course may be used in partial fulfillment of the course requirements in the teaching discipline for the major's degree in education.

501 Microeconomic Theory (3) F, Sp Theory of optimal behavior of individuals, firms, and resource suppliers. Theories of choice under conditions of risk and uncertainty. Partial equilibrium analysis of competitive and non-competitive markets. General equilibrium analysis, welfare concepts, and introduction to cap-
tal theory. For students with no formal background in economics.

502 Economic Analysis (3) F, Sp Prerequisite: Baccalaureate degree. This course cannot be taken for graduate credit toward the degree in economics. A rigorous, concentrated introduction to micro- and macro-economic analysis. Emphasis is placed on eco-
omic concepts, tools of analysis, and business appli-
cations. For students with no formal background in economics.

505 Welfare Economics (3) The topics covered in-
clude Pareto optimality, social welfare functions, the voting paradox, indivisibilities, consumer surplus, out-
put and input economics, and the economic analysis of the basic welfare theorem caused by noncompetitive market structures, external economies and dis-econo-
 mies and secondary constraints. As time permits,

Kaldor, Hicks, Scitovsky, Arrow, Little, Bergson, and Samuelson are discussed.

555 Resource Economics (3) F Introduction to
benefit-cost and cost-effectiveness analysis in the con-
text of resource allocation and economic policy. Emphasis on the development of water resources by the public sector and the experience of the Army Corps of Engineers and Bureau of Reclamation in project selec-
tion, economics of uncertainty, time horizon consid-
erations, joint costs, multiple benefits, nonquantifiable

556 Economics of the Environment (3) Analysis of
economic models of ecosystems and pollutant dis-
charges with emphasis on the evaluation of methods
that attempt to improve economic efficiency by incor-
porating pollution control incentives. Review of public policies designed to enhance environmental quality.

560 Public Policy Analysis (3) The analysis of the
forces contributing to and retarding economic progress in developing countries. The role of foreign trade, eco-

563 Seminar on Latin American Development (3) An examination of economic characteristics and recent economic development of Latin America. Topics in-
clude industrialization and import substitution, the rural sector and agrarian reform, population and unemploy-
ment, inflation, trade and development, development
strategies, including balanced or unbalanced growth, import substitution, and planning.

565 American Economic History (3) The growth
and development of the American economy as well as the evolution of economic thought analyzed through the use of economic theory and statistics.

570 Industrial Organization and Public Policy (3)

571 Health Economics (3) Sp Economic analysis of
major problems in the health care sector such as man-
power and training, regulation, insurance, health
costs, debt management, and intergovernmental fiscal rela-
tions. Allocative and distributional effects of alternative tax and subsidy techniques. Principles of benefit-cost
and cost-effectiveness analysis for government deci-
sions.

573 Seminar in Industrial Organization (3) Topics
are selected from the following: the centrifugal and

575 The Economics of Urban Transportation
Planning (3) An examination of issues and problems in urban transportation planning using various analyti-
cal tools including models of transportation planning
processes, the transportation model, pricing policies
and congestion, transportation planning for the future,
techniques of evaluation, environmental impact, socio-

580 Comparative Economic Systems (3) F The
trend and theory of capitalism, socialism, and corpor-

581 History of Economic Thought (3) Sp The
development of economic analysis. Major figures in the
history of economic thought and their tools of analysis
they created. Major emphasis on the classical, neo-
classical, and Keynesian theories.

591 International Trade and Policy (3) F An exami-
nation of classical, neoclassical, and modern theories
of international trade and their application to the poli-
cy of world trade models such as project LINK. Analy-
sis of foreign investment and economic growth, tariffs
and non-tariff barriers, and economic integration. A
comprehensive synopsis of the major developments in
the world economy with emphasis on natural resources.

592 Introduction to Monetary Economics (3) Sp Analysis of the balance-of-payments and foreign ex-
change markets. Examination of the international ad-
justment mechanism, price and income effects, con-

http://catalog.gmu.edu
Education Courses (EDUC)

The courses numbered through the 400 series constitute the undergraduate program. Courses in the 200 and 300 series are open only to students who have been admitted to a teacher education program. Students may not receive degree credit for more than one of the comparable courses relating to early childhood and upper elementary grades. For example, students taking EDUC 407 may not receive degree credit for EDUC 408.

Undergraduates may enroll in graduate courses only upon exhausting all the upper-level undergraduate courses relevant to their educational objectives and upon demonstrating a level of maturity required for graduate level work. Circumstances under­graduates may, with the written permission of the course instructor and the chairman of the department offering the course, register for graduate courses appropriate to their academic needs and interests, provided they have earned toward the undergraduate degree. Undergraduate students electing this option must have completed all prerequisite hours and courses for the graduate course in which they wish to enroll.

300 Foundations of Elementary Education (3) This course introduces early childhood and upper elementary education majors to the teaching profession through an examination of the role of a teacher in a child's development. emphasizes the interaction of the school, the family, and society as they influence the growth of young children.

301 Foundations of Education (3) Open only to secondary education majors. A survey of the historical, philosophical, and sociological foundations of education with emphasis on the development of education as a field of study. focuses on the structure of American education and the factors influencing it. A survey of the area of teaching as a profession, including current issues and problems in education. The relationships between educational objectives, the structure of the curriculum, and the influence of society on education and the students. Field experiences in public and private schools are an integral part of the course.

302 (200) Human Growth and Development (3) An introduction to the study of human development from conception through the school years. Focuses on the development and hazards of development are considered. Includes are studies of cognitive, intellectual, physical, social, emotional, and psychological development. Field experiences in public schools are required.

303 Children's Literature (3) Prerequisite: Nine semester hours of English. Survey of children's literature suitable for nursery school, kindergarten, and the elementary school. The historical development, types, representative authors, and illustrations are studied. Children's literature is used as a vehicle for helping students develop listening and reading skills. determining interests of children at these levels are studied. The techniques of storytelling and presentation of literature to children are studied and practiced.

306 History and Philosophy of Trade and Industrial Arts (3) An introduction to industrial arts and its beginnings in Europe and the United States. Places emphasis on the current trends related to curriculum and methods used today, and discusses the various methods used in the past. Stresses the importance of knowledge about teacher preparation for the profession. Field experiences are required.

309 History and Philosophy of Trade and Industrial Education (3) Theories and philosophies of trade and industrial education in Europe and America. Places emphasis on the current trends in curriculum and methods used to accomplish the goals of trade and industrial education, with information about teacher preparation for the profession. Field experiences are required.

311 Educational Psychology (3) Acquaints the prospective teacher with the processes of learning and their application to teaching. Included in the course are learning theory, various aspects of the learning process, individual differences, motivation, and adjustment in the learning process. Emphasis is on teacher preparation for the profession. Field experiences are required.

320 Introduction to Tests and Measurements (3) An introductory course presenting basic principles, techniques, and tests used in the quantification of personality and aptitudes. Emphasis is on the importance of the tests in the area of intelligence, achievement, aptitudes, and personality and their role in the selection of students. Includes an examination of the role of teacher preparation for the profession. Field experiences are required.

321 Production and Utilization of Instructional Materials (3) A study of media production and utiliza­tion in the industrial arts classroom. Stresses group design, layout and their application to teaching. Includes the history of the development and utilization of instructional materials in secondary schools and current trends in vocational guidance. The course includes industrial field trips, group discussion, and a thorough investigation of current industrial practices. Field experiences are required.

365 Laboratory and Vocational Guidance (3) A study of the organization and operation of vocational education programs. Includes laboratory facilities for instruction to be offered. Systems for personnel, tool storage, purchase, maintenance, and recordkeeping are developed and tested. Recommendations are made for the organization, management, and operation of the laboratory. Some emphasis is placed on laboratory planning, educational specifications, and facility evaluations for safety and appropriateness.

366 Current Trends in Industrial Vocational Education and Vocational Guidance (3) The study of existing and emerging industrial technology related to trade and industry. Includes an examination of current developments in the industrial arts and current trends in vocational guidance. The course includes industrial field trips, group discussion, and a thorough investigation of current industrial practices. Field experiences are required.

370 Basic Industrial Arts Woodworking (3) A laboratory course with emphasis on acquisition of basic skills and fundamental knowledge needed to teach woodworking. The materials, processes, techniques, occupations, and problems of the woodworking industry are studied via lecture-demonstrations, product analysis/ planning, and actual construction of projects. Safe, effective machine operation and hand-tool utilization are stressed throughout the course.

371 Basic Industrial Arts Metalworking (3) A laboratory course with emphasis on acquisition of basic skills and fundamental knowledge needed to teach and metalworking. The materials, processes, techniques, occupations, and problems of the metalworking industry are studied via lecture-demonstrations, product analysis/ planning, and actual construction of projects. Safe, effective machine operation and hand-tool utilization are stressed throughout the course.

372 Basic Industrial Arts Plastics (3) A laboratory course with emphasis on acquisition of basic skills and fundamental knowledge needed to teach plastics technology. The materials, processes, techniques, occupations, and problems of the plastics industry are studied via lecture-demonstrations, product analysis/ planning, and actual construction of projects. Safe, effective machine operation and hand-tool utilization are stressed throughout the course.

373 Basic Industrial Arts Electricity and Electronics (3) A laboratory course with emphasis on acquisition of basic skills and fundamental knowledge needed to teach electricity and electronics. The components, properties, fundamentals, and applications of electricity, including problems of modern electrical/electronic technology are studied via lecture-demonstrations, experimentation, product analysis/ planning, and actual construction of projects. Safe, effective machine operation, tool utilization, and teaching strategies are stressed throughout the course.
mental knowledge and skills needed to teach drafting. Equipment, techniques, occupations, and types of drawings typical in modern technical drawing are studied via lecture-demonstrations, exercises, and field experiences. Emphasis is on drafting technique, understanding the theory of design, and critical understanding as applied to the degree. Field experiences in public schools are required.

408 Diagnostic Reading for the Intermediate Grades (3) Prerequisite: EDUC 404; admission to teacher education program. A review of theory, methods, practices, and materials involved in the teaching of reading skills. Emphasis is placed on the intermediate grade level (NK-3) for all students, including below-level readers, beginning readers, the gifted, and multicultural and bilingual readers. Field experiences in public schools are required.

409 Directed Reading for the Early Childhood Levels (3) Prerequisite: EDUC 403; admission to teacher education program. A study of theory, methods, practices, and materials involved in the teaching of early childhood levels (K-1-2). Emphasis is placed on the young child. Students work with or observe actual teachers and related fields. Field experiences in public schools are required.

411 Teaching Mathematics in the Elementary School (3) Prerequisite: MATH 371; admission to teacher education program. A study of the theory, methods, practices, and materials involved in teaching mathematics in the elementary school. Laboratory and discovery techniques are emphasized for the practical application of fundamental math concepts and reinforced through practical teaching experiences. Field experiences in public schools are required.

412 Teaching Social Studies in the Elementary School (3) Prerequisite: 12 hours of social science courses and admission to teacher education program. A study of theories, practices, methods, and materials related to the teaching of social studies in the elementary school. Emphasis is on modern approaches to social studies teaching with an emphasis on planning units of instruction, and methods and materials associated with the teaching of social studies. Field experiences in public schools are required.

413 Teaching Science in the Elementary School (3) Prerequisite: admission to teacher education program and completion of two of the required lab sciences. A study of the theories, practices, methods, and materials related to the teaching of science in the elementary school. Discovery techniques are emphasized for the practical application of scientific concepts and reinforced through practical teaching experiences. Field experiences in public schools are required.

414 Teaching Language Arts in the Elementary School (3) Prerequisite: admission to teacher education program. A study of the theory, methods, practices, and materials related to the teaching of language arts in the elementary school. Emphasis is on modern approaches to language arts teaching with an emphasis on planning units of instruction, and methods and materials associated with the teaching of language arts. Field experiences in public schools are required.

415 Teaching General Science in the Elementary School (3) Prerequisite: admission to teacher education program. A study of the theory, methods, practices, and materials related to the teaching of general science in the elementary school. Discovery techniques are emphasized for the practical application of scientific concepts and reinforced through practical teaching experiences. Field experiences in public schools are required.

416 Teaching Health in the Elementary School (3) Prerequisite: admission to teacher education program. A study of the theory, methods, practices, and materials related to the teaching of health in the elementary school. Emphasis is on modern approaches to health teaching with an emphasis on planning units of instruction, and methods and materials associated with the teaching of health. Field experiences in public schools are required.

417 Teaching General Science in the Elementary School (3) Prerequisite: admission to teacher education program. A study of the theory, methods, practices, and materials related to the teaching of general science in the elementary school. Discovery techniques are emphasized for the practical application of scientific concepts and reinforced through practical teaching experiences. Field experiences in public schools are required.

418 Teaching Social Studies in the Elementary School (3) Prerequisite: admission to teacher education program. A study of theories, practices, methods, and materials related to the teaching of social studies in the elementary school. Emphasis is on modern approaches to social studies teaching with an emphasis on planning units of instruction, and methods and materials associated with the teaching of social studies. Field experiences in public schools are required.

419 Teaching Language Arts in the Elementary School (3) Prerequisite: admission to teacher education program. A study of the theory, methods, practices, and materials related to the teaching of language arts in the elementary school. Emphasis is on modern approaches to language arts teaching with an emphasis on planning units of instruction, and methods and materials associated with the teaching of language arts. Field experiences in public schools are required.

420 Student Teaching at the Upper Elementary Levels (9, 15) Prerequisite: EDUC 345; admission to teacher education program. A study of the theory, methods, practices, and materials involved in the teaching of reading at the middle-level grades (5-7). Emphasis is placed on integrated instruction, understanding the relationship of child to environment, leading to the development of basic generalizations in science. Includes "hands-on" work in the biological, physical, and earth sciences. Field experiences in public schools are required.

421 Student Teaching at the Upper Elementary Levels (9, 15) Prerequisite: EDUC 345; admission to teacher education program. A study of the theory, methods, practices, and materials involved in the teaching of reading at the middle-level grades (5-7). Emphasis is placed on integrated instruction, understanding the relationship of child to environment, leading to the development of basic generalizations in science. Includes "hands-on" work in the biological, physical, and earth sciences. Field experiences in public schools are required.
502 History of Education in America (3) An examination of the development of the American education system.

503 Philosophy of Education (3) A critical examination of selected ancient and contemporary philosophies and their impact upon educational thought and practice.

504 Comparative Education Systems and Organizations in the Contemporary World (3) A comparative study of selected educational systems and international educational organizations and their significance in today's world, with emphasis on elementary and secondary education.

505 Social Problems in Education (3) An appraisal of the changing role of the American school system in society, relationships of education to other institutions, the social environment, and major social problems involving the school and possible solutions.

508 Human Relations for Educators (3) Helps students develop awareness of self and social concepts, learn communication skills for improving interpersonal relations, and create a non-discriminatory school environment.

525 Advanced Human Growth and Development (3) An advanced course relating to human development through the life span including the development of the child through education, the unfolding of human abilities in terms of personal adjustment and achievement.

526 Advanced Educational Psychology (3) An advanced course relating to learning theory, motivation, personality, social and emotional behavior, and student attitudes.

527 Evaluation of Student Progress (3) Teacher evaluation of the progress of the learner through observation of performances and measurement devices in the classroom. Teacher interpretation of standardized tests given in the schools.

531 Educational and Psychological Measurement (3) 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.

533 Mental Health in the School Program (3) Mental health problems in the school emphasizing control of the school environment as an influence on mental health. Dynamics of behavior, personal and social maladjustments.

565 Production of Instructional Materials (3) Prerequisite: A basic 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 with ENGL 650, ENGL 651, or NVWP Summer Institute. A seminar designed to acquaint classroom teachers with current findings related to the composing process and methods of studying writing. Certificate in school psychology.

571 Role and Function of the School Psychologist (3) A survey of the roles and functions of the school psychologist within the educational environment. Certification serves as a professional standard of the school psychologist and is also considered along with current issues and trends.

579 School Psychologist Practicum (3) Prerequisite: Permission of the department. Students work in the field with a practicing school psychologist. Placement is in a school division. Students spend two days per week in the placement.

590 Educational Research (3) Development of skills, insights, and understandings basic to performing research, with major emphasis, however, on interpretation and application of research results. The primary focus is on criticism of research and use of findings in educational settings.

591 Education Statistics (3) An introductory course with emphasis on practical and applied aspects of statistics in education. Selected descriptive and inferential statistics. Statistical data processing.

598 Directed Reading, Research, and Individual Projects (1, 2, 3, 4, 5, 6) Prerequisites: Admission to a degree program in the Division of Education. By arrangement. Various subjects and projects; principally by directed study, discussion, research, and participation under the supervision of a member of the graduate faculty. No more than ten semester hours of EDUC 500, 508, and/or 600 may be applied to degree credit.

599 Thesis (6) Prerequisites: EDUC 590 and 591. The study of a significant problem of interest to the student, utilizing accepted research methods under the supervision of a member of the graduate faculty.

600 Workshop in Education (1, 2, 3, 4, 5, 6) Concurrency with one or more of the three workshops. Workshops dealing with selected topics in education, education tour seminars, etc. May be repeated. No more than six semester hours of EDUC 500 and/or 600 may be applied to degree credit.

602 The Art of Teaching: History and Philosophy of Instructional Styles (3) Prerequisite: Graduate standing in the Education Department or permission of the instructor. Examination of the history and philosophy of six teaching styles which represent current classroom practice in all subject matter areas. Analysis of philosophical descriptions of teaching from eras of educational thought and on the basis of the writings of Bronson Alcott, William James, John Dewey, Hamlin Garland, Jesse Stuart, Upton Sinclair, Jacques Barzun, Arthur Jersild, Max Rafferty, B. F. Skinner, and others. Emphasis on the development of authentic teaching skills and knowledge relative to the field of professional expertise.

611 Doctoral Projects Seminar (2) Prerequisite: Admission to candidacy and permission of the student's Doctoral Advising Committee. An independent study planned with approval of the student's Doctoral Advising Committee in which the student engages in a structured and directed study oriented to the development of professional expertise.

615 Doctoral Project Research (3-6) Prerequisites: Admission to candidacy in the Doctor of Arts in Education program, successful completion of the doctoral qualifying examination, and EDUC 590 or its equivalent. A seminar designed for the development of proposals for individual projects in the Doctor of Arts in Education program. May be repeated once. No more than 8 hours of EDUC 911 and EDUC 998 may be applied toward the minimum Doctor of Arts in Education degree requirements.

694 Advanced Internship in Education (3) Prerequisites: Admission to candidacy in the Doctor of Arts in Education program; and approval of the student's doctoral project committee. Development of an internship in a setting related but not identical to the student's major area of study. The internship requires a minimum of 100 hours completed over at least a five-week period. Each student works with a cooperating staff member in a cooperating school, school system, or other educational institution or agency, or in a setting that may differ from regular employment.

698 Doctoral Project Research (3-6) Prerequisites: Admission to candidacy in the Doctor of Arts in Education program, successful completion of the doctoral qualifying examination, and EDUC 590 or its equivalent. A seminar designed for the development of proposals for individual projects planned in EDUC 911 and the initiation of new projects. May be repeated. No more than 8 hours of EDUC 911 and EDUC 998 may be applied toward the minimum DA Ed degree requirements.

Education Courses

Administration/Supervision (EDAS)

611 School-Community Relations (3) The principles, philosophy, practices, and agencies involved in developing and maintaining desirable relationships between schools and the communities they serve.

612 School Organization (3) The structure and functioning of the school law needed by school administrators, supervisors, counselors, and others.

621 School Administration (3) Prerequisite: Teaching experience. Basic principles and practices of school organization and administration. Emphasis on the elementary, middle, and high schools with reference to state and district structures.

631 Supervision of Instruction (3) Prerequisites: Teaching experience and EDUC 650, 651, or 652. Elementary, middle, and high school specialization may be accomplished through options in reading and project issues.

789 Seminar in School Leadership (3) Prerequisites: EDUC 650, 651, or 652; EDAS 531 and 621; admission to the degree program in school administration and supervision; or permission of the department. Advanced study in school leadership for the evaluation and facilitation of instruction. Emphasis is placed on individual and group processes in supervision.

790 Practicum in School Administration and Supervision (3 or 6) Prerequisite: Permission of the program coordinator, admission to and completion of the graduate program except for practicum, or enrollment in the final term of the program. Students translate administrative and supervisory theory into practice through field experiences and intensive seminar inquiry. Placement is in elementary school, middle...
Education Courses

Elementary/Secondary (EDC)

511 Preparing the Pre-Elementary Environment (3) An advanced course in the general procedures, materials, and organization of environments for young children (infancy-kindergarten). Field experiences are required for students without previous teaching or administrative experience at the pre-elementary levels.

512 Home-School Relations in Pre-Elementary Education (3) Examination of the patterns and problems of family life for the purpose of improving communication between teachers and parents of young children.

513 Planning Growth Process in Pre-Elementary Education (3) Play viewed as an approach to teaching and learning. The play process is examined as an intellectual, social, and emotional function in children's development. Play is studied as an effective means of facilitating the growth of young children. Teachers learn skills applicable to the classroom.

514 Administering and Supervising Pre-Elementary Education (3) An analysis of concepts, principles, and issues in pre-elementary education. Students are exposed to the history of bilingual education, its present status, and its future direction. Current programs in bilingual education and their relationship with curricula in English as a second language are examined. An overview of classroom bilingual methodology is presented.

515 Introduction to Multicultural Education (3) A survey of the theories, concepts, principles, and techniques relating to the administration and supervision of pre-elementary education programs. Emphasis is placed on the director's role in staff recruitment, hiring, evaluation, and evaluation. Leadership and management techniques are also studied and analyzed.

517 Introduction to Bilingual Education (3) An analysis of the theories, concepts, principles, and issues in bilingual education. Students are exposed to the history of bilingual education, its present status, and its future direction. Current programs in bilingual education and their relationship with curricula in English as a second language are examined. An overview of classroom bilingual methodology is presented.

519 Methods of Teaching in Bilingual/English-as-a-Second-Language Settings (3) Examination of the various strategies which can be utilized by the teacher in Bilingual/English-as-a-Second-Language classrooms. Students analyze various conceptual models of instruction, study methods of second-language learning, and analyze the role of the teacher in the classroom. Materials and techniques utilized in the classroom are also studied.

567 (667) Teaching Social Studies in the Secondary School (3) An advanced course in the methods, materials, content, and organization of social studies programs in the secondary schools. Offered Spring semester only.

569 (669) Teaching English in the Secondary School (3) An advanced course in the methods, materials, content, and organization of social studies programs in the secondary schools. Offered Spring semester only.


573 (673) Teaching Science in the Secondary School (3) An advanced course in the methods, materials, content, and organization of science programs. Emphasis is placed on the development of different styles of teaching.

640 An Introduction to the Instructional Use of Microcomputers in Elementary and Junior High Schools (3) This course is designed to acquaint elementary and junior high school teachers with microcomputers. Teachers learn some beginning BASIC programming for the selected microcomputers as well as how to interact with and choose software programs available for classroom use. Attention is given to when and how to involve microcomputers in the classroom. Methods hands-on experience with actual microcomputers.

650 Curriculum Development in the Elementary School (3) Development of the curriculum in the pre-elementary education levels. Historical backgrounds; present programs; development of new programs; methods of implementing new programs; and evaluative methods and procedures.

651 Curriculum and Instruction in the Middle School (3) Development of curriculum in the middle school grades; historical backgrounds, present programs; development and implementation of new programs; program evaluation; instructional and organizational implications.

652 Curriculum Development in the Secondary School (3) Development of the curriculum in the secondary school; historical backgrounds, present programs; development of new programs; methods of implementing new programs; and evaluative methods and procedures.

657 Teaching Language Arts in the Elementary School (3) Study of methods, curricula, current issues, and research literature in English-language arts programs at the elementary school level. Emphasis is placed on recent innovations in methodology and the traditional concerns of the communication arts.

658 Teaching Social Studies in the Elementary School (3) Examination of the theories, concepts, principles, and techniques relating to the administration and supervision of social studies programs in the elementary school. An advanced course in the methods, materials, content, and organization of social studies programs in the elementary school.

660 The Diagnostic Teaching of Reading in the Elementary School (3) Prerequisite: A basic course in reading. An advanced course in the use of diagnostic techniques, diagnostic instruments, and evaluation to individualize the reading instruction in the classroom. Prerequisites: Designed for classroom teachers.

661 Literature in the Elementary School (3) Prerequisite: A basic course in children's literature. An advanced course relating to children's literature.

662 Teaching Music in the Elementary School (3) Prerequisite: A basic course in music for the elementary school. An advanced course in the methods, materials, content, and organization of music programs in the elementary school.

663 Teaching Science in the Elementary School (3) Prerequisite: A basic course in teaching science in the elementary school. An advanced course in the development of new programs; methods of implementing new programs; and evaluative methods and procedures.

666 Teaching Mathematics in the Elementary School (3) Study of the curricula, current issues, and research literature in elementary school mathematics. Analysis of current methodologies and goals of mathematics education at the elementary school level. Emphasis is placed on the development of different styles of teaching.

782 Seminar in Pre-Elementary and Elementary School Teaching (3) Prerequisite: An advanced course in the methods, materials, content, and organization of science programs. Emphasis is placed on the development of different styles of teaching.

783 Seminar in School Teaching (3) Prerequisite: Must have completed graduate program except for seminar, or be in final semester of program, or have permission of the department. Application of graduate coursework to instructional situations through discussion, projects, and reports related to practice and research.

Education Courses

Guidance and Counseling (EDGC)

604 Analysis of the Individual (3) Prerequisite: EDCU 531. Development of a framework for understanding the individual in counseling, including methods of gathering and interpreting data; choosing, administering, and interpreting career decision and growth tests; the study of individual differences; use of case study technique.

606 Counseling Theory and Practice (3) Prerequisite: EDCU 525 or 604. A study of the basic theories, principles, and techniques of counseling and their applications to counseling settings. Attention is given to supervised practice sessions.

607 Group Approaches to Analyses (3) Prerequisites: EDCG 606. Includes theories appropriate to various types of groups, as well as descriptions of group practices, methods, dynamics, and facilitative skills. Attention is given to supervised practice sessions.

610 Career and Educational Counseling (3) Prerequisites: EDCU 531, EDGC 604 and 606. Vocational choice theory, sources of occupational and educational information, approaches to career decision-making processes, and career development exploration techniques. Attention is given to application of theory to practice.

622 Theories, Principles, and Practices of Guidance in the Elementary School (3) Study of the basic philosophy and nature of guidance services in the elementary school situation. Emphasis is placed on the role of the guidance counselor in helping students meet the developmental needs of the elementary school pupil.

629 Organization and Administration of a Guidance Program (3) Prerequisite: EDCU 624 or 634. Prerequisites: Organization and administration of a guidance program with emphasis on the role and functions of school in various organizational programs, and the major services of the adequate guidance program.

634 Special Problems and Field Management (3) An introductory survey of guidance in the secondary school: definitions, scope, principles, historical background, organization, service, emerging trends and issues.

644 College Student Personnel Work (3) The introductory course for students interested in entering student personnel work at the college level. The study of organization, structure, and administration of personnel work in higher education. Structure, organization, and administration of services and programs.

646 College Students and Campus Groups (3) Prerequisite: EDCU 644. Study of the nature, characteristics, and needs of college students as they interact in groups which form student subcultures on campus. Analysis of college student development programs relating to campus groups, group activities, and development of student leadership.

684 Seminar in College Student Personnel Work (3) Prerequisites: EDCU 644 and 646. Current social and political issues in personnel work in higher education, including professional ethics and standards. Role of counseling, consulting, and collaborating with students and other educators in efforts to facilitate student development and self-understanding.

685 Guidance and Counseling in the Community Agency (3) Study of guidance and counseling services within community agencies. Emphasis is placed on the types of services and facilities provided, needs and problems of the clientele served, the role of the counselor, and the techniques of counseling and their applications to counseling settings and personnel needs of the individual agency.

690 Practicum in Guidance Counseling (3) Prerequisite: EDCU 644. An introduction to the major approaches to counseling and counseling settings. Case studies and simulations are used to help the student practice counseling skills through role plays and counseling in simulated settings.

658 Couples and Family Counseling (3) Prerequisite: EDCU 606. An introduction to the major approaches to counseling couples and families. Case studies and simulations are used to help the student practice the transition from theory to practice.

754 Pre-Practicum in Guidance and Counseling (3) Prerequisite: EDCU 606. Course focuses on the development of counseling skills through supervised counseling in both simulated and actual counseling experiences. Students are required to spend 150 hours as a volunteer in counseling settings and class meetings for presentations and analysis of counseling situations.

780 Practicum in Guidance and Counseling (3) A. Elementary; B. Secondary; C. Higher Education; D. Agency. Prerequisite: Admission to and completion of the graduate program except for practicum,
and permission of the program coordinator based on satisfactory academic standing and satisfactory level of counseling skill. Supervised practice of guidance and counseling in a setting similar to that in which students plan to work. (Elementary and secondary school practical open to certified personnel only. All other students are placed in a setting related to their career goals.)

**Education Courses**

**Reading (EDRD)**

559 Teaching Developmental Reading in the Elementary School (3) An advanced course covering the foundations of reading, principles, techniques, and materials for developmental reading programs in the elementary grades.

560 The Diagnostic Teaching of Reading in the Elementary School (3) Prerequisite: A basic course in reading. An advanced course in diagnostic techniques, diagnostic instruments, and evaluation to individualize the reading instruction in the classroom. Primarily designed for classroom teachers. This course is not suitable for those earning a master's degree with a reading specialty.

611 Remedial Reading (3) Prerequisite: EDRD 559 or 614. Nature and cause of reading difficulties; organization of remedial reading programs; use of remedial reading techniques, teaching centers, psychological and logical services, and innovative methods and materials.

613 Diagnostic and Evaluative Techniques in Reading (3) Prerequisites: Admission to graduate program in reading; EDRD 611 or 612; EDUC 537 or 591; and permission of the program coordinator. A technical course in diagnosing reading problems. Procedures in testing, scoring, and evaluating standardized and informal tests, individual and group tests, physical and psychological tests, and techniques of reporting the test results.

614 Teaching Reading in the Secondary School (3) A course for teachers in the secondary or in the intermediate schools. Reading in content areas; reading problems, diagnosis, remediation; skills and speed reading.

615 Teaching Reading in Multicultural/Multilingual Settings (3) A course designed to develop competence in reading with students from multicultural or multilingual backgrounds. Emphasis is placed on increasing the teacher's knowledge and understanding related to effective reading instruction for all learners. Particular emphasis is placed on issues, methods, techniques, innovative designs for teaching, problem areas, linguistic differences, pre-reading skills, and the psychological development of the child.

616 Teaching Reading to Adults (3) A basic course to acquaint the student with the history of adult education, assessment techniques, and reading methods and materials that meet the special needs of adult students.

617 Teaching Reading to the Gifted (3) Prerequisite: EDRD 559 or 614. A course dealing with the higher levels of student development including critical reading, advanced study skills, intellectual needs of the gifted, and literature and materials for enrichment programs.

790 Practicum in Reading (3 or 6) Prerequisites: Admission; and completion of the graduate program in reading except for practicum; or enrollment in the final semester of the program; and permission of the program coordinator. Supervised practice in the Educational Child/Youth Study Center, work with individuals and small groups using a variety of reading procedures. Participation in scheduled group sessions required.

794 Internship in Reading (3) Prerequisites: Admission to and completion of graduate program in reading except for practicum; or enrollment in the final semester of the program; and permission of the program coordinator. A program of supervised teaching and participation as a reading specialist in a public school system. Participation in scheduled group sessions required.

**Education Courses**

Special Education (EDSE)

630 Characteristics and Identification of Gifted (3) Study of characteristics associated with gifted and talented youth. Techniques and procedures for identification emphasized. Laboratory experience may be required.

561 Curriculum and Methods—Gifted and Talented (3) Study of teaching the gifted and talented with emphasis upon cognitive styles, strategies for developing creative thinking, and curriculum content modification. Materials for individuals with learning disabilities required. Students apply classroom management interventions in simulated and/or actual situations. Laboratory experiences may be required.

631 Socialization of the Handicapped in Regular Education (3) Survey of management/discipline theory and related socialization intervention techniques specifically applied to handicapped children and youth enrolled in regular education. Students apply classroom management interventions in simulated and/or actual situations. Laboratory experiences may be required.

641 Survey of Special Education (3) A comprehensive overview of exceptional individuals. Emphasis is on historical developments of definitions, characteristics, identification, incidence and legislation. This course provides a foundation for students of special education. Field observations and volunteer experiences are required.

643 Emotional and Behavioral Disorders of Children (3) Prerequisite: EDS 641 or permission of adviser. In-depth study of characteristics of individuals experiencing emotional and/or psychological disturbance. Implications for educational intervention are introduced. Field experiences are required.

645 Characteristics of Children with Learning Disabilities (3) Prerequisite: EDS 641 or permission of adviser. Study of medical and behavioral characteristics of children experiencing receptive, integrative, and/or expressive learning disabilities. Implications for educational intervention are introduced. Field experiences are required.

562 Curriculum and Methods—Mental Retardation (3) Prerequisite: Graduate status and approval of adviser. Study of educational programming for the mentally retarded; design, implementation, and evaluation of current educational practices associated with the behavioral and academic achievement of mentally retarded individuals to their highest potential. Concurrent experiences in Child/Youth Study Center required.

647 Medical and Health Aspects of Handicapping Conditions (3) Prerequisite: EDS 641 or EDUC 525 or permission of adviser. The nature and causes of disabilities; general characteristics of students experiencing handicapping conditions; identification of screening and evaluation techniques, treatment goals, and intervention procedures. Emphasis on educational implications.

648 Comprehensive Assessment in Special Education (3) Section A: Focuses on mildly and moderately handicapped. Section B: Focuses on severely handicapped and early childhood handicapped. Prerequisites: A basic course in tests and measurements; graduate status; and approval of adviser. Administration, scoring, and interpretation of a wide range of formal and informal education evaluation instruments with emphasis on the generated educational plan and written report. Experiences in Child/Youth Study Center required.

650 Precision Teaching for the Severely Handicapped (3) Prerequisite: Graduate status and approval of adviser. A practical and applied behavior analysis for instruction of handicapped children. A systematic approach to developing individual programs for teaching social, motor, self-help, readiness, and educational skills for handicapped children. Concurrent experiences in Child/Youth Study Center required.

651 Characteristics of Children with Crippling Conditions (3) Prerequisites: Holding or qualifying for Collegiate Professional Certificate and EDS 650 or permission of adviser. Study of the physiological, behavioral, and psychological characteristics of children experiencing crippling conditions. Implications for educational interventions are introduced. Field experiences are required.

652 Language Development and Disorders (3) Influence of conflicting theories concerning language acquisition; analysis of verbal and non-verbal communication; techniques of assessment; and strategies for language intervention.

653 Teaching Remedial Mathematics (3) Study of techniques for assessing and remediating difficulties in mathematics. Laboratory experience required.

654 Curriculum and Methods—Emotionally Disturbed (3) Prerequisite: Graduate status and approval of adviser. Study of the teacher's role in providing curricula, instructional approaches for developing academic skills and modifying behavior disorders. Emphasis on individualized programming procedures and clinical teaching techniques. Concurrent enrollment for one credit hour in EDSE 790: Internship, required.

657 Curriculum and Methods—Learning Disabilities (3) Prerequisite: Graduate status: EDSE 641 and 649, and permission of individual program coordinator. Group and individual programming procedures for children experiencing learning disabilities. Teaching strategies and techniques emphasized. Concurrent enrollment for one credit hour in EDSE 790: Internship, required.

659 Curriculum and Methods—Early Childhood (3) Prerequisite: Graduate status and approval of adviser. Emphasis placed on planning, organizing, and implementing educational programs for handicapped children ages two to eight years. Students are required to develop curricula designed for children having specific handicapping conditions. Focuses on planning, implementing, and evaluating programming procedures appropriate to the young child's needs. Concurrent enrollment for one credit hour in EDSE 790: Internship, required.

661 Curriculum and Methods—Severely Multi-Handicapped (3) Prerequisites: Approval status and approval of adviser. Emphasis on recognition of influence of handicapping conditions on learning processes and socialization; formulation, implementation, and evaluation of individualized educational programs for children having specific handicapping conditions; focus on development of self-care and educational skills of daily living. Concurrent enrollment for one credit hour in EDSE 790: Internship, required.

663 Seminar in Special Education: Severely Handicapped (3) Prerequisites: Permission of instructor. Topics include effective communication with parents, regional agencies, and non-school groups, and special education program administration for teaching social, motor, self-help, readiness, and academic skills. Field experiences required.

780 Comprehensive Programs in Special Education (1) Prerequisites: Approval of adviser and permission of Special Education Committee. This course is a culminating experience designed to synthesize course work and practical experience. It is structured around traditional comprehensive examination topics. Students elect two or three topics for which they develop position papers with hypotheses supported by research findings. The paper and reading list are prepared and distributed to class members prior to group reaction and debate discussion. A final examination concludes the course. This course replaces the traditional comprehensives and will be offered only in the fall and spring.

790 Internship in Special Education (1, 2, 3, 6) Prerequisite: Approval of the Special Education Committee. For field internship the student must have obtained grade lower than B in the following: ED—643, 649, 659; LD—645, 649, 657; MR—646, 649; ECH—647, 649, 657; SVHM—647, 649, 661. Supervised internship includes the design and implementation of an education program for handicapped youngsters in the following areas: emotional disturbance (ED), learning disabilities (LD), mentally retarded (MR), Early Childhood Handicapped (ECH), or Severely Multi-Handicapped (SVHM).

**Engineering Courses (ENGR)**

100 Introduction to Engineering (1) Introduction to the technological problems encountered in the engineering profession and the role of the engineer in soci-
English Courses (ENGL)

ENGL 101 is the usual prerequisite for ENGL 102.

With the approval of the department, international students may use ENGL 100 instead of ENGL 101 as the prerequisite for ENGL 102. Students may not receive credit for both ENGL 100 and ENGL 101.

100 Composition for Foreign Students (4)

A course for non-native speakers of English with limited proficiency in the language. Principles and practice of expository writing, with intensive drill in grammar, vocabulary, and principles of organization. A student must attain a minimum grade of C in order to have this course fulfill degree requirements.

101-102 Composition and Introduction to Literature (3, 3) Prerequisite: ENGL 101 or (100) is a prerequisite to ENGL 102. Expository writing, ranging from paragraphs to essays of some length and complexity. Students will learn the logical structure of expository prose. The methods and conventions of preparing research papers, and introduction to analysis and appreciation of major literary types. A student must attain a minimum grade of C in order to have these courses fulfill degree requirements.

Six credit hours of English in 100-level courses are prerequisites for all 200-level courses. Six credit hours of English in 200-level courses are prerequisites for all ENGL 300- and 400-level courses with these exceptions: (1) Students who have completed six credit hours of composition control in ENGL 310. (2) Non-degree students who have completed six credit hours of English composition may enroll in courses numbered 300-309.

Any English course numbered 200 or above, taken in any order, may be used to fulfill the general degree requirements in literature.

203, 204 Western Literary Masterworks (3, 3)

Great works of Western literature: 203: writers such as Homer, Sophocles, Euripides, Dante, Cervantes, and Flaubert; 204: writers such as Dostoyskii, Tolstoy, Mann, Camus, Malraux, Ionesco, and Beckett. All requirements for lower-division English majors.

205, 206 Readings in English and American Literature (3, 3) English and American literature by types. ENGL 205 focuses on selected English and American popular fiction, for example, Mark Twain's Adventures of Huckleberry Finn, 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 Lawrence, Hemingway, Faulkner, Melville, Crane, E. Bronte, Fitzgerald, and Barth.

251, 252 Survey of English Literature (3, 3) Major movements and works of English literature, focusing on the writings of such authors as Chaucer, Spenser, Shakespeare, Donne, Milton, Pope, Johnson, Wordsworth, Keats, Browning, Yeats, Eliot, and Joyce.

253 Survey of American Literature (3) Major literary movements and works of American literature, focusing on the writings of such authors as Franklin, Poe, Emerson, Whitman, Hawthorne, Melville, Dickinson, Twain, James, Crane, O'Neill, Hemingway, Eliot, Faulkner, Stevens, Lowell, Williams, Bellow, and Barth.

The Department of English offers ENGL 300-308 to encourage the study of literature, film, and writing by students not interested primarily in becoming English majors. These courses may be taken more than once for credit. International students may take up to six hours in the sequence for credit toward the major only with the permission of their advisors.

300 Introduction to Film (3) An introduction to the film medium as an art form.

301 Special Topics in Film (3) American and foreign films selected by type, period, or director with the emphasis varying from year to year. Emphasis may be placed on such directors as Griffith, Welles, Penn, Hitchcock, Bergman, Truffaut, and Antonion. Types could include the Western, the epic, the thriller, the situation comedy, the romantic comedy, and the experimental short. Required viewings, student discussion, and written critiques.

303 Significant Authors (3) One or two major authors, such as Shakespeare, Dickens and Hardy, or Tolstoy and C. S. Lewis, as announced in the catalog.

306 Science Fiction: A Critical Examination (3) A critical examination of major works of science fiction in terms of their historical, cultural, and philosophical context. Emphasis will be especially the role of science fiction in science fiction. The course focuses on novels and short stories from the early nineteenth century to the present.

307, 308 Special Topics in Literature (3, 3) A study of major topics such as women in literature, science fiction, and literature of the avant garde. The topic changes each time the course is offered.

309 Independent Writing (3) 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.)

310 Technical and Report Writing (3) Study and practice of technical and report writing. Intended for students in any major who are preparing for careers in government, industry, business, or academic administration.

313 Critical Approaches to Literature (3) Study in depth of a selected approach to literary criticism, as announced, with exercises in critical analysis. Examples: structuralism, post-structuralism, deconstruction, Marxism. This course may be repeated with permission of the department.

320 Myth and Symbol in Western Literature (3) A study of the traditional myths and archetypes of the past which have affected the development of Western literature. Sources such as the Bible, classical mythology, and primitive myths and rituals are studied as well as literary consciousness conditioned by folk institutions. Some myth theory is included.

330 American Folklore (3) Introduction to full range of American folkloric materials including folktales, personal narratives, legends, proverbs, folktales, jokes, folkliterature, folk art, folk craft, and folk architecture. Consideration given to ethnicity, community, family, festival, folklore in literature, and oral history. Discussion of traditions in students' own lives.

331 Literary Approaches to Popular Culture (3) A literary approach to the study of popular culture. Emphasis is placed on popular fiction and the adaptation of popular culture into the genres of journalism, romance, science fiction to media which have strong verbal and visual elements. The relationship between verbal and non-verbal elements of such media as film, comics, radio, and television is considered.

341 Chaucer (3) The major works of Chaucer, with emphasis on The Canterbury Tales.

342 Literature of the Middle Ages (3) Selected English narrative, dramatic, and homiletic literature written between 1300 and 1500 A.D. exclusive of Chaucer.


346 Spenser (3) A study of the major portion of the poetry of Edmund Spenser, with central emphasis upon The Faerie Queene.

351, 352 Shakespeare (3, 3) Twenty selected plays: First semester emphasizes histories and comedies; second semester, tragedies and romances.

353 English Renaissance Drama (3) Major dramas and dramatists of the English Renaissance, exclusive of Shakespeare.


355 Milton (3) Milton's major poetic works, with emphasis on Paradise Lost.

356 Restoration and Eighteenth-Century Drama (3) Restoration comedy of manners, sentimental comedy, neoclassical and bourgeois tragedy. Some emphasis on theories of drama, of staging, and on parallel developments in opera. Such writers as Wycherly,
Farquhar, Etheredge, Congreve, Dryden, Addison, Gay, Fielding, Goldsmith, and Sheridan are studied.

357 The Age of Romanticism (3) The development of English literature from the late eighteenth century to the middle of the nineteenth century, with emphasis on works of Dryden, Swift, and Pope.

358 The Age of the Romantic Century (3) Major American poets of this century, with emphasis on the works of Robinson, Frost, Stevens, Williams, Pound, Crane, Eliot, and Lowell. A work of fiction which employs poetical techniques, such as Joyce’s Ulysses, may also be studied.

370 English Novel of the Eighteenth Century (3) The English novel from its beginnings through the turn of the nineteenth century. Works by such authors as Defoe, Richardson, Fielding, Sterne, Smollett, Scott, and Austen are studied.

371 English Novel of the Nineteenth Century (3) The English novel of the nineteenth century. Works by such authors as Dickens, Thackeray, E. Bronte, Eliot, Trollope, Meredith, and Hardy are studied.

372 English Novel of the Twentieth Century (3) The English novel from the beginning of the twentieth century to the present, with such authors as Conrad, Ford, Bennett, Forster, Lawrence, Joyce, Woolf, Huxley, Greene, Orwell, Beckett, Lessing, and Murdoch are studied.

373 Literary Modes (3) The theory and practice of such modes as tragedy, comedy, tragicomedy, romance, and satire, considered in separate semesters and drawn from a variety of periods ranging from biblical times to the present. In addition to dramatic poetry, prose, and fiction, this course may be repeated with permission of the department.

374 English and Irish Drama of the Twentieth Century (3) English and Irish drama from Yeats to Pinter. Plays by such authors as O’Casey, Synge, Eliot, Frye, Osborne, Wesker, Behan, Delaney, and Pinter are studied.

375 376 Contemporary Drama (3, 3) Representa­tive plays of contemporary dramatists of Europe and America, with emphasis on dramatic styles such as realism, expressionism, and existentialism. Among the authors studied are Ibsen, Strindberg, Genet, Brecht, Shaw, O’Neill, O’Casey, Saroyan, Lorca, Ionesco, and Brecht.

377, 378 Selected Continental Novels in Transla­tion (3, 3) Selected major novelists from the eighteenth to the end of the nineteenth century, and includes works of such writers as Balzac, Gogol, Stendhal, Turgenev, Flaubert, Dostoevski, Tolstoy, and Galdos. ENGL 378 deals with the continental novel from the beginning of the twentieth century of the present and includes such writers as Proust, Mann, Gide, Sitke, Kafka, Sarre, Cela, Moravia, and Grass.

380 Recent American Short Fiction (3) An examination of the work of some of the finest American short story writers and novelists from World War II to the present, with emphasis on such writers asMailer, Barth, Hawkes, Cheever, Oates, Gass, and the coszki. Recent works by Vonnegut, Bellow, Nabokov, Updike, and O’Connor.

381 Colonial and Federalist American Literature (3) The works of the first 200 years of American literature, including Edwards, Franklin, Irving, Cooper, and Bryant.

382 Literature of the American Renaissance (3) The major writers of the American Renaissance (1830-1865), including the works of Emerson, Thoreau, Hawthorne, Melville, Whitman, and Poe.

383 American Jewish Writers (3) The study of major twentieth-century American Jewish writers, including works by Roth, Singer, Fried­man, Malamud, and Bellow.

384 Literature of the Modern South: 1920 to the Present (3) Novels, short stories, drama, poetry, and essays; this course is repeated with permission of the department.

385 American Poetry of the Twentieth Century (3) Major American poets of this century, with emphasis on the work of Robert Frost, Stevens, Williams, Pound, Crane, Eliot, and Lowell. A work of fiction which employs poetical techniques, such as Joyce’s Ulysses, may also be studied.

386 Literature of Black America (3) 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, Ellinson, Baraka, and Bullins are studied.

387 American Drama of the American Novel to 1914 (3) 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.

388 Development of the American Novel since 1914 (3) The American novel from the end of World War I to the present; the course includes the work of such authors as Fitzgerald, Hemingway, Faulkner, Dos Passos, Wolfe, Berry, Cather, Fitzgerald, Dreiser, and Pound.

389 American Drama of the Twentieth Century (3) American drama of the twentieth century, with special attention to the plays of Eugene O’Neill, Thornton Wilder, Arthur Miller, Tennessee Williams, and Edward Albee.

390 Recent American Poetry (3) Major American poets from World War II to the present, with emphasis on the work of such authors as Wilbur, Dickey, Lowell, Merwin, Kinnell, and Ammons.

391 General Linguistics (3) Introduction to general linguistics: phonics, phonemics, morphology, and syntax.

392 History of the English Language (3) Introduc­tion on historical principles to the development of the English language, including study of the Indo-European family of languages. Old English, Middle English, for­e­ign influences on the American language.

393 Selections from the Literature of the Indian Subcontinent (3) Selected modern works of the native literatures from the Indian subcontinent, including works of authors such as Tagore, Renu,改革委, Tawfiq, Ahmed, and Manto.

394 Japanese Literature in Translation (3) Selected modern works in translation from ancient and modern Japan, including works by authors such as Natsume Soseki, Fumio Kishida, and Natsume Tae. This course may be repeated with permission of the department.

395 Chinese Literature in Translation (3) Selected modern works in translation from ancient and modern China, including works by authors such as Lu Xun, Mao Dun, and Mencius. This course may be repeated with permission of the department.

396 Russian Literature in Translation (3) Selected major works of Russian literature, including works by authors such as Dostoevski, Tolstoy, and Chekhov.

398 Modern Drama (3) The development of the modern drama, with special attention to the work of such authors as Ibsen, Strindberg, and Brecht. This course may be taken a second time for credit.

400 Introduction to Creative Writing (3) Introduc­tion to the theory and practice of creative writing. A writing course for students who have taken ENG 398. This course may be repeated with permission of the department.

401 Film History and Theory (3) Prerequisite: ENGL 300: Introduction to Film, or ENGL 301: Special Topics in Film, or permission of the instructor. An introduction to the development of the modern cinematic practice and narrative conventions.

431 Medieval Intellectual Topics (3) This course is identical to HIST 431 and FRNL 431 and may be taken for English or French equivalent credit. Requisite: ENL 301. An examination of a selected topic in the intellectual history of the Middle Ages. The specific topic may vary from year to year. The primary emphasis is literary or historical, depending on the nature of the instructor. Relevant material drawn from philosophy, theology, and art may also be considered.

441, 442 Studies in English and American Liter­ary History (3, 3) Upper level seminar in depth on a selected literary topic, period, or genre, as announced. These courses may be repeated with permission of the department.

446 Selected Major English and American Writers Before 1900 (3) An intensive study of one or two major authors, such as Donne and Swift, or Melville and Twain as announced. This course may be repeated with permission of the department.

447 Selected Major English and American Writers of the Twentieth Century (3) An intensive study of one or two major twentieth-century writers, such as Joyce, Proust, or Elie Wiesel as announced. This course may be repeated with permission of the department.

464 Poetry Writing Workshop (3) Prerequisite: ENGL 398 or equivalent permission of the instruc­tor. 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 permission of the instruc­tor, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major. No more than a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENG 469 may take 464, 465, 466 up to a combined total of nine hours in all four courses.)

465 Fiction Writing Workshop (3) Prerequisite: ENGL 398 or equivalent permission of the instruc­tor. 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 fiction and study of the imagination in the creative process. Intended for students already writing original fiction. At the discre­tion of the instructor, technical exercises and assigned reading may be required. (By permission of the instruc­tor, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major. No more than a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENG 469 may take 464, 465, 466 up to a combined total of nine hours in all four courses.)

466 Special Topics in Creative Writing (3) Prereq­uisite: ENGL 301 or permission of the instruc­tor. 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 genre, with emphasis on the work of students already writing original fiction. At the discre­tion of the instructor, technical exercises and assigned reading may be required. (By permission of the instruc­tor, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major. No more than a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENG 469 may take 464, 465, 466 up to a combined total of nine hours in all four courses.)

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a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENGL 469 may take 464, 465, or 466 up to a combined total of nine hours in ENGL 464, 465, 466.

467 Advanced Expository Writing (3) Theory and practice of advanced expository writing: practice in analyzing and writing essays, articles, and other expository papers.

469 Seminar in Creative Writing (3) Prerequisite: Permission of the instructor. Intensive practice in the technique of creative writing and study of the nature of the imagination in the creative process. Normally the course concentrates on one literary type each time it is offered (for example, short story, poetry, play, and film-writing) and the concentration is announced before prerogistration. Intended for students already writing original literary forms. (By permission of the instructor, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major.)

470 Independent Study (1-3) Prerequisite: Permission of the department and the instructor. Open only to English majors with senior standing and 15 credit hours in English courses numbered above 300, including 300, 400, and 500-level courses. Intensive study of a particular author, genre, period, or critical or theoretical problem in literature or linguistics, to be conducted by an individual student in close consultation with an instructor. The course concentrates at least three hours and a half of work on an advanced literary type, subject, or theme. Open to students in the third and fourth semesters of their senior year. Must have departmental approval.

475 The Structure of Contemporary American English (3) A survey of the syntactic, semantic, and phonological structure of contemporary American English, including dialectical variation caused by region, race, sex, national origin, and historical evolution of the language.

503 Theory and Practice of Editing (3) Prerequisites: ENGL 203, 204, 260, 300, including one advanced writing course—309, 310, 397, 398, 464, 465, 466, 467—or permission of the department. A course in revising, editing, and preparing student writing for printing, stressing 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 or 6) Prerequisites: Open to senior English majors and graduate students pursuing the MA in English or the MFA. Contact the English Department one semester prior to enrollment. Internships are approved work-study positions in writing or editing established by the English Department with specific employers. Credit varies with each semester, as specified by the department. Course prerequisites vary according to the type of writing/editing position for which the student applies.

522 Modern English Grammar (3) Prerequisite: ENGL 111 or equivalent. A general introduction to the study of the characteristic structural features of current English usage. Special consideration is given to Standard American English, yet some attention is paid to regional and social dialectical variation. Syntactic and phonological structures are explored in depth with consideration given to how these structures can be taught to students of English as a second language.

530 Principles and Practice of Teaching Literature (3) Prerequisite: English 391, 620, or permission of the instructor. A study of the history and development of the science of linguistics. Important theories of language are surveyed including those of Saussure, Bloomfield, Chomsky, and others.

551 Literary Criticism (3) Studies of major critical theories and techniques with emphasis on the twentieth century.

555 Literary Style (3) The theory and practical analysis of English literary style. Several methodologies, including the impressionistic, the rhetorical, and the linguistic, are examined and then applied to the language of various literary texts, including essays, poems, and novels.

557 Old English (3) A study of the Old English language including its phonology, morphology, syntax, and lexicoid, aimed at preparing students to read Anglo-Saxon literature in its original form. The study of the language is accompanied by reading from Anglo-Saxon prose and poetry of the seventh through the eleventh 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 Rood, The Seafarer, and Judith, are read and translated.

564 Form of Poetry (3) Prerequisites: ENGL 464 or equivalent and permission of the instructor. 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 practice in the craft of fiction and poetry of the formal elements of poetry through analysis of models and in the formal elements of poetry through analysis of models and in weekly or biweekly writing assignments. Assigned for students already writing original poetry. During the semester students study rhyme, meter, rhythm, and other musical elements of language, lineation, stanza pattern, traditional and experimental forms, free verse and open form composition, lyric, narrative and dramatic modes.

565 Form of Fiction (3) Prerequisites: ENGL 465 or equivalent and permission of the instructor. 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 craft of fiction and poetry of the formal elements of poetry through analysis of models and in weekly or biweekly writing assignments. Assigned for students already writing original fiction. During the semester students study style, language, lineation, stanza pattern, traditional and experimental forms, free verse and open form composition, lyric, narrative and dramatic modes.

567 Literary Criticism (3) A workshop course: Intensive study of the linguistics of teaching English as a second language, especially as they relate to the English language, supplying students with methods of teaching English to speakers of other languages.

580 Applied Linguistics (3) Prerequisite: ENGL 391 or permission of the instructor. A study of the applied linguistics of teaching English as a second language and language and literature. Specific attention is given to the linguistic foundations of teaching English as a second language, the findings of linguistics with regard to composition instruction, and the ways in which linguistics can support the teaching of literature and literary style.

581 PSYC 581 Psycholinguistics (3) Prerequisite: Six hours of psychology credits. A study of the linguistic aspects of human language, language acquisition, verbal concept formation, and perception.

610 Proseminar in Teaching the Reading of Literature (3) Prerequisite: Two units in methods of instruction. An in-depth study of the methods of approaching the study of the various methods of literary analysis and the most effective ways of developing student responses to literature, with some classroom practice. (This course does not satisfy the state of Virginia certification requirements in diagnostic or developmental reading.)

614 Technical and Scientific Writing (3) Prerequisites: English 391, and two units in methods of instruction. An intensive study of the theory and practice of technical and scientific writing, with special emphasis on writing for a variety of audiences. The course focuses on writing and evaluating formal reports, articles for lay audiences, and technical audiences, proposals, theses, manuals, and other forms of technical prose.

615 Proseminar in Composition Instruction (3) A study of the theory and practice of instruction and evaluation of the writing process. Consideration of the planning of courses, practice in teaching and in grading papers, and study of the laboratory method of instruction.

616 Writing of Nonfiction (3) The writing of original essays, biographies, documentaries, reports, and other forms of nonfiction.

617 Poetry Writing Workshop (3) Prerequisites: ENGL 391, and permission of the instructor. 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 creative process. Intended for students already familiar with traditional and contemporary poetic forms and techniques. At the discretion of the instructor, reading may be required.

618 Fiction Writing Workshop (3) Prerequisites: ENGL 565 or equivalent and permission of the instructor. 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 fiction and study of the creative process. Intended for students already familiar with traditional and contemporary fiction and already writing original fiction. At the discretion of the instructor, reading may be required.

619 Special Topics in Writing (3) Prerequisites: Two graduate writing courses and/or permission of the instructor. 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, the essay, playwriting, film-writing, children’s literature, and creative nonfiction). The instructor, reading may be required. The concentration will be announced in the Department’s Course Description Booklet before pre-registration. Intended for students already familiar with the type.

620 Descriptive Linguistics (3) An introduction to the terminology and methodology of modern linguistic science, and a detailed structural analysis of English phonology, morphology, syntax, and semantics.

621 Applied Linguistics: Teaching English as Foreign Language (3) Prerequisite: Linguistics (descriptive or historical, graduate or undergraduate). Theory and practical basis of English as a second language, especially as they relate to the English language, supplying students with methods of teaching English to speakers of other languages.

625 Studies in English Medieval Literature (3) Selected literary authors, works, or movements, generally excluding Chaucer, from between 1300 and 1500. Content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:

A Middle English Lai and Romance
B Medieval Drama
C The Poetry of Medieval England (excluding lai and romance)

630 Studies in English Renaissance Literature (3) Selected literary authors, works, or movements, generally excluding Shakespeare and Milton, of the English Renaissance. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:

A Sexual Inclinations of Eighteenth-Century Poetry
B Prose, and Drama
C Education and Self-Realization in Eighteenth-Century Literature
D The Augustan Age
E Johnson and the Circle
F Sympathy, Selfishness, and Self-Realization in English Literature
640 Studies in Nineteenth-Century English Literature (3) Selected English literary authors, works, or movements of the nineteenth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Major Victorian Poets
B The Byronic Mode
C Novels of Maturation
D The Morality of Sin
E The Victorian Novel
F Romantic Visionary Poets
G Jane Austen, Charlotte Bronte, George Eliot
H Romantic Self-Consciousness

645 Studies in Twentieth-Century English Literature (3) Selected English literary authors, works, or movements of the twentieth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A The Theatre of Cruelty in Recent British Drama
B Developments Since World War II in English Literature
C Contemporary English Drama
D The Development of the British Novel to World War II

650 Studies in Seventeenth- and Eighteenth-Century American Literature (3) Selected literary authors, works, or movements of early colonial and American literature. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A The Bible in Early American Literature
B The "Pilgrims" and the "Wilderness"
C The Puritan in America
D The Development of American Literature: 1650-1914
E The Novel and American Society

660 Studies in Twentieth-Century American Literature (3) Selected American literary authors, works, or movements of the twentieth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Literature of the Thirties
B The American Drama of the Thirties
C The American Naturalistic Novel
D Contemporary American Experimental Fiction
E American Social Drama of the Twenties and Thirties
F The Federal Theatre Project
G Gothicism in Southern Literature
H Physics and Metaphysics in the Modern Novel
I Women in the American Theatre: Playwrights, Directors, Actresses
J The Wasteland Theme in American Literature

685 Selected Topics, Movements, or Genres of Literature in English (3) Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Literary Modernism
B The Unconscious in Twentieth-Century Literature
C Romantic Theories of Myth
D Popular Culture and Literature
E Modern Autobiography
F Cultural Issues in Canadian and American Literature
G Golly and Nonsense
H Studies in Folklore and Folklore
I Experiment and Tradition in American Literature in the 1920s

695 EDUC 695 Northern Virginia Writing Project Inservice Program (1, 2, 3) Prerequisites: Admission to the graduate program or permission of the department. Offered at the request of a school district or other education agency. Content of the course varies. This course may be repeated for credit with the permission of the department, but no more than six semester hours of credit in ENGL 695 and/or ENGL 699 may be applied toward a master's degree in English.

696 EDUC 696 Northern Virginia Writing Project Teacher/Researcher Seminar (3) Prerequisites: ENGL 695/EDUC 696 or NWPP Summer Institute. A seminar designed to acquaint classroom teachers with current findings related to the composing process and methods of studying writing. The primary focus is on the development of a proposal investigating some aspect of the composing process. Teachers who have developed a proposal prior to enrolling will conduct the research during the course.

699 Workshop in English (1-3) Prerequisite: Admission to the graduate program or permission of the department. Concentrated workshops, educational tours, and special seminars dealing with selected topics in writing, linguistics, film, the electronic media and literature written in English. All tours are optional and may be replaced by specified work conducted on campus. This course may be repeated for credit with the permission of the department, but no more than six semester hours of credit in ENGL 699 may be applied toward a master's degree in English.

701 Literary Scholarship (3) The methods and purposes of literary research, including study of library methodology, use of critical bibliographies, techniques of textual criticism, and the evaluation of various approaches to literary history.

705 Literary Theory and Criticism (3) The major theories of literature and methods of analyzing and evaluating literary works. Specific content varies and is announced before registration. This course may be repeated for credit with the permission of the department.

707 Seminar in Shakespeare (3) Intensive study of the achievement of Shakespeare and the major critical approaches to this work. This course may be repeated for credit with the permission of the department.

775 Seminar in Major Figures of English Literature After 1800 (3) Intensive study of the work of one or two major figures of English literature after 1800. Specific course content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department.

780 Seminar in Major Figures of American Literature (3) Intensive study of the work of one or two major figures of American literature. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department.

European Studies Courses (EUST)

300 Foundations of European Civilization (3) Prerequisite: At least sophomore standing or permission of the instructor. 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) Prerequisite: EUST 300 or permission of the instructor. 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) Prerequisite: EUST 300 or permission of the instructor. An examination of how the arts interact in reflecting historical, intellectual, and aesthetic aspects of nineteenth- and early twentieth-century European culture.

Finance Courses (FNAN) School of Business Administration

Effective Fall Semester 1981, non-core, 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 and may not be used as general elective credit if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

320 Financial Management (3) Prerequisites: ECON 103, 104; ACCT 201, 202; and DESC 202. An introduction to the management of the financial resources and obligations of the firm. The major financial management functions of financial planning and con-
615 Literary Theory and Criticism (3) Study of the nature of the literary work; analysis of contemporary critical approaches to literature.

French Courses (FREN)

Foreign Languages and Literatures

Placement: See Academic Policies and Procedures. 151, 152 Elementary French (4, 4) Basic grammar, oral expression, listening and reading. Laboratory instruction, and elementary reading and writing. Language laboratory instruction is an integral part of the course. FREN 151 and 152 must be taken in sequence. Four classroom hours, two laboratory hours per week.

153 Review of Elementary French (4) Intensive review of elementary French, including basic grammar, aural training, the development of oral skills, and reading and writing proficiency. Language laboratory instruction is an integral part of the course. FREN 153 may not be taken for credit in combination with 151 or 152. Four classroom hours, two laboratory hours per week.

251 Intermediate French (4) Prerequisite: FREN 152 or 153 or equivalent. Intensive review of grammar, practice in writing; development of reading proficiency and of aural and oral skills; study of the life and culture of French-speaking countries. Language laboratory instruction is an integral part of the course. Four classroom hours, two laboratory hours per week.

252 French Conversation (3) Prerequisite: FREN 251 or equivalent. Development of oral proficiency in French. Discussion of selected topics touching on practical aspects of everyday life. Enrollment limited to 15 students.

255 French Literary Masterpieces (3) Prerequisite: FREN 251 or equivalent. Reading of selected works in the original language. Students may elect to take their examinations in English. Course may be repeated for credit with prior approval of the department.

329 Problems of Western Civilization in French Literature (3) Prerequisite: FREN 255 or equivalent. Examination of a selected topic in the intellectual history of the Middle Ages. The specific topic may vary from year to year. Primary emphasis is literary or historical, depending on the discipline of the instructor. Relevant material drawn from philosophy, theology, and art may also be considered.

450 Methodology of Foreign Language Teaching (3) Prerequisite: GER 165 or 420 for Spanish majors; FREN 355 or 461 for French majors; SPAN 320 for Spanish majors; or permission of the instructor. Study of the major theories and methods of foreign language teaching. Practical application of these theories to the specific activities of the classroom. This course is cross-listed as EDUC 450.

570 Foreign Language Learning and Teaching (3) An advanced course in the theories, methods, and strategies of second and foreign language learning and teaching.

600 Workshop in Foreign Languages (1, 2, 3, 4, 5, 6) Prerequisite: Graduate standing or permission of the instructor. Concentrated workshops, educational tours and special seminars dealing with selected topics in literature, language, bilingualism, culture, methodology, etc. will be arranged with the permission of the department, but no more than six semester hours of credit in FRLN 600 may be applied toward a master's degree.

Foreign Language Courses (FRLN)

431 Medieval Intellectual Topics (3) This course is identical to ENGL 431 and HIST 431 and may be taken for credit toward the requirements of Area Studies for the Baccalaureate degree. Examination of a selected topic in the intellectual history of the Middle Ages. The specific topic may vary from year to year. Primary emphasis is literary or historical, depending on the discipline of the instructor. Relevant material drawn from philosophy, theology, and art may also be considered.

450 Methodology of Foreign Language Teaching (3) Prerequisite: GER 165 or 420 for Spanish majors; FREN 355 or 461 for French majors; SPAN 320 for Spanish majors; or permission of the instructor. Study of the major theories and methods of foreign language teaching. Practical application of these theories to the specific activities of the classroom. This course is cross-listed as EDUC 450.

570 Foreign Language Learning and Teaching (3) An advanced course in the theories, methods, and strategies of second and foreign language learning and teaching.

600 Workshop in Foreign Languages (1, 2, 3, 4, 5, 6) Prerequisite: Graduate standing or permission of the instructor. Concentrated workshops, educational tours and special seminars dealing with selected topics in literature, language, bilingualism, culture, methodology, etc. will be arranged with the permission of the department, but no more than six semester hours of credit in FRLN 600 may be applied toward a master's degree.
strucror. The poetry, theatre, and novel of the Realist, Naturalist, and Symbolist movements. May be taken toward fulfillment of the general requirement in litera-
ture for baccalaureate degrees.

441 Twentieth-Century Prose Fiction (3) Prerequi-
site: 15 semester hours of French or permission of the instructor. Principal literary trends in contemporary French literature will be examined through the ex-
ample of the novel from Proust and Gide to Beckett and the "Nou-
veau Roman." May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

442 Twentieth-Century Drama and Poetry (3) Prerequi-
site: 15 semester hours of French or permission of the instructor. French drama from Surrealism to the "Nouveau Theatre" and poetry from Symbolism to contemporary poets. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

450 Methodology of Foreign Language Teaching (3) Prerequisite: FREN 330 or 461 for French majors; or permission of the instructor. Study of the major theories and methods of foreign language teaching. Practical application of these theories to the specific activities of the classroom.

451 Writers of French-Speaking Africa and the Carib-
bean (3) Prerequisite: 15 semester hours of French or permission of the instructor. Study of selec-
ted poems, plays, tales, and novels expressing the culture and aspirations of the peoples of Africa and the Caribbean. Such authors as Senghor, Cesaire, Bozeat, Dany Laferriere. May be taken towar-
d fulfillment of the general requirement in literature for baccalaureate degrees.

461 Linguistic Structure of Modern French (3) Prerequi-
site: 15 semester hours of French or permission of the instructor. A descriptive analysis of the phonology, morphology, and syntax of modern standard French. Optional laboratory work.

480, 481, 482, 483 Special (3) Prerequisites: 15 hours of French or permission of the instructor. Study in depth of a selected literary topic, period, or genre, as announced. These courses may be repeated for credit with permission of the instructor.

490, 491 Independent Study (1-3, 1-3) Prerequi-
site: Senior standing as a major in French and permission of the department chairperson. Research and analysis of a selected problem in literature or linguistics in consultation with a member of the faculty. A maximum of six hours of independent study may be applied to fulfillment of requirements in the major.

497, 498 Senior Honors Tutorial (3, 3) Prerequi-
site: Senior standing as a major in French, with an overall grade point average of 3.00 and 3.00 in the major field. Students who meet these requirements are admitted to the Honors Tutorial in French by permission of the Honors Committee in the second half of the junior year, supported by a faculty re-
commendation. An interview with the Honors Committee is required. Open to the falls of an academic year, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the French faculty. In the second semester, independent research and completion of an honors essay under the supervision of a member of the French faculty.

515 Medieval French Literature (3) Intensive study of the outstanding literary works of the Middle Ages. All course work in French.

517 Studies in Seventeenth-Century Literature (3) Selected writers, works, themes, or trends of French literature in the classical era. Specific topic may be announced in Schedule of Classes. All course work is in French.

525 Studies in Modern French Literature (3) Se-
lected writers, works, themes, or trends of French literature in the modern era. Specific topic content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. A maximum of six hours of credit may be applied toward the baccalaureate degree in French.

550, 551 Special Topics (3, 3) This course con-
centrates on a specialized topic relating to French culture and literature. The specific topic, theme, or genre var-ies from semester to semester and is announced before regi-
stration. All course work is in French.

560 History of the French Language (3) Evolution of the French language from Latin to present-day French.

570 Foreign Language Learning and Teaching (3) An advanced course in the theories, methods, and strategies of second and foreign lan-
guage teaching. An oral or written examination in foreign language learning and teaching. An oral or written examination in foreign language learning and teaching.

580 Literary Theory and Criticism (3) Study of the nature of the literary work; analysis of contempo-
rary approaches to literature.

798 Directed Research (3) Prerequisite: Open only to degree students who have com-
pleted at least 18 credit hours. Reading and research on a specific project, under the direction of a depart-
ment, on the approval of the instructor.

799 Thesis (3 or 6) Students who take FREN 798 and then elect the thesis option receive three credits for FREN 799 upon completion of the thesis. Students will write and defend a thesis. Students may elect to write six credits for FREN 799 upon completion of the thesis.

800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to Ed stu-
dents admitted to a major field. Students must obtain the approval of the instructor to other students. The student presents a research paper in a subsequent DAEd summer seminar. This course may be repeated as required by a student's program.

Geography Courses (GEOG)
Public Affairs
101 Major World Regions (3) A geographic analy-
sis of the patterns, problems, and prospects of the world's principal human-geographic regions, including Africa, the Middle East, Latin America, and the Soviet Union. Emphasis is upon the causal factors of areal differentiation and the role geographic differ-
ences play in the interpretation of the current world sit-
uation.

102 Physical Geography (3) Interrelated process affecting the global distribution and character of climate, soils, vegetation, hydrography and landforms, and the global distribution of living organisms. May be taken toward fulfillment of the general requirement in geography for baccalaureate degrees.

103 Cultural Geography (3) Study of relationships between geography and human population distribution, cultural patterns, and economic development.

110 Maps and Map Reading (3) Introduction to con-
cepts and techniques of map reading, map interpreta-
tion, map analysis, and orientation. Major types of maps and other spatial imagery, their sources, and their use.

199 America Before Columbus (1) A survey of the geography of North and South America before the landing of Columbus. This course studies the regional physical and human geography of the Americas, including the cultural geography of the Native Americans.

201 Geography of Latin America (3) A regional survey of physical resources, populations, cultural characteristics, and economic activities in Latin America.

206 Introduction to Meteorology and Climate (3) Elements of meteorology; analysis of world distribution of meteorological controls as the bases of regional cli-
matetic variations.

220 Geography of the United States and Canada (3) A study of the great diversity of physical and cultural landscapes in the United States and Canada, emphasis on the role of environment in shaping patterns of human geography. May be taken toward fulfillment of the general requirement in geography for baccalaureate degrees. May be taken toward fulfillment of the general requirement in geography for baccalaureate degrees.

220 Geography of Europe (3) A study of the envi-
ronmental, economic, social, and political factors influ-
encing the regional structure of Europe. The effect of the new European Economic and Social Community (E.E.C., COMECON) upon the urban network, the regions, and their relationships emphasized.

225 Geography of North Africa and the Middle East (3) Study of the major physical, economic, and social factors of differentiation of the regional structure and distribution of resources in the North African and Middle Eastern countries.

234 Survey of the Soviet Union (3) Analysis of the geographic factors involved in the history, eco-
omic development, and geopolitical situation of the Soviet Union. Ethnic diversity and population problems in a multinational state are stressed.

280 Geography of Virginia (3) An introduction to the natural and cultural forces which molded the land-
scape of the state of Virginia. Study of the regional maps of Virginia and the particular environmental and human characteristics of the regions.

303 Political Geography (3) Prerequisite: Sopho-
more standing or higher. An analysis of the geopolitical factors involved in the political division of the earth's surface. The course examines the structures and processes involved in the creation of political spheres of influence. May be taken toward fulfillment of the general requirement in geography for baccalaureate degrees.

304 Geography of Population: Patterns and Pro-
blems (3) Prerequisite: Sophomore standing or higher. Study of the spatial distribution of population, its causes and effects, and of the changing patterns resulting from population mobility. Emphasis on spatial characteristics of variables such as age, sex, race, education, and income, and on such issues as crowding and poverty are viewed in the spatial context.

305 Economic Geography (3) Prerequisite: Sopho-
more standing or higher. An analysis of the pattern of distribution of world economic activity. May be taken toward fulfillment of the general requirement in geography for baccalaureate degrees.

401 Cartography (3) Prerequisites: MATH 252, 256 or equivalent; course in introduction of the cartograph-
y and cartography. The fundamental principles and methods of map-making. Exercises in the collection, analysis, and cartographic portrayal of geographic data. Two lecture hours, three laboratory hours.

409 Selected Topics in Geography (3) Prerequi-
site: Open to geography majors and by permission of the instructor to other students. Course content varies from semester to semester according to the regional or systematic specialty of the faculty member.

406 Suburban Geography (3) Prerequisite: Sopho-
more standing or higher. An analysis of the spatial aspects of suburbanization from both the perspec-
tives of the individual and the problems of ethnic groups within suburbs. Suburbanization is viewed both as an independent force and as a component of the larger urbanization process. Northern Virginia is utilized as a laboratory for a cartographic study and student-initiated fieldwork projects.

411 Introduction to Computer Cartography (3) Prerequisite: Junior standing or higher. An intro-
duction to the basic concepts and techniques involved with production and utilization of computer-generated cartography. The course emphasizes the need for graphic representations of manipulated data when the volume of data is too large for manual computer.

412 Aerial Photography Interpretation (3) Prerequi-
site: Junior standing or higher. An introduction to the technology of gathering and managing information through the use of aerial photography. Study of the methods and techniques of interpreting and using information contained in aerial photography and the applications of these techniques to problems of land use analysis.

413 Photogrammetry (3) Prerequisites: Junior stand-
ing and a college course in mathematics or physical science. Study of the principles and physical processes involved in terrestrial measurement and mapping with remotely sensed imagery. Particular emphasis is given to current technology and applica-
tions in land use, economic, and thematic mapping.

415 Seminar in Geography (3) Prerequisite: Open to junior or senior geography majors. Offers the stu-
dent an opportunity to integrate previous coursework

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into a comprehensive disciplinary framework and to do in-depth study of some particular aspect of geography. The format varies from semester to semester but stress always focuses on readings of the most recent literature, history, and research techniques of the discipline.

480 Internship (2-5) Prerequisite: Open to authorized seniors only. Internships are approved work-established by the department with specific employers. Credit is suited to individuals as determined by the department. Contact the department one semester prior to enrollment.

503 (403) Problems in Environmental Management (3) Prerequisite: Six hours of geography, including GEOG 102. Man's role as steward of the natural environment. Case studies of the impacts of human activities on atmospheric, hydrologic, geomorphic, and biotic processes.

505 (405) Transportation Geography (3) Prerequisite: Six hours of geography, including GEOG 102. Application of mathematical and statistical methods to the problems of traffic problems, cost analysis, and transportation. The course stresses the critical role of transportation in moving people, goods, and ideas at the international, national, and urban levels.

520 Geography for Teachers (3) Prerequisites: Graduate standing or permission of the instructor. Emphasis on problems in teaching geography and on new teaching techniques, as well as on current developments in research, methodology, and philosophy in the discipline. Evaluation of curriculum materials from various sources. Lecture, discussion, library research, preparation, and projection.

583 Statical Dynamics of Political Systems (3) Prerequisites: Statical Dynamics of Political Systems. Topics include territory, re-apportionment, spatial allocation of public facilities, perception of boundaries. Emphasis on the spatial impact of political process upon land use.

621 Human Ecology of the City (3) Prerequisite: Graduate standing. This course introduces the graduate student to urban ecology. The origin and development of various types of cities; the shape and structure of urban areas; the inner and outer city and spatial patterning of urban institutions are among the areas covered in this course.

670 (570) Applied Climatology (3) Prerequisites: A course in physical geography and atmospheric science. The factors controlling the weather pattern of the earth and the processes acting upon it. Laboratory includes analysis of weather maps and identification of weather systems.

671 (571) Applied Geomorphology (3) Prerequisite: Graduate standing and a course in Climatology. Application of physical geography and climatology to the development of landform by geological and biological factors. One period of laboratory and one period of field work.

674 (574) Environmental Impact Analysis and Statement Preparation (3) Prerequisites: Graduate standing or permission of the instructor. A thorough treatment of the scientific and administrative processes involved in environmental impact analysis and preparation of Environmental Impact Statements.

680 (580) Economic Geography and Methodology (3) Prerequisite: Graduate standing or permission of the instructor. Examination of the historical development of geography and the current philosophies of geography. Analysis of the instruments of the discipline's methods and how they are applied. Role of geographic techniques and methods of analysis are studied. Concept of region as both a tool and an object of study is analyzed.

681 (581) World Food and Population in Geographical Perspective (3) Prerequisites: Graduate standing or permission of the instructor. Study of spatial aspects of world food problems, with emphasis on the distribution of population, regional disparities in growth rates and income distribution, food production and world hunger, areal concentrations of ethnic minorities. Discussion of the growth and distribution of population policies with emphasis on Third World countries.

684 (584) Applied Economic Geography (3) Prerequisites: Baccalaureate degree or permission of the instructor. Study of the factors and patterns of location of economic activity, its theories and regional systems. Special emphasis on case studies.

690 (590) Selected Topics in Geography (3) Prerequisites: Baccalaureate degree or permission of the instructor. This course is designed to analyze topics of immediate interest and, for that reason, the content varies. The particular topic for any semester is a result of the interest of the instructor and the expertise and interest of the students. The course may be repeated for credit.

785 (585) Geographic Fieldwork and Quantitative Methods (3) Prerequisites: Baccalaureate degree or permission of the instructor. Scope and objectives of geographic field methods and techniques, including use of base maps, acquisition of data, field research design. Survey of questionnaire design and analysis and of statistical techniques of geographical distributions, network analysis, and spatial transformations.

795 (595) Seminar in Regional Analysis (3) Prerequisites: Baccalaureate degree or permission of the instructor. Analysis and synthesis of physical and cultural elements of geography in a selected region. This course should be taken near the end of the master's degree program and should provide an opportunity for the student to apply selective knowledge gained in previous systematic courses to a specific region.

303 Thesis (3 or 6) Prerequisite: Degree candidacy and departmental approval of thesis proposal.

Geology Courses

Chemistry

101 Physical Geography (4) Survey of the geologic features of the earth—its rocks and minerals, its surface features, and the processes acting upon it and within the earth's crust. This course, together with GEOG 102, satisfies the eight-hour laboratory science requirement for the BA degree. The laboratory may include one or more weekday or weekend field trips. Two lecture hours, three laboratory hours.

102 Historical Geology (4) A study of the history of earth, including its life, ancient and modern, and the universe, as revealed through a sequence of events. Three lecture hours, three laboratory hours.

103 Geology of National Parks (2) This course is designed to analyze topics of immediate interest and, for that reason, the content varies. The particular topic for any semester is a result of the interest of the instructor and the expertise and interest of the students. The course may be repeated for credit.

104 Introduction to Field Geology (2) Prerequisite: GEOG 101. This course consists of four weekend trips (7 a.m. Saturday through 5 p.m. Sunday) to selected localities. The emphasis is on the processes that are used to examine the geologic features in the Coastal Plain, the Piedmont, the Blue Ridge, and the Valley and Ridge Province. The course includes campfire discussions (permission), and students must pay a transportation fee.

105 Geology of Virginia (2) This course deals with the geology, geomorphology, physiography, geological history, and economic geology of Virginia. One weekend field trip. Two lecture hours.

106 Environmental Geology (3) A study of the interrelationships between man and the earth and an introduction to the concepts in environmental geology. One or more natural science courses, including any of the sciences, are required to environmental problems. The course includes topics such as the geological causes and effects of natural disasters, the geology of natural resources, aspects of geologic planning, and geology as related to health problems. Three lecture hours.

201 Mineralogy (4) Prerequisite: GEOG 101. 102. The genesis of minerals and their crystallographic classification. Identification of minerals according to their optical properties. Three lecture hours, three laboratory hours.

202 Invertebrate Paleontology (3) Prerequisite: GEOG 101. 102. The classification, evolutionary trends, and distribution of the common invertebrate fossils. Laboratory work includes field collection of fossils, their preparation and identification. Two lecture hours, three laboratory hours.

204 Geomorphology (3) Prerequisites: GEOG 101 or GEOG 102. The study of processes that occur at the earth's surface and the landforms that result from these processes, including the recognition, description, and analysis of landforms from pictures, maps, and aerial photos. One or more weekend field trips. Two lecture hours, three laboratory hours.

205 Hydrology (3) Prerequisites: GEOG 101 or GEOG 102. Three laboratory hours. Laboratory work includes one or more weekend field trips to structurally deformed part of the Appalachian Mountains. Two lecture hours, three laboratory hours.

207 Structural Geology (3) Prerequisite: GEOG 101, 102, 201, or 303, or permission of the instructor. Principles of structural geology and their application to selected problems. One or more weekend field trips. Two lecture hours, three laboratory hours.

209 Stratigraphy (3) Prerequisite: GEOG 101, 102, 201 or 303, or permission of the instructor. Principles of stratigraphy and their application to selected problems. Six laboratory hours. One weekend trip to the Atlantic coast. Three lecture hours.

210 Optical Mineralogy (4) Prerequisite: GEOG 101, 102, 201, or 303, or permission of the instructor. Principles of optical mineralogy and their application to selected problems. Six laboratory hours. One weekend trip to the Atlantic coast. Three lecture hours.

309 Organic Geology (3) Prerequisite: GEOG 101, 102, 201. The origin, description, and classification of sediments and sedimentary rocks and their economic importance. The laboratory includes techniques for the analysis of sedimentary rocks. One or more weekend field trips. Three lecture hours, two laboratory hours.

310 Microscopic and Palynology (3) Prerequisite: GEOG 101. 102, 201. or 303, or permission of the instructor. Principles of microscopic and palynology and their application to selected problems. Six laboratory hours. Two lecture hours.

312 Soil Mechanics for Geologists (3) Prerequisite: GEOG 101, 102, 301, or permission of the instructor. This course is designed to acquaint the student with the field and laboratory techniques for investigating the mechanical properties of soil, including its origin, structure, mineralogy, strength, compressibility, and permeability. Applications to construction problems are presented. Three lecture hours, three laboratory hours.

317 Micropaleontology (3) Prerequisites: GEOG 101, 102, 201, or permission of the instructor. This course is designed to acquaint the student with the field and laboratory techniques for investigating the mechanical properties of soil, including its origin, structure, mineralogy, strength, compressibility, and permeability. Applications to construction problems are presented. Three lecture hours, three laboratory hours.

318 Soil Mechanics for Geologists (3) Prerequisites: GEOG 101, 102, 201, or permission of the instructor. This course is designed to acquaint the student with the field and laboratory techniques for investigating the mechanical properties of soil, including its origin, structure, mineralogy, strength, compressibility, and permeability. Applications to construction problems are presented. Three lecture hours, three laboratory hours.

319 Field Studies in Regional Geology (2, 2) Prerequisites: GEOG 101, 102 and permission of the instructor. One or more field trips in the field to Appalachian. This course consists of 10 to 20 days in the field to examine various points of interest in one or more geological provinces (area to be announced). The course will involve camping out and wear in conjunction with similar programs at other schools. Students must pay a transportation fee.

401 Igneous and Metamorphic Petrology (4) Prerequisite: GEOG 101, 102, 201, and 305, CHEM 211...
212, or permission of the instructor. This course is a study of the origin and evolution of igneous and metamorphic rocks, with emphasis on the principles of igneous and metamorphic processing. Laboratory work on the study of rock samples involves the use of thin-section petrography and the study of the chemical and physical properties of rocks. The course is designed to provide an understanding of the processes that govern the formation of igneous and metamorphic rocks.

402 Geochronological Development of North America (3) Prerequisite: GEOL 101, 102, 201, 301, or permission of the instructor. This course presents the geological history of North America in terms of plate tectonics. The major tectonic events and the evolution of the North American crust are discussed.

403 Geochromatography (3) Prerequisite: GEOL 101, 102, 201 or 308, CHEM 211-212, or permission of the instructor. This course is a survey of stability isotope geochemistry, carbon isotope geochemistry, chemostratigraphy, water/chemistry, organic geochemistry, and the geochemistry of ancient rocks. The course is designed to provide an understanding of the processes that govern the formation of ancient rocks.

404 Analytical Techniques in Geochemistry (3) Prerequisite: GEOL 101, 102, 201 or 308, CHEM 211-212, or permission of the instructor. A study of the techniques used in the analysis of geological materials. The course is designed to provide an understanding of the processes that govern the formation of geological materials.

410, 411 Special Projects in Geology (2, 2) Prerequisite: Senior standing in geology. Discussions of various topics in geology, as determined by the students. Six lecture hours.

417 Geophysics (3) Prerequisite: GEOL 101, 102, 201, 301; MATH 113, 114; PHYS 250. Corequisite: MATH 213, PHYS 350, 351. This course surveys seismological and gravitational theory and their application to an understanding of the earth's interior. Three lecture hours.

500, 501 Selected Topics in Modern Geology (3, 3) Prerequisite: Baccalaureate degree and permission of the instructor. This course consists of lectures alternating with laboratory and field trip examinations of geological materials. The specific topic varies and is announced in advance. The course is recommended for teachers of general science and earth science.

800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Senior standing. Open only to DA Ed students admitted to study in geology. A program of studies designed by the student's discipline director and approved by the student's doctoral committee, which brings the student to participate in the current research of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student's program.

German Courses (GERM) Foreign Languages and Literatures Placement: See Academic Policies and Procedures.

151, 152 Elementary German (4, 4) Intensive introduction to German, including basic grammar, aural comprehension, and reading. Elementary proficiency. Introduction to the life and culture of German-speaking countries through selected readings and through programs in the language laboratory. Four classroom hours, two laboratory hours per week. 151 and 152 must be taken in sequence.

153 Review of Elementary German (4) An intensive review of elementary German designed for stu-
518 Studies in Eighteenth and Early Nineteenth-Century German Literature (3) Study of major authors, movements, and themes in eighteenth and early nineteenth century German literature through critical inquiry into the theory and practice, historical background, and critical reception. Specific topics are announced in the Schedule of Classes. May be repeated for credit with permission of the instructor.

525 Studies in Modern German Literature (3) Study of writers, themes, or genres of modern German literature. Specific topics are announced in the Schedule of Classes. May be repeated for credit with permission of the instructor.

560 History of the German Language (3) Study of the development of the German language from the eighteenth century to the present. Emphasis on the phonological, morphological, and syntactic structures characteristic of the various stages of development. FRLN 570 Foreign Language Learning and Teaching (3) An advanced course in the theories, methods, and strategies of second and foreign language learning and teaching. FRLN 615 Literary Theory and Criticism (3) Study of the nature of the literary work; analysis of contemporary critical approaches to literature.

798 Directed Research and Reading (3) Prerequisite: Open only to degree students who have completed at least 18 hours. Reading and research on a specific project, under the direction of a department member. An oral or written report is required.

799 Thesis (3 or 6) Students who take GERM 798 and GERM 799 may receive six credits for GERM 799 upon completion of the thesis. Students who do not take GERM 798 will receive six credits for GERM 799 upon completion of the thesis.

800 Studio or Seminar in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to study in a program. A program of studies designed by the student’s disciplinary director and approved by the student’s doctoral committee. The program prepares the student to do research and writing in the current area of interest of the disciplinary director. The student presents a research paper in a subsequent DA Ed summer seminar. This course may be repeated as required by a student's program.

Government and Politics Courses (GOVT) Public Affairs


102 British-American Democratic Government (2) See description for GOVT 103.

103 Introduction to Democratic Government (3) An examination of concepts of the American presidential and the British parliamentary forms of democratic government examined in light of basic concepts and institutions of democracy. Subdivided into GOVT 101: Concepts of Democratic Government (1) dealing with introductory concepts basic to democracy, and GOVT 102: British-American Democratic Government (2) presenting the comparative and analytical phases of the American and British systems. Each may be taken separately. To register for both, enroll in GOVT 103. However, GOVT 102 and GOVT 103 are not open to students who have completed a course in American national politics, unless permission of the instructor is granted.

132 Introduction to International Politics (3) An examination of geographic, demographic, economic, ideological, and other factors which influence foreign policies of states; the methods of conflict and institutions of adjustment extant among states; the limitations and functions of power, diplomacy, and international law and organization.

133 American State and Local Government (3) An introduction to the nature, organization, functions, and problems of American state and local governments in their challenging and rapidly changing environment.

241 Introduction to Public Administration (3) Prerequisite: GOVT 103 or permission of the instructor. An examination of administrative structure and processes. Includes organization theory, administrative behavior, personnel administration, public finance, public decision making, management, budgetary processes, and administrative responsibility.

250 Introduction to Political Analysis (3) An introduction to the systematic analysis of political data. Application of the scientific method to political subjects. Research design and methodology. Use of computer to reduce and analyze data. Prerequisites: Elementary statistics and one semester of political science. Problems of multi-party systems, coalition governments, Eurocommunism, and stability and change in post-industrial societies.
rights and obligations of the uniformed services in tort and criminal law, historical development of each, Vir­
ginia law, and other aspects of the law.
378 Risk and Insurance (3) An analysis of the ele­
ments of risk control and management, applications of the same to the fields of insurance including fire, liabil­
ity, accident, fidelity, and property insurance.
401 Public Policy Making (3) Prerequisites: Junior or senior standing. An inquiry into the processes, agencies, and policies involved in the proposal, making, implementation, and evaluation, and revision of public pol­
icy in the United States.
402 Public Policy in Metropolitan Areas (3) Pre­
erequisite: GOVT 204. The analysis of metropolitan po­
litical problems as they affect the delivery of public services. Emphasis is on the substance and impact of such pol­
cies as housing, transportation, land use, crime pre­
vention, service delivery, and health care.
420 American Political Thought (3) Prerequisites: GOVT 103 and junior or senior standing. Major political values and theories in America from the formation of the American Republic to the present. Special attention is paid to changes in American political values in crisis periods and to contemporary American political theory, includ­ing pluralism, elite theories of democracy, and empiri­
cal political theory.
430 Comparative Political Leadership (3) Pre­
quisites: GOVT 103 and junior or senior standing. A cross-national study of political leadership relationships between po­
litical cultures and types of leadership, patterns of leader­
ship recruitment, and linkages between political elites and citizenry.
444 Issues in International Security (3) Prereq­
uities: GOVT 132 and junior or senior standing. Major security issues in the international system. Impact of weapons technology on international sta­
bility. Forms of armed conflict, including nuclear war, conventional war, and insurgency. Techniques of con­
flict resolution and war prevention. Problems of nuclear deterrence and disarmament.
446 International Law (3) Prerequisites: GOVT 132 and junior or senior standing. The nature, sources, and subjects of the law of nations; the law and the individ­
ual; territories and international transactions; war; and the present and future status of international law.
447 Foreign Policy and Analysis (3) Prerequisites: GOVT 132 and junior or senior standing. Examination of foreign policies and decision making of major world powers.
449 Senior Seminar in International Studies (3) Prerequisite: Open only to senior majors in Interna­
tional Studies. An integrative seminar that draws to­
gether previous course material into a single analytical framework and gives the student opportunity for in­
depth study of some aspect of international studies.
451 Administrative Management and Behavior (3) Prerequisites: GOVT 241 and junior or senior standing, or permission of the instructor. An examina­
tion and study of American governmental administra­
tion. Particular attention is paid to organizational theory and behavior, administrative responsibility, manage­
ment systems, roles of the bureaucracy, and relation­ships between the individual and the organization.
461 Citizen Participation in the Policy Process (3) Prerequisite: GOVT 204. The ways in which citizens participate in the policy process with an emphasis on recent innovations. Includes the use of research skills, inten­sity of participation, satisfaction, and effectiveness of the policies.
462 Political Campaign Organization (3) Prereq­
uities: GOVT 204 and senior standing. Design, develop­
ment, and implementation of campaign strategies and the in­
structor. This course provides a detailed exami­
nation of campaign practices and techniques, including candidate recruitment and selection, campaign organi­
zation, fund raising, polling, and media techniques. It also analyzes the implications of such campaign practices for the American political system.
463 Lobbying and the Policy Process (3) Prereq­
uites: GOVT 103 and junior or senior standing or permission of the instructor. This course examines the lobbying tech­
niques, characteristics of interest groups and the implications of their political behavior for the American political system.
471/SOCI 471 Prevention and Deterrence of Crime (3) Prerequisites: SOCI 131 or 231. A study of theo­
retical and practical strategies for crime prevention and deterrence. Social, environmental, and mechanical developments are examined. The police, courts, and corrections are incorporated into an overall legal framework and are analyzed in terms of current effectiveness and future potential for crime prevention.
480 Internship (2-5) Prerequisite: Open to junior and senior majors only. Contact the department one semester before enrollment. Internships are approved work-study programs established by the department with specific employers. Credit is fixed to suit each situ­
ation as defined by the department.
490 Seminar (3) A seminar open to junior and senior majors, Department of Public Affairs, and by permission to other seniors who have com­
pleted not fewer than 12 hours of work in government. May be repeated for elective credit. The subject of the seminar varies from semester to semester according to the specialization of the faculty member in charge. Recent topics have included political development of Third World countries, development of political dependency theory, and development strategy within the context of resource scarcity.

Greek Courses (GREE)

Foreign Languages and Literatures
101, 102 Elementary Greek (3, 3) Introduction to Attic Greek. Grammar of the language and easy ex­
cerpts from classical authors. Development of ability to read. Discussion of elements of English vocabulary drawn from Greek. Three classroom hours and one laboratory hour per week. 101 and 102 must be taken in sequence.
201, 202 Intermediate Greek: Readings in Classi­
cal Literature (3, 3) Prerequisites: GREE 102 or equiv­
alent. Development of proficiency in reading, with emphasis on texts of tragedy, vocabulary, dialect or style that will be met in authors to be read. Study of selections from such writers as Her­­
acles, Euripides, and Plato. Three classroom hours and one laboratory hour per week. 201 and 202 must be taken in sequence.

Health Education Courses (HEAL)

Health and Physical Education
110 Personal Health (3) Consideration is given to the promotion of optimum individual and family well­
being through the integration of physical, psychologi­
cal, and social components of health. Emphasis is placed on such areas as nutrition, abuse of alcohol, tobacco, and drugs; human sexuality and sex education; disease; and accidents. Attention is also given to medical care, physical fitness, nutrition, weight control, consumer health, and environmental health.
111 Advanced First Aid & Emergency Care (2) The identification, care, and treatment of various medi­
cal emergencies, including both illnesses and injuries. One lecture hour, two laboratory hours.
120 Community Health (2) Principles and practices of community health programs of official and voluntary health agencies are stressed. Attention is directed to identifying relationships between local, state, and na­
tional health programs. Organization of community health education programs is emphasized. Field ob­
servation required.

205 Principles of Accident Causation and Pre­
vention (3) The accident problem in the nation with special emphasis on concepts and theories of acci­
dent prevention, particularly as they relate to use of the highways.

220 Dimensions of Mental Health (3) An interdisci­
plinary course which integrates behavioral and sociocultural factors in the study of mental health. Focus is placed upon an analysis of factors predispos­ing to mental health problems and selected personal and community resources for dealing with mental health problems.

301 Teaching Health and Physical Education in the Elementary School (3) Prerequisites: HEAL 110 and two of the education courses in the 100 series. Designed to prepare the prospective teacher with in­
formation concerning the theory, methods, and materials involved in the teaching of physical education, health, safety, and recreation in the elementary school. Emphasis is placed on the application of methods and materials to classroom and playground situations. Field experiences in the public schools are required. Not for health and physical education majors.

305 Health Education in the Elementary School (3) Designed for Elementary Education students. Ap­
praisal of health interests and needs of children. Rela­
tionships between health services, environment, and individual health with emphasis on research methods, and resource materials in health teaching.

310 Drugs and Health (3) Analysis of the distinctive characteristics of drug use, misuse, and abuse. Em­
phasis is placed upon the need for drug education as well as upon alternatives to drug misuse and abuse. Alcohol and nicotine are covered. Personal responsi­
bility and decision making related to drug use are given special emphasis.

315 Foundations of Health Education (3) Prereq­
uite: HEAL 110 and HEAL 120. Develops the histori­
cal and philosophical foundations of health education. Major emphasis is on general principles and theories governing contemporary programs of health education and their present application and significance to the school, the home, and the community. Career opportu­
nities in health professions are discussed.

323 Community Health Education Programs (3) Organization and principles in planning, developing, implementing, and evaluating community health edu­
cation programs. Attention is also focused on existing programs and service provided by voluntary govern­
mental and professional health agencies.

325 Health Aspects of Human Sexuality (3) Pre­
quisites: Junior or senior standing. Special emphasis is placed on the special attention.

330 Nutrition (2) Prerequisite: HEAL 110. Identifica­
tion and interdependence of dietary nutritional physiological functions, their major deficiency dis­
orders, and some of their principal sources. Emphasis is placed on the assessment of dietary habits in relation to nutrient requirements and recommendations in the evaluation of personal nutritional status with respect to food intake.

401 The School Health Program (3) Prerequisite: HEAL 110. The composition of the school health program—health services, healthy school environment, and health education—as the in­
terrelated responsibility of both school and community. Major emphasis is placed on the development of methods appropriate for the intermediate and sec­
ondary schools.

402 Introduction to Driver Education: Driver Task Analysis (3) Prerequisite: HEAL 205. An introduction to the vehicle operator’s task within the highway transpor­
tation system. Includes introduction to laboratory experiences in the use of psycho-physiological and psychosocial equipment, or in the design of programs for prac­
tice driving instruction, and teaching. Two lecture hours, three laboratory hours.

420 Organization of the School Health Program (3) Prerequisite: HEAL 110. Organization and designation of program or permission of the department. A study of the three areas of the school health program—health services, healthy school environment, and health education—as the interrelated responsibilities of both

http://catalog.gmu.edu
History Courses (HIST)

100 The Uses of History (3) Primarily for non-majors; may be taken by majors only as elective credit. An introduction to the methods, sources, and historical interpretation. It helps students to understand the process of interpretation and how historians construct their arguments. The course covers the major themes in Western History from antiquity to the present. It provides an overview of the development of Western civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

201, 202 Survey of Western Civilization (3, 3) An overview of the major developments in Western civilization from the classical period to the present. The course covers the major themes in Western History from antiquity to the present. It provides an overview of the development of Western civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

203, 204 Survey of World History (3, 3) An overview of the major developments in world history from antiquity to the present. The course covers the major themes in world history from antiquity to the present. It provides an overview of the development of world civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

210, 211 History of the United States (3, 3) An overview of the major developments in United States history from the colonial period to the present. The course covers the major themes in United States history from the colonial period to the present. It provides an overview of the development of United States civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

212, 213 Survey of African History (3, 3) An overview of the major developments in African history from antiquity to the present. The course covers the major themes in African history from antiquity to the present. It provides an overview of the development of African civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

214, 215 Survey of Asian History (3, 3) An overview of the major developments in Asian history from antiquity to the present. The course covers the major themes in Asian history from antiquity to the present. It provides an overview of the development of Asian civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

216, 217 Survey of Latin American History (3, 3) An overview of the major developments in Latin American history from antiquity to the present. The course covers the major themes in Latin American history from antiquity to the present. It provides an overview of the development of Latin American civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

218, 219 Survey of European History (3, 3) An overview of the major developments in European history from antiquity to the present. The course covers the major themes in European history from antiquity to the present. It provides an overview of the development of European civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

220, 221 History of the Modern World (3, 3) An overview of the major developments in modern world history from the sixteenth century to the present. The course covers the major themes in modern world history from the sixteenth century to the present. It provides an overview of the development of modern world civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

222, 223 History of Europe Since 1800 (3, 3) An overview of the major developments in European history since 1800. The course covers the major themes in European history since 1800. It provides an overview of the development of European civilization since 1800 and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

224, 225 World History to the Nineteenth Century (3, 3) An overview of the major developments in world history to the nineteenth century. The course covers the major themes in world history to the nineteenth century. It provides an overview of the development of world civilization to the nineteenth century and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

226, 227 World History Since 1800 (3, 3) An overview of the major developments in world history since 1800. The course covers the major themes in world history since 1800. It provides an overview of the development of world civilization since 1800 and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

228, 229 Modern Italy to the End of World War II (3, 3) An overview of the major developments in modern Italian history. The course covers the major themes in modern Italian history. It provides an overview of the development of modern Italian civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

230, 231 The Modern State (3, 3) An overview of the major developments in modern state history. The course covers the major themes in modern state history. It provides an overview of the development of modern state civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.

232, 233 Contemporary History (3, 3) An overview of the major developments in contemporary history. The course covers the major themes in contemporary history. It provides an overview of the development of contemporary civilization and its impact on the modern world. The course includes an analysis of the impact of technology, science, and society on the modern world. The course is open to all students and is not limited to majors.
341 History of United States Constitutional Law to 1865 (3) Prerequisite: Six hours of history, or permission of the instructor. A continuation of the study of the development of the American political system from the Constitution of 1787 to 1865 and the Reconstruction Amendments. Focus on the development of the Supreme Court as an instrument of social change.

342 History of United States Constitutional Law from Reconstruction to the Present (3) Prerequisite: Six hours of history, or permission of the instructor. The course considers the development of the American political system from Reconstruction to the present, emphasizing the role of the Supreme Court in shaping American society.

343 History of Virginia Since 1860 (3) Prerequisite: Six hours of history, or permission of the instructor. The course considers the development of the state of Virginia from 1860 to the present, examining the political, social, and economic changes that have occurred.

401 Colonial America (3) Prerequisite: Six hours of history, or permission of the instructor. An intensive study of the development of the colonies that led to the formation of the United States, focusing on the political, social, and economic factors that shaped early American society.

411 Cultural and Intellectual History of the United States: 1600-1865 (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of cultural and intellectual currents in the United States from 1600 to 1865, examining the role of the American mind in shaping the nation.

414 War and the Military in American Life (3, 3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the role of war and the military in American society from the Revolutionary War to the present, focusing on the social, political, and economic impact of military service.

416 United States Urban History: Civil War to the Present (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of American cities from the Civil War to the present, focusing on the social, political, and economic factors that shaped urban development.

436 European History (3) Prerequisite: Six hours of history, or permission of the instructor. An examination of the development of European society from the Middle Ages to the present, focusing on the political, social, and economic factors that shaped European history.

440 Jacksonian Democracy, 1820-1848 (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the political and social changes that occurred in the United States during the Jacksonian era, focusing on the role of Andrew Jackson in shaping American democracy.

450 American Economic History (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of American economic institutions from the colonial period to the present, focusing on the political, social, and economic factors that shaped American economic history.

451 History of Western Civilization from Ancient Times to the Middle Ages (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of Western civilization from prehistoric times to the Middle Ages, focusing on the political, social, and economic factors that shaped Western society.

452 History of the Family in the United States and Europe (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the family in the United States and Europe, focusing on the political, social, and economic factors that shaped family life.

453 History of Political Economy (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of political economy from the colonial period to the present, focusing on the political, social, and economic factors that shaped economic thought.

454 History of the United States Since 1941 (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of American society from World War II to the present, focusing on the political, social, and economic factors that shaped American history.

455 History of the World in the 20th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 20th century, focusing on the political, social, and economic factors that shaped world history.

456 History of the World in the 21st Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 21st century, focusing on the political, social, and economic factors that shaped world history.

457 History of the World in the 22nd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 22nd century, focusing on the political, social, and economic factors that shaped world history.

458 History of the World in the 23rd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 23rd century, focusing on the political, social, and economic factors that shaped world history.

459 History of the World in the 24th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 24th century, focusing on the political, social, and economic factors that shaped world history.

460 History of the World in the 25th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 25th century, focusing on the political, social, and economic factors that shaped world history.

461 History of the World in the 26th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 26th century, focusing on the political, social, and economic factors that shaped world history.

462 History of the World in the 27th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 27th century, focusing on the political, social, and economic factors that shaped world history.

463 History of the World in the 28th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 28th century, focusing on the political, social, and economic factors that shaped world history.

464 History of the World in the 29th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 29th century, focusing on the political, social, and economic factors that shaped world history.

465 History of the World in the 30th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 30th century, focusing on the political, social, and economic factors that shaped world history.

466 History of the World in the 31st Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 31st century, focusing on the political, social, and economic factors that shaped world history.

467 History of the World in the 32nd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 32nd century, focusing on the political, social, and economic factors that shaped world history.

468 History of the World in the 33rd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 33rd century, focusing on the political, social, and economic factors that shaped world history.

469 History of the World in the 34th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 34th century, focusing on the political, social, and economic factors that shaped world history.

470 History of the World in the 35th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 35th century, focusing on the political, social, and economic factors that shaped world history.

471 History of the World in the 36th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 36th century, focusing on the political, social, and economic factors that shaped world history.

472 History of the World in the 37th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 37th century, focusing on the political, social, and economic factors that shaped world history.

473 History of the World in the 38th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 38th century, focusing on the political, social, and economic factors that shaped world history.

474 History of the World in the 39th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 39th century, focusing on the political, social, and economic factors that shaped world history.

475 History of the World in the 40th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 40th century, focusing on the political, social, and economic factors that shaped world history.

476 History of the World in the 41st Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 41st century, focusing on the political, social, and economic factors that shaped world history.

477 History of the World in the 42nd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 42nd century, focusing on the political, social, and economic factors that shaped world history.

478 History of the World in the 43rd Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 43rd century, focusing on the political, social, and economic factors that shaped world history.

479 History of the World in the 44th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 44th century, focusing on the political, social, and economic factors that shaped world history.

480 History of the World in the 45th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 45th century, focusing on the political, social, and economic factors that shaped world history.

481 History of the World in the 46th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 46th century, focusing on the political, social, and economic factors that shaped world history.

482 History of the World in the 47th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 47th century, focusing on the political, social, and economic factors that shaped world history.

483 History of the World in the 48th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 48th century, focusing on the political, social, and economic factors that shaped world history.

484 History of the World in the 49th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course examines the development of the world in the 49th century, focusing on the political, social, and economic factors that shaped world history.

485 History of the World in the 50th Century (3) Prerequisite: Six hours of history, or permission of the instructor. The course explores the development of the world in the 50th century, focusing on the political, social, and economic factors that shaped world history.
tion. Among the major themes discussed are romanticism, socialism, Marxism, the social effects of modernization, science, and society.

440 History of Absolutism and Revolu-
tion (3) Prerequisite: Six hours of history, or permission of the instructor. A survey of French history from 1610 (the assassination of Henry IV) through the
establishment of the Ancien Régime (Louis XIV), the revolution (Louis XVI), and the decline of absolutism, to the opening stages of the Revolution. Emphasis is placed on the institutional, social, intellectual, and economic transitions that occurred during this period known as "the old regime."

441 France Since the Revolution (3) Prerequisite: Six hours of history, or permission of the instructor. A study of French history and cultural developments in France and their influence on Europe and the world from 1789 to the present.

443 History of Spain and Portugal (3) Prere-
squisite: Six hours of history, or permission of the instructor. 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) Prerequisite: HIST 252 or permission of the instructor. The history of foreign relations between the United States and China in the nineteenth and twentieth centuries, with emphasis on the cooperation and conflict between the two nations.

452 Modern India and Pakistan (3) Prere-
squisite: Six hours of history, or permission of the instructor. The history of the Indo-Pakistan subcontinent with special emphasis on internal political and religious conflicts, the British Raj, and the foundation of the modern nations.

454 Argentina (3) Prerequisite: Six hours of history, or permission of the instructor. The history of Argentina, including its colonial origins, independence, and the development of modern Argentine society.

470 Diplomacy and War in Latin America (3) Prerequisite: Six hours of history, or permission of the instructor. The study of diplomacy and war in Latin America, focusing on key conflicts and their impact on the region.

471 History of Mexico (3) Prerequisite: Six hours of history, or permission of the instructor. The history of Mexico, from the pre-Columbian era to the present, with an emphasis on Mexican national identity and the impact of European colonialism.

480 The Middle East in the Twentieth Century (3) Prerequisite: Six hours of history, or permission of the instructor. The history of the Middle East from World War I to the present, focusing on the impact of world powers and local nationalism.

485 Latin American History (3) Prerequisite: Six hours of history, or permission of the instructor. The history of Latin America, covering its pre-Columbian past, colonization, independence, and modern developments.

486 International Relations (3 or 6) Open to authorized junior and senior history majors only. Contact the department one semester prior to enrollment. Internships are approved work-study programs established by the department in cooperation with specific organizations. These may include area museums, archives and historic sites, as well as local, state, and federal agencies. Credit, to be determined by the department, is either three or six hours in accordance with the amount of work performed.

498 Directed Readings in History (3) Open only to senior majors in history with permission of the instructor. A student may not present more than three hours of directed readings for credit. A thorough examination of the literature on a specialized topic in history, conducted on an individual basis in consultation with the instructor.

499 Seminar in History (3) Open only to senior majors in history with permission of the instructor. A student may not present more than three hours of seminar credit for credit. A thorough examination of the literature on a specialized topic in history, conducted on an individual basis in consultation with the instructor.

500 The Study and Writing of History (3) The methodology of the historian, including techniques of research, use of documentation and other sources, development of historiography, synthesis of material.


502 The Enlightenment in America (3) A study of the Enlightenment in America as it was reflected in various aspects of American literature, philosophy, politics, and the arts.

503 The Enlightenment in Europe (3) A study of the Enlightenment as it was reflected in various aspects of European history, focusing on the eighteenth century.

504 The Rise and Fall of Imperial Rome (3) A study of the history of Rome from its rise to its fall, focusing on political, social, and cultural developments.

505 Attempts to Control the U.S. Westward Movement (3) A study of attempts by the U.S. government to control the West, focusing on the impact of federal policies on the region.

510 A Study of the United States Diplomatic History (3) A study of the role of the United States in international relations, focusing on key diplomatic engagements and treaties.

511 Research Seminar in United States History (3) Prerequisite: HIST 500 or permission of the department. Research in specialized topics using primary sources.

512 Research Seminar in Latin American History (3) Prerequisite: HIST 500 or permission of the department. Research in specialized topics using primary sources.

515 Problems in Latin American History (3) An analysis of selected problems in Latin American history, focusing on key issues such as the growth of the middle classes, the role of the military, and the impact of external economic and political factors.

519 Seminar on Inter-American Diplomacy (3) Prerequisite: HIST 500 or permission of the department. Seminar in inter-American relations, focusing on the role of political, economic, military, and other forces that have influenced inter-American relations. Study of the special relationship between the United States and Latin America. This course may be applied toward the major or minor concentration in either U.S. or Latin American history.

520 Social Revolution in Latin America (3) An analysis of social revolutions in Latin America, focusing on key issues such as the impact of foreign intervention, the role of political ideologies, and the impact of external economic and political factors.

521 Research Seminar in Latin American History (3) Prerequisite: HIST 500 or permission of the department. Research in specialized topics using primary sources.

522 Problems in Latin American History (3) An analysis of selected problems in Latin American history, focusing on key issues such as the role of the military, the impact of foreign intervention, and the impact of external economic and political factors.

523 Research Seminar in European History (3) Prerequisite: HIST 500 or permission of the department. Research in specialized topics using primary sources.

524 Problems in European History (3) An analysis of selected problems in European history, focusing on key issues such as the impact of foreign intervention, the role of political ideologies, and the impact of external economic and political factors.

530 European History (3) An analysis of selected problems in European history, focusing on key issues such as the impact of foreign intervention, the role of political ideologies, and the impact of external economic and political factors.

532 Cultural History of the Islamic World (3) A study of the history of the Islamic world, focusing on key issues such as the role of the Ottoman Empire, the impact of foreign intervention, and the impact of external economic and political factors.

539 Asian History (3) An analysis of selected problems in Asian history, focusing on key issues such as the role of the Ottoman Empire, the impact of foreign intervention, and the impact of external economic and political factors.

540 Development of Latin America (3) A study of the development of Latin America, focusing on key issues such as the role of the Ottoman Empire, the impact of foreign intervention, and the impact of external economic and political factors.

541 Problems in Latin American History (3) An analysis of selected problems in Latin American history, focusing on key issues such as the role of the Ottoman Empire, the impact of foreign intervention, and the impact of external economic and political factors.

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summer seminar. Enrollments in this course are repeated according to each student’s program.

Information Systems Courses (INFS) School of Business Administration

Effective with Fall Semester 1981, non-core, upper-level (300-400 series) courses offered by the School of Business Administration may not be presented on an undergraduate degree application for any major in the School (except as general elective credit) if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

In earlier catalogs these courses were identified as Decision Sciences (DESC) or as Business Administration (BUAD) courses; the course numbers have not changed.

201 Computer Information Systems (3) A survey of the systems and hardware in general use for data processing by business organizations with emphasis on computer-based data processing and management systems. Topics covered include manual and punched card systems; computer systems-capabilities, hardware operating principles, performance characteristics; computer software; analysis, design, and implementation of computer programs, with emphasis on time-shared BASIC, use of library programs, laboratory exercises.

211 Introduction to COBOL Programming (3) Prerequisite: INFS 201. Introduction to computer programming in COBOL for business and organizational applications. Analyzing, coding, debugging, executing, and documenting COBOL programs. Laboratory exercises are emphasized.

311 Database Management (3) Prerequisite: INFS 201 or permission of the instructor. The structure of computer installations and information systems with emphasis on data management. Data structures; design, creation, editing, updating, sorting, searching, and retrieval of sequential and direct-access files; time-shared data-bases; quality control and recovery. Laboratory exercises for managerial applications using DBMS systems.

312 Computer Hardware and Operations (3) Prerequisite: INFS 201. A comprehensive coverage of computer system hardware components, treating both their characteristics and suppliers, and an examination of computer systems operations, including operating systems and job control languages. Student teams conduct feasibility studies which include system descriptions, hardware selection, and operation plans.

313 Computer Languages and Data Structures (3) Prerequisite: INFS 201. The study of comparative computer languages, their structure and application, covering machine, assembler, and higher level programming languages. These languages will include PL/1, COBOL, and FORTRAN.

411 Management Information Systems (3) Prerequisites: ACCT 202, INFS 201, and DESC 202. An integration of the separate prior learning on computers and on information-processing needs in different functional areas of administration such as operations, marketing, finance, personnel, accounting, and planning and control. Interdisciplinary student-teams design and implement on the computer at least one aspect of a management information system for an organization. Lecture, laboratory, and project.

Japanese Courses (JAPA) Foreign Languages and Literatures

101, 102 Introduction to the Japanese Language (3, 3) Introduction to Japanese, including basic grammar, oral expression, listening comprehension, and reading and writing. Language laboratory instruction is an integral part of the course. Three classroom hours and one laboratory hour per week. 101 and 102 must be taken in sequence.

301 Japanese Culture and Civilization (3) Prerequisite: Junior standing or permission of the instructor. A study of the Japanese with a focus upon their behavior in the cultural context to gain a better understanding. Problems of cross-cultural understanding between the Japanese and others in a multicultural society are discussed. Films, slides, and music are used as an integral part of the course. All coursework in English.

Korean Courses (KORE) Foreign Languages and Literatures

361, 362 Korean Literature (3, 3) Prerequisite: Knowledge of the Korean language. A survey of Korean literature from the Three Kingdoms period to the twentieth century. A study of the vernacular genres of verse and prose in Korea. May be taken toward fulfillment of the general requirement in literature for baccalaureate degree.

450, 451 Korean Culture and Civilization (3, 3) Prerequisite: Junior standing or permission of the instructor. A survey of the Korean culture and civilization, including language, philosophy, religion, education, and family life, and discussion of the problems of cross-cultural understanding. The coursework is in English.

Language Arts and Cultures Courses (LAC)

See “Regional Cultures.”

Latin Courses (LATN) Foreign Languages and Literatures

Placement: See Academic Policies and Procedures. 101, 102 Elementary Latin (3, 3) Introduction to Latin, including basic grammar and the development of reading skills; introduction to Latin literature and Roman civilization. Three classroom hours and one laboratory hour per week. 101 and 102 must be taken in sequence.

201 Intermediate Latin: Prose and Poetry (3) Prerequisite: LATN 102 or equivalent. Intensive review of elementary grammar; introduction to more advanced grammatical constructions and patterns of usage; continued development of reading proficiency in various genres selected from classical and post-classical Latin literature; study of the origin and development of Latin literature. Three classroom hours and one laboratory hour per week.

202 Intermediate Latin: The Golden and Silver Ages (3) Prerequisite: LATN 201 or equivalent. 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. Three classroom hours and one laboratory hour per week.

321, 322 Latin Tutorial (1-3, 1-3) Prerequisite: LATN 202 or equivalent, and permission of the department. 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. The tutorial may be repeated once under each number to a maximum of four separate topics and 12 semester hours of credit.

Library Science Courses (LSCI) Education

401 Adolescent and Adult Literature (3) The selection of classics and contemporary inter-disciplinary reading materials in relation to the needs, abilities, and interest of adolescents, including adult titles for young people. Reading guidance for this age group. Attention to the gifted student, reluctant reader, and slow reader. Procedure for handling complaints relating to controversial materials. Suits elective especially for secondary education majors.

402 Information Services (3) Designed for the general university student as well as library science students. Use of basic library materials plus emphasis on elementary and secondary school library media. Provides experience in the evaluation of reference books and in answering fact-finding and material-gathering questions.

403 Introduction to Technical Processing for Libraries (3) The purpose of this course is to acquaint the library science student with general techniques and routines in the acquisition, preparation, and circulation of print and non-print materials. Includes simplified classification and cataloging.

404 Administration of School Library Media Centers (3) Prerequisites: LSCI 401, 402, and 403. To develop the understanding, attitudes, skills, and information necessary for leadership in a school library media center that will contribute to the school’s educational objectives. Includes visits to neighboring school library media centers.

405 Practicum in the School Library Media Center (3) Prerequisites: LSCI 404 at the University and admission to the teacher education program or possession of a Collegiate Professional Certificate or equivalent and permission of the instructor. Involves 120 hours of observation and practice in the school library media center. Designed to give the school media specialist experience in many aspects of media service.

Management Courses (MGMT) School of Business Administration

Effective with Fall Semester 1981, non-core, upper-level (300-400 series) courses offered by the School of Business Administration may not be presented on an undergraduate degree application for any major in the School (except as general elective credit) if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

301 Principles of Management (3) Prerequisite: Sixty semester hours or permission of the instructor. An introduction to management. Historical evolution of management thought with particular emphasis on modern theories of management; managerial functions of planning, organizing, directing, and controlling organizational activity. Practical application of theory to actual business situations.

311 Organizational Behavior and Administration (3) Prerequisite: MGMT 301 or permission of the instructor. Perspectives for understanding and predicting
behavior in formal organizations as applied to management theory and practice. Basic concepts of organizational behavior such as power and authority, roles, motivation, and group dynamics are explored in relationship to management information. Major subjects are leadership, organizational climates, processes, and the roles of organizations and the promotion of organizational effectiveness and change.

321 Personnel Administration (3) An examination of the personnel procedures related to the recruitment and selection of a labor force, grievance and disciplinary procedures, problems involved in collective bargaining, pay policies, merit rating, promotion, training, etc., with emphasis on their relationship to management.

323 Labor-Management Relations (3) An examination of American trade unions and of unionism. The labor contract; the bargaining process, legal philosophy of unionism, the use of bargaining techniques for non-wage 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) An introduction to the theory and practice of effective business communication. Includes inquiry into the principles of communication, communicating through correspondence and reports, and business research methods.

351 Small Business Management (3) Prerequisites: COMP 201, 202, and MGMT 301, or permission of the instructor. A study of the entrepreneur and entrepreneurial organizations. Emphasis is on the entrepreneurial process and social, economic, and cultural factors affecting entrepreneurial behavior. Lecture, case studies, and research are used to illustrate and develop solutions for the general and unique problems facing the small businessman in a variety of high-technology and service-related businesses.

371 Government and Business (3) Prerequisites: ECON 103 and 104 or permission of the instructor. A consideration of public policies intended to resolve or mitigate problems that arise from industrial and other combinations, by public utility industries, by government enterprises, and by labor-management relations.

381 Management Problem Solving and Decision Making (3) Prerequisites: MGMT 301. Application of the principles and techniques of management to cases drawn from business and industry. Cases involving hospitals, public agencies, voluntary associations, educational institutions, and general business enterprises are covered. Emphasis is placed on the internal organization and management of the enterprise. This course exposes the student to the purpose, methodology, and transportation function to analyze business problems effectively. The complete spectrum of analysis and design is presented from isolation and definition to evaluation of alternatives and selection. Applications of systems theory are employed to enhance student perspective and creativity in problem solving.

411 Organization Theory and Development (3) Prerequisite: MGMT 311. The study of complex organization models and the development of both formal and informal organization models of applied research designs. Particular emphasis on the systems approach as an integrative framework. Analytical and experimental exercises are used to acquaint the student with organization development techniques for effective management of change.

421 Advanced Personnel Administration (3) Prerequisites: COMP 202 and MGMT 321. An 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) Prerequisite: MGMT 331. Stresses the institutional framework in which the structure of collective bargaining is cast, focusing primarily on the private sector. The first half of the course is devoted to a coverage of the major pieces of labor legislation, from English Common Law through such recent developments as the Privacy Act, the Information Policies and Procedures Act, collective bargaining, and the legislative environment, reasons for these trends, and their consequences for labor organizations are discussed. The second half includes an analysis of the collective bargaining process and the role of the legal environment, what techniques are used, what are the major issues, and how to evaluate the end result—the labor contract.

461 Operations Management (3) Prerequisites: ACCT 202, DESC 301, and MGMT 301. An introduction to operations (production) management as practiced in both manufacturing and service industries. A comprehensive approach to the study of the aspects of productivity, technology, new processes, materials, products, equipment, and facilities. Implications of new technology in managing the operations (production) function are developed.

471 The Social Environment of American Business (3) Prerequisite: Senior class standing or permission of the instructor. An introduction to the social position of business and the place of ethics and standards in its conduct.

479 Seminar in Management Theory (3) Prerequisite: Completion of MGMT 301, six hours of management work beyond MGMT 301, and senior standing, or permission of the instructor. Advanced study of management concepts and theories designed to deepen, expand, and integrate the student's knowledge of general management theory and practice. Included is an intensive examination of major writers' and practitioners' contributions to management theory. Significant contemporary research findings are explored. Also included are selected topics for research and study.

Marketing Courses (MKTG) School of Business Administration
Effective with Fall Semester 1981, non-core, upper-level (300-400 series) courses offered by the School of Business Administration may not be presented on an uncore course number. However, credit is given toward the total credit requirements for the School (except as general elective credit) if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

301 Principles of Marketing (3) Prerequisites: ACCT 201/202, ECON 103/104. An examination of the marketing structure and of business and economic activities in the U.S. Emphasis is on the basic framework to which the student must refer in order to solve problems in marketing. The study includes an examination of businesses and the place of ethics and standards in its conduct.

311 Sales Management (3) Prerequisite: MKTG 301. An examination and evaluation of the sales effort as it relates to the consumer and participants within the marketing channel.

312 Consumer Behavior (3) Prerequisite: MKTG 301. A study of the concepts, theories, and principles underlying the marketing behavior of consumers. Applications to marketing problem solving and decision making.

313 Advertising Management (3) Prerequisite: MKTG 301. Advertising and its role as a function of management. Basic concepts and terms are defined to provide a framework for an in-depth study of advertising. Emphasis is on the nature and scope of advertising. Measurement of results.

331 Distribution Systems (3) Prerequisite: MKTG 301. The study, using case analyses, of the design, selection, evaluation, and management of the marketing channels of distribution; with particular emphasis on the physical distribution concept and the storage, handling, and movement of goods.

332 Retail Management (3) Prerequisite: MKTG 301. A comprehensive view of retailing as it relates to the total marketing process. Emphasis on the retail decision alternatives used when formulating retail strategy.

333 Industrial and Governmental Marketing (3) Prerequisite: MKTG 301. An in-depth description, analysis, and evaluation of the industrial and governmental marketplace. Emphasis on the marketing procedures practiced and available to the decision makers within these markets.

341 Market Research Techniques and Applications (3) Prerequisites: DESC 202, MKTG 301. A study of the concepts, theories, and principles underlying the marketing research process. Course focuses on the principles of research design for gathering marketing information.

451 Marketing Information Systems (3) Prerequisite: MKTG 301. The 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 pricing decisions.

471 Marketing Management (3) Prerequisite: Six hours of marketing. The managerial aspects of marketing, emphasizing the development of marketing strategies and their implementation. The marketing process. Emphasis on case analysis.

479 Seminar in Marketing (3) Nine hours of marketing. In-depth treatment within a seminar format of timely topics with marketing emphasis. Emphasis placed on the ability to synthesize and communicate contemporary issues in marketing.

Mathematics Courses (MATH)
In exceptional cases the prerequisite for a course above the calculus sequence may be waived at the discretion of the instructor.

Computer Science courses, Operations Research courses, and Statistics courses offered by the Department of Mathematical Sciences are listed separately under the prefixes CS, OR, STAT, respectively.

100A Business Calculus (3) Three hours per week for two-thirds of the semester. 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, and exponential functions.

101 Algebra and Elementary Functions (no credit) 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.

102 Trigonometry (no credit) Meets three hours per week for one-third of the semester. No degree credit is given; however, tuition and fees are charged for three hours. Trigonometric functions. Limit and continuity. A study of the properties of trigonometric functions.

106 Concepts of Mathematics (3) Important ideas in mathematics and their development.

108 Introductory Calculus with Business Applications (3) Prerequisite: A knowledge of high school algebra is assumed. Functions, limits, the derivative, the integral. Applications of differentiation and integration.

110 (103) Finite Mathematics (3) Elementary set theory, probability, and statistics.

120 Business Calculus (3) Prerequisite: MATH 110 (103). Matrix algebra, linear programming, Markov chains and game theory. Applications. 113, 114, 213 Analytical Geometry and Calculus I, II, III (4, 4, 3) Must be taken in sequence. Functions, limits, the derivative, maximum and minimum problems, the integral, transcendental functions, applications. Techniques of integration, vectors and analytic geometry, differentiation of functions of several variables, linear algebra. Vector differential calculus, multiple integrals, infinite series.


200 Foundations of Mathematics (3) Prerequisite: MATH 116. Real numbers, axiom systems, naive set theory, cardinal and ordinal numbers.

252 Introductory Statistics (2) An introduction to the underlying principles and methods of elementary statistical analysis. The course acquaints students with the statistical techniques, how to apply them, and when to apply them.

254 Applications of Statistics in Health Care (1) Prerequisite or corequisite: MATH 252. An introduction to the problems of data gathering and evaluation in the area of health care information. There is some use of calculators as special projects are assigned and exist-
ing reports in the area of health care are evaluated and criticized.

255 Applications of Statistics in Public Administration (3) Prerequisite: or corequisite: MATH 252. An introduction to the problems of data gathering and statistical evaluation in the area of public administration. There is some use of calculators as special projects and assignments are given. In the area of the public sector are evaluated and criticized.

256 Applications of Statistics in Geography (1) Prerequisite: MATH 252 or equivalent. An introduction to the problems of data gathering and evaluation in the area of geography. There is some use of calculators as special projects and assignments are given. In the area of the public sector are evaluated and criticized.

301 Number Theory (3) Prerequisite: MATH 114 or MATH 116. Prime numbers, factorization, congruences, Diophantine equations.

302 Geometry (3) Prerequisite: Six semester hours of mathematics. An introduction to the concepts of incidence. Axioms of Euclidean geometry and the resulting theory, axioms, and development of non-Euclidean and projective geometry.

303 Matrix Algebra (3) Prerequisite: MATH 114 or permission of the instructor. Matrix operations, vector spaces, rank of a matrix, determinants, eigenvalues and eigenvectors.


305 (425) Differential Equations for Mathematical Structures (3) Prerequisite: MATH 114 or MATH 116. A survey of topics in discrete mathematical structures essential to the study of computer science. Topics covered include a discussion of sets, graphs, functions, algorithmic thinking, recursion, proof techniques, and elementary introduction to graphs and finite fields, and finite-state machines. Students who have received credit for MATH 425 may not receive credit for this course.


313, 314 Introduction to Applied Mathematics (3, 3) Prerequisite: MATH 304 or 306. Euclidean Spaces. Fourier and orthogonal series, special functions, boundary-value problems, partial differential equations, special functions.

315, 316 Advanced Calculus (3, 3) Prerequisite: MATH 306. Elementary topology, limits, continuity, differentiation, integration, and series. Functions of several variables.

321 Abstract Algebra (3) Prerequisite: MATH 215. Theory of groups, rings, fields.

322 Linear Algebra (3) Prerequisite: MATH 303. Vector spaces, linear independence, bases, linear transformations, matrix algebra, inner product, special topics.

351 Probability (3) Prerequisite: MATH 213 or 215. Random variables, probability functions, special distributions, limit theorems.

352 Statistics (3) Prerequisite: MATH 351. Estimation, decision theory, testing hypotheses, correlation, linear models and design.

371 Mathematics for the Elementary School I (3) Concepts and theories underlying elementary school mathematics, including sets, logic, systems of numeration, whole numbers and integers, operations with integers, equations, and inequalities.

372 Mathematics for the Elementary School II (3) Continuation of MATH 372; it is recommended that students complete MATH 371 prior to enrolling in MATH 372. Topics include elementary number theory, rational and real numbers, integers, proportion, graphing, descriptive statistics, and probability through consumer-related problems. This course will partially satisfy Virginia state teacher certification requirements in secondary school pre-algebra mathematics. It does not count toward a major in mathematics.

382 Introduction to Stochastic Processes (3) Prerequisite: MATH 315 or MATH 313 and MATH 351. General notion of stochastic processes, finite and infinite state Markov chains, the Poisson process, renewal processes, stationary processes, random walk problems, birth and death processes, waiting line and serving problems. Brownian motion.

411 Functions of a Real Variable (3) Prerequisite: MATH 304 or 306. Analytic functions, contour integration, residues, and applications to such topics as integral transforms, generalized functions, and boundary value problems.

431 Topology (3) Prerequisites: MATH 306 and six hours of mathematical sciences above the 310 level. Metric spaces, topological spaces, compactness, connectedness, and completeness.

441 Operations Research I (3) Prerequisite: MATH 303 or permission of the instructor. A survey of deterministic methods for solving "real-world" decision problems. The linear programming model and simplex method of solution, duality and sensitivity analysis, transportation and assignment problems, shortest path and maximal flow problems, project networks including PERT and CPM, dynamic programming, dynamic programming, and game theory. Emphasis is placed on modeling and problem solving. Students who have received credit for MATH 443 may not receive credit for this course.

442 Operations Research II (3) Prerequisite: MATH 351 or permission of the instructor. A survey of probabilistic methods for solving "real-world" decision problems, queueing models and theory, Markov decision processes, reliability, decision theory, simulation. Emphasis is placed on modeling and problem solving.

446, 447 Numerical Analysis and Digital Computation (3, 3) Prerequisites: MATH 306 and a knowledge of a scientific programming language. Knowledge of matrix algebra required for MATH 447. NUMERICAL ANALYSIS: Solution of differential equations, numerical differentiation and integration, significant figures, errors. Formulation of numerical problems for solution on digital computers.

491, 492 Reading and Problems (1-3, 1-3) Enrollment restricted to mathematical sciences majors. Independent study in mathematics. Must be arranged with instructor prior to registration.

493 Topics in Applicable Mathematics (3) Prerequisite: Six credits of mathematics at or above the 300 level. This course provides an in-depth survey of mathematical topics that have been successfully used in applications. Topics are selected to give full view to its applicability.

494 Topics in Pure Mathematics (3) Prerequisite: Six hours of mathematics at or above the 300 level. This course is designed to present areas of pure mathematics which are otherwise courses but which are interesting and important. Among topics which might be studied are Galois theory, cardinal and ordinal arithmetic, measure theory, mathematical logic, and differential geometry. An object to be taught will be determined by the instructor.

A double number separated by a comma (MATH 772 771) is to be a graduate course normally constitute a sequence and that the first semester is a prerequisite to the second. The prerequisite may be waived by the department chairman.

600 Cooperative Education Students (1) Prerequisite: Enrollment in the Cooperative Education Program and 9 hours of graduate credit in mathematics towards the degree. A study of a special topic to be by the student and the instructor. In order to obtain credit, the student must be enrolled in the Cooperative Education Program and the topic chosen must be related to the on-site phase of the student's department and course work. This course satisfies the Cooperative Education Program contract. However, this credit may not be applied towards the thirty hours required for the degree in mathematics. The department expects this course to be taken no later than the completion of 12 hours of graduate credit in mathematics towards the degree.

611 (503) Intermediate Analysis (3) Development of the number system, a review of the highlights of calculus, sequences, and series of functions. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but can be counted toward the Master of Education degree.

620 (520) Applied Matrix Analysis (3) Prerequisite: MATH 612 (504), 333, or 322. Review of vector calculus, matrix arithmetic, Gaussian elimination, linear programming, eigenvalues, the Jordan form, linear differential systems, positive definite matrices, Markov processes, game theory, applications to numerical analysis, optimization, economic and ecological systems. This course emphasizes modeling using matrix algebra to give full view to its applicability.


637, 638 (537, 538) Non-Euclidean Geometry (3, 3) Prerequisite: Permission of the instructor. Affine, projective, hyperbolic, elliptical, differential geometry; transformations, present elementary introduction to graphs and finite fields, and finite-state machines. Students who have received credit for MATH 435 may not receive credit for this course.

651 (551) Probability Theory (3) Axioms for a probability space, conditional probability, random variables, distribution functions, moments, characteristic functions, convergence of random variables.

675, 676 (515, 516) Analysis I, II (3, 3) Real and complex number systems, topology of euclidean space, continuity and differentiability of functions, Riemann integrals, the fundamental theorem of calculus, Riemann-Stieltjes integrals, sequences of functions, power series, complex analytic functions, Cauchy's theorem, contour integration, normed linear spaces, contraction mapping theorem, Banach category theorem, Ascoli-Arzela theorem, differentiable mappings in euclidean space, inverse and implicit function theorems, Lebesgue integration, dominated convergence theorem, measurable sets and functions.


681, 682 (561, 562) Systems Optimization and Control (3, 3) Prerequisite: MATH 651 (551) or the equivalent, and MATH 675 (515) or permission of the instructor. Systems of linear differential equations, optimization of linear dynamical systems, controllability and optimal control of linear systems, Gauss-Markov Processes, Kalman filtering, applications to networks, aerospace, information processing.

733 (534) Homotopy Theory (3) Homotopy theory including the fundamental group, higher groups and extensions.

734 (536) Homology Theory (3) Homology theory including simplicial homology theory, exact sequences, fixed point theorems.


798 (598) Seminar (3, 3) 799 (599) Thesis (1-6) Original or compulsory work to be evaluated by a committee of three faculty members.

200 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to study in mathematics. A program of studies designed by the student’s discipline director and approved by the student’s doctoral committee which brings the student to participate in the current research of the discipline of education and results in a paper reporting the original contributions of the study. A program of studies for the Doctor of Arts in Education is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student’s program.

Medical Technology Courses (MCTH) Biology

200 Introduction to Medical Technology (1) Prerecess
require: None. Students are introduced to the profession of medical technology. One hour per week of lectures, including guest presentations and roundtable discussions. Application persymmetrical.

401 Orientation to the Problems and Practices of the Clinical Laboratory (1-2) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Orientation to the clinical laboratory; scope, organization, and record keeping; management principles and problems; educational theories as they apply to the teaching of clinical laboratory procedures; quality control principles. Not offered on campus.

402 Clinical Hematology and Coagulation (6-8) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours 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 hemopoesis and coagulation; techniques for measurement of hematologic parameters; hematologic pathologies and their laboratory evaluation. Not offered on campus.

403 Clinical Microscopy (1-3) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours 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 or urine, feces, and certain other body fluids, especially the microscopic identification of normal and pathologic components. Includes a study of the kidney and theories of microscopy. Not offered on campus.

404 Serology and Immunohematology (5-7) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Clinical laboratory procedures that involve antigen-antibody reactions and the theoretical bases of such procedures. Includes both diagnostic and blood bank techniques. Not offered on campus.

405 Clinical Microbiology (4-8) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours 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 humans and their culture and identification. Not offered on campus.

406 Clinical Chemistry (6-10) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours 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. Includes manual and automated methods of chemical analysis. Not offered on campus.

409 Nuclear Medicine (1-2) Prerequisites: Completion of all requirements for the BS with a major in medical technology except for the 30 hours 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.

Music Courses (MUSI) Fine and Performing Arts and Communication

100 Fundamentals of Music (3) Prerequisite: Student must be able to read either treble or bass clef and should have some proficiency on a musical instrument or in voice. The course involves a study of musical notation, production of sounds, and construction of scales, bass clefs, scale construction, rhythm, elementary sight singing and ear training, and the application of the above concepts at the keyboard. This course cannot be applied toward a degree in music.

115 Harmony I (3) Prerequisite: Nonmusic majors only. An introduction to music appreciation through formal and aesthetic principles. The elements of music are examined separately and as combined in various musical forms. A brief overview of the development of Western art music leads into a more intensive study of music from the eighteenth century to the present, culminating in the discrimination of contrasting styles of music. Three hours per week. Not offered on campus.

120 Mexican Music in the United States (3) For nonmusic majors only. A study of the musical structure and cultural setting of folk music among diverse people, with an introduction to the traditional art music of Mexico. Three hours per week. Not offered on campus.

135 Class Brass I (1) Prerequisite: Nonmusic majors only. Must have permission of the instructor. A study of techniques of playing and teaching the oboe and bassoon. A survey of instructional materials, instrument selection, and reed adjustment. Two hours per week.

155 Class Percussion (1) Prerequisite: Nonmusic majors only. Must have permission of the instructor. A study of techniques of playing and teaching the percussion instruments. A survey of instructional materials and instrument selection. Two hours per week.

156 Class Guitar I (Prerequisite: Nonmusic majors only. Must have permission of the instructor. A study of techniques of playing and teaching the guitar. A survey of instructional materials and instrumental selection. Two hours per week.

158 Voice Class I (1) Prerequisite: Nonmusic majors only. Must have permission of the instructor. A study of vocal techniques of playing and teaching the voice. A survey of instructional materials and instrumental selection. Two hours per week.

159 Voice Class II (Prerequisite: MUSI 158 or permission of the instructor. A continuation of voice study begun in MUSI 158, with emphasis on artistic singing in several styles. Two hours per week.

171 Class Piano I (1) Prerequisite: Nonmusic majors only. Must have permission of the instructor. The study of the piano keyboard as it is related to various clefs in music. Emphasis is placed on the solution of basic problems in piano technique and literature. Two hours per week.

172 Class Piano II (Prerequisite: MUSI 171 or permission of the instructor. The study of the piano keyboard as it is related to intermediate song and composition. Techniques in music notation are emphasized. Three hours, two hours for credit, one hour for noncredit.

173, etc. Private Music Instruction See descriptions at end of section.

181, 381 University Chorus or Choral (1, 1, 1, 1, 1, 1, 1, 1, 1, 1) Prerequisite: MUSI 158 or permission of the instructor. Open to all students in the University who possess a reasonable amount of performing ability. Performance of works from the choral repertoire, to include one major work each semester. Public concerts are given. Four credits are to be earned at the 181 level before proceeding to the 381 level. Three hours per week.

183, 383 Symphonic Winds (1, 1, 1, 1, 1, 1, 1, 1) Prerequisite: MUSI 158 or permission of the instructor. Open to all students in the University who possess a reasonable amount of performing ability. Performance of works from the wind repertoire, to include one major work each semester. Public concerts are given. May be taken for credit eight times. Four credits are to be earned at the 183 level before proceeding to the 383 level. Three hours per week.

187, 387 Chamber Orchestra (1, 1, 1, 1, 1, 1, 1, 1, 1, 1) Prerequisite: MUSI 158 or permission of the instructor. Open to all students in the University who possess a reasonable amount of performing ability. Performance of works from the chamber orchestra repertoire. Public concerts are given. May be taken for credit eight times. Four credits are to be earned at the 187 level before proceeding to the 387 level. Three hours per week.

215 Harmony III (3) Prerequisite: MUSI 116 or permission of the instructor. A study of four-part chromatic harmony and analysis of nineteenth-century compositions.

216 Harmony IV (2) Prerequisite: MUSI 215 or permission of the instructor. A continuation of the study of chromatic harmony as it applies to the classical forms. Study of counterpoint and the four-part texture. Prerequisite: MUSI 116. Three hours per week.

231 Survey of World Music (3) Prerequisite: MUSI 215 or permission of the instructor. An overview of music literature in the four major theoretical systems of the world with emphasis on the influences of non-Western systems on Western music.

251 Elementary Music School (4) 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 (technical keyboard, percussion, wind, and fretted string instruments). Application of these understandings and skills to the development of the elementary school child’s musicality by the nonspecialist classroom teacher. Five hours per week.

271, 272, 371, 372, 471, 472 Techniques of Acoustic...
companying (1, 1, 1, 1, 1) Prerequisite: A minimum of four credits earned in Private Music Instruction (keyboard instrument) or performance of the director. For both seniors and juniors. Three hours per week. 23 hours per semester. 

386 Laboratory Ensemble (1,1) Prerequisite: One semester of class instrumental instruction on a band or orchestra instrument. Three hours per week. 

285 Chamber Ensembles (1,1, 1, 1, 1) Prerequisite: Audition. Open to all students in the University. Performance of works from the chamber music repertoire. Two hours per week. 

319 Class Composition and Arranging I (3) Prerequisite: MUSI 114, 216, or permission of the instructor. Students are encouraged to exercise their creative powers through the writing of original compositions for specific instrumental combinations. They then apply compositional principles to the creation of instrumental music of various styles. 

230 Class Composition II (3) Prerequisite: MUSI 319 or permission of the instructor. The compositional skills acquired in Class Composition and Arranging I are applied to larger forms of music and larger ensembles, with emphasis on Western music. Three hours per week. 

279 Choral Arranging (3) Prerequisite: MUSI 216 or permission of the instructor. A comprehensive course in the practical application of the various technical devices employed in the preparation of choral music. The scope of the course includes notation, text setting, choral voicing, choral texture, and contemporary vocal writing, as well as the composition of original material as they apply to arranging techniques. 

335 Historical, Theoretical, and Analytical Study of Music I (3) Prerequisite: MUSI 216 and 231 or permission of the instructor. A study of Western music from the Renaissance to the Baroque. Historical, theoretical, and analytical aspects. 

336 Historical, Theoretical, and Analytical Study of Music II (3) Prerequisite: MUSI 216 and 231 or permission of the instructor. A study of Western music from the Baroque to the Romantic era. Historical, theoretical, and analytical aspects. 

351 Piano Pedagogy (3) Prerequisite: MUSI 114, 216, 218 and eight credits in piano, or permission of the instructor. An investigation of the various methods, theories, techniques, and materials used in the teaching of piano to children and adults, both in individual and group situations. 

439 Piano Literature (3) Prerequisite: MUSI 216 and 231 or permission of the instructor. A chronological survey of the literature of the piano and its antecedents from the seventeenth century to the present. Solo keyboard genres such as suite, sonata, theme and variations, and character piece are analyzed and examined critically. 

440 Orchestral Literature (3) Prerequisite: MUSI 216 and 231 or permission of the instructor. A chronological survey of the development of the orchestra and its music from the seventeenth century to the present. Selected orchestral genres by composers such as Beethoven, Verdi and Mahler are examined critically. 

497, 498 Independent Study (3,3) Prerequisite: Open only to music majors with senior standing and permission of the instructor and the music faculty. Intensive research on a specialized ethnomusicalological topic culminating in an oral presentation and a seminar paper. The areas and subjects under study are determined by the instructor conducting the section and may be obtained in advance. The courses may or may not be taken for credit. (If the course is required students will finance their own way.) May be taken for credit four times provided a different area or subject is researched each time. Three lecture hours or the equivalent. 

168 GEORGE MASON UNIVERSITY
Prerequisites and Corequisites...

Prerequisites: MUSI 223: MUSI 114, 319, portfolio of compositions and an interview with a faculty member.

Prerequisites for MUSI 223: MUSI 114, 319; MUSI 115, 319, portfolio of compositions and an interview with a faculty member.

Prerequisites for MUSI 491 and 493: MUSI 396 and an audition before a faculty committee.

Graduate Private Music Instruction To earn two or three credits per semester, a student takes 14 one-half hour private music lessons. The three-credit sequence is designed for students who will work toward the MA degree with a specialty in Music Performance. Instruct-

Private Music Instruction (1, 1, 1)

Undergraduate Private Music Instruction To earn one credit per semester, a student takes 14 one-half hour private music lessons; to earn two or three credits per semester, a student takes 14 one-half hour lessons.

The following amount of practice (or composing) is expected each day: one credit: 50 minutes; two credits: one hour and 40 minutes; three credits: two and one-half hours.

As part of the repertoire requirement for this course, each student must attend at least 10 music programs sponsored by the Department of Fine and Performing Arts and Communication. Undergraduate Private Music Instruction is offered in piano, organ, harp, classical guitar, voice, and the standard band and orchestral instruments.

Content includes an examination of normal growth, development, nutrition. Three hours lecture.

Five dollars.

Nursing Assessment (1) Prerequisites: NURS 101, 102, 103, 104. Skills in nursing are required in the assessment, design, and control of nursing systems. Clinical practice arranged. Nine hours laboratory.

Orientation to Professional Nursing (2) Prerequisites: NURS 101, 102, 103, 104. This course provides the student with knowledge necessary to practice in a health care setting.

Nursing Research (3) Prerequisites: NURS 260. Research methods are studied as a foundation for the development of research in the field of gerontology. Three to six field experiences are required.

Research Dimensions in Nursing (3) Prerequisites: NURS 301, 302, 311, 312, 321, 322. This introductory research course presents basic research concepts and methods used in nursing studies. Major nursing theories are examined as a foundation for scholarship. Lectures are supplemented by exercises drawn from contemporary nursing research problems. Three hours lecture.

Professional Nursing Practice in Health Care Organizations (3) Prerequisites: NURS 301, 302, 311, 312, 321, 322. This course is designed to give an overview of foundational principles related to managing nursing systems. Emphasis is placed on the application of nursing research to the development of the delivery of nursing care to large groups to facilitate increased self-care. Nursing systems are developed to serve large groups in a variety of community settings. Two hours lecture, twelve hours laboratory.

Health Maintenance and Health Aspects of Aging (3) The study of physiological and psychological factors which have influence on the health status and have implications for preventive measures in disease and health disorders in the aging. Nutrition, the nature of health problems, and methods of assessing physical and psychological needs are examined.

Nursing Systems for Individuals and Groups with Complex Problems (3) Prerequisites: NURS 301, 302, 311, 312, 321, 322. Synthesis of knowledge of nursing systems of individuals and groups. Complex problems that may affect care are explored in seminars. Three hours lecture.
612 Nursing Action and the Political Process (3) Explores the issues of power, political, and legislative action as they relate to nursing. The effects of the political establishment (in both institutional and government administration) on nursing practice are discussed.

615 Survey of Research in Human Development: Implications for Nursing Intervention (3) Seminar presentation of selected research findings and audit of research programs in human development across the life span. Discussion of research findings focuses on application to individuals and families with long-term and chronic illness and implications for nursing intervention. Three lecture hours.

616 Cancer: Theoretical Foundations and Nursing Interventions (3) Focuses on the current knowledge about the nature of cancer and presents research findings to develop the theoretical foundation for the development of a concept of nursing clients with cancer, on an understanding of cancer as a major chronic illness, and on the assistance available to cancer-cried children and their families. Three hours lecture.

621 Components of Health Appraisal (3) Includes principles, skills, and techniques in health appraisal of clients in various settings. Development of health appraisal and auditing problem-oriented profiles provide a framework for the development of a health appraisal database. Two hours lecture, three hours laboratory.

625 Independent Nursing Practice (3) An overview of designs for independent practice and their conceptual frameworks. Problems inherent in pioneering a private practice are delineated with opportunities for development of management and administrative principles and potential implications for independent nursing practice. Three hours lecture.

635 Gerontological Nursing (3) Analysis of the multidimensional process of aging, its effects on the functional capacity of the elderly, and implications for effective preventive health care programs. Exploration of factors which influence preventive health care development, utilization, and evaluation of health maintenance protocols. Lecture and discussion. Three hours lecture.

650 Health Care and Law (3) Survey course designed to introduce students to the impacts of courts and legislature on rights and responsibilities of health care consumers and health care providers. Focus is on definition of standards, informed consent, and legal theories of liability.

655 Quality Assurance in Nursing (3) Examination of the functional capacity of the elderly, and implications for effective preventive health care programs. Exploration of factors which influence preventive health care development, utilization, and evaluation of health maintenance protocols. Lecture and discussion. Three hours lecture.

673 Nursing in Long-Term Care and Gerontological Nursing I (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759. NURS 773 is co-requisite. Opportunity to apply the nursing process as it relates to the care of individuals and families with existing or potential long-term health problems in a selected clinical setting. Three hours lecture.

773 Practicum in Long-Term Care and Gerontological Nursing I (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759. NURS 773 is co-requisite. Opportunity to apply the nursing process as it relates to the care of individuals and families with existing or potential long-term health problems in a selected clinical setting. Three hours lecture.

775 Practicum in Long-Term Care and Gerontologi
cal Nursing II (3) Prerequisites: NURS 755, 759, 773, 777. NURS 773 is co-requisite. Opportunity to apply the nursing process as it relates to the care of individuals and families with existing or potential long-term health problems in a selected clinical setting. Three hours lecture.

776 Practicum in Long-Term Care and Gerontologi
cal Nursing III (3) Prerequisites: NURS 755, 773. NURS 773 is co-requisite. Opportunity to apply the nursing process as it relates to the care of individuals and families with existing or potential long-term health problems in a selected clinical setting. Three hours lecture.

790 Principles and Methods of Nursing Research (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759. NURS 763, 773 are co-requisites. Principles and methods of nursing research applied to problem identification, research design, and data collection and measurement. Three hours lecture.

797 Group Projects in Nursing Research (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759, 770. Independent research and a group research project under the direction of a faculty member.

799 Thesis (3-6) Prerequisites: Admission to the graduate nursing program, NURS 755, 759, 790. Explo ration of a nursing problem using appropriate research methodology under the supervision of the graduate faculty member(s).

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**Operations Research Courses (OR) Mathematical Sciences**

541 Operations Research I (3) Prerequisite: MATH 303 or equivalent. A survey of deterministic methods for solving "real-world" decision problems. The linear programming model is used to illustrate solution techniques for solving linear programs. Emphasis is placed on modeling and problem solving.

542 Operations Research II (3) Prerequisite: MATH 303 or equivalent. A survey of heuristic methods for solving "real-world" decision problems. Probability review, queuing theory, inventory theory, Markov decision processes, reliability, decision theory, simulation. Emphasis is placed on modeling and problem solving. Students who have taken MATH 441 or MATH 443 will not receive credit for this course.

543 Integer Programming (3) Prerequisite: OR 541 or permission of the instructor. Cutting plane and enumeration algorithms for the solution of integer linear programs; Knapsack problem, matching problem, set covering and bipartition problems, applications to problems in management science, social capital budgeting, facility location, political redistricting, and scheduling.

544 Nonlinear Programming (3) Prerequisite: MATH 675 and knowledge of a scientific programming language, or permission of the instructor. Nonlinear programming. Optimization techniques applicable to the most frequently occurring problems in management science, economics, operations research, and management science. Unconstrained optimization by search techniques, descent methods, and conjugate directions. Constrained optimization by a transformation to unconstrained problems, and techniques which deal with the constraint region explicitly.

546 (formerly MATH 581, 582) Stochastic Models in Operations Research (3) Prerequisite: MATH 351 or 651. OR 542 is recommended. Selected applied probability models including Poisson process, Markov and semi-Markov processes, renewal theory, queueing models of both finite and infinite sources, matrix-geometric solutions, stochastic processes; applications to Markov decision problems, advanced queuing and inventory problems, reliability theory, and time series. Both theory and application are emphasized. Three hours lecture.
leisure in actually realizing human potential. Includes an overview of the PRLS program.

103 Careers in Leisure (1) In cooperation with the career centers, students explore personal and professional interests, attributes, and skills regarding the training needs for various job opportunities in leisure services.

210 Leisure Policy (3) An investigation into the changing role of leisure in today's society. Dealing with cultural, demographic, social, and economic aspects of leisure pursuits and the positive and negative effects on individuals, the family, and the community. The course analyzes social and political thought, such as society, the family, education, religion, economics, the state, human rights, freedom, morality, law, authority, and civil disobedience. An effort is made to show how these concepts and institutions reflect various assumptions concerning the practice of leisure and society in general. Examples of topics covered in both lecture and seminar: the role of leisure in defining the role of leisure in the lives of individuals, the family and the community.

310 Leisure Programming (3) An examination of the role of programming in providing leisure opportunities for society. Development of special skills and theories in need and resource assessment; social, cultural, physical, and educational program values, and the role of the professional in programming.

315 Public and Media Resources for Leisure Service Delivery (2) Examination of the use of media in leisure service delivery. Emphasis is placed on practical application and development of competencies in the effective use of media in publicly, public relations, and value-added services. Two lecture hours, two laboratory hours.

320 Leadership Principles and Techniques in Leisure Services (3) Examination of the dynamics of leisure professional group leadership and agent directorship. Analysis of leadership techniques and individual leadership styles in working with leisure service volunteers, advisory boards, community organizations, personnel, and leisure participants.

Philosophy Courses (PHIL)

110 Introduction to Philosophy (3) An introduction to the nature of philosophical reasoning and to some of the main problems of philosophy.

111 Introduction to Social and Political Philosophy (3) An examination of the philosophical foundations of some of the major concepts and institutions in social and political thought, such as society, the family, education, religion, economics, the state, human rights, freedom, morality, law, authority, and civil disobedience. An effort is made to show how these concepts and institutions reflect various assumptions concerning the practice of leisure and society in general. Examples of topics covered in both lecture and seminar: the role of leisure in defining the role of leisure in the lives of individuals, the family and the community.

151 Introduction to Ethics (3) A consideration of some of the perennial issues in ethical theory with a view toward contrasting the kinds of reasons for accepting or rejecting these problems in classical, modern, and contemporary thought.

173 Introduction to Logic (3) A study of basic concepts and techniques of deduction, emphasizing the modern treatment of such topics as quantification and rules of inference, but with some study of the classical treatment as well. Also studied are basic principles of induction and formal fallacies, and the uses of logic in everyday life.

212 Alternative Futures for Science and Society (3) An analysis of values of freedom, and rationality are involved in the ways in which science and technology are being used to meet the urgent problems of our day. Readings are chiefly from contemporary science fiction.

254 Contemporary Ethical Problems (3) An examination of some contemporary ethical problems, e.g., homosexuality, abortion, drugs, civil disobedience, capital punishment and the death penalty, the rights of society, from the point of view of the dominant systems of ethics in use today, e.g., Utilitarianism, Deontology, Self-Realization Ethics, Situationism.

273 Informatol Logic and the Computer (3) A study of predicate calculus by means of a step-by-step construction of artificial languages. Topics covered include procedures for constructing a calculus, proof techniques, significant properties of predicate calculus (e.g., completeness and consistency), and procedures for recognizing phases (parsing algorithms).

301 (231) History of Western Philosophy: Ancient (3) Figures and problems of classical philosophy: an introduction to the development of philosophy from the pre-Socratics to the Stoics and Epicureans. May not be taken by students who have previously taken PHIL 231.

302 (232) History of Western Philosophy: Medieval (3) A survey of leading thinkers from the fifth to the fifteenth century. Figures covered are selected from the following: Plotinus, Augustine, Boethius, John Duns Scotus, Eckhart, William of Ockham, Giordano Bruno, Grotius, Abelard, Avicenna, Averroes, Moses Maimonides, Bonaventure, Albert the Great, Thomas Aquinas, Roger Bacon, John Duns Scotus, Meister Eckhart, William of Ockham. May not be taken by students who have previously taken PHIL 232.

303 (233) History of Western Philosophy: Modern (3) Figures and problems of modern philosophy; an introduction to the development of philosophy from the fifteenth to the twentieth century. Locke, Berkeley, Hume, Kant, and Hegel. May not be taken by students who have previously taken PHIL 232.

309 Medicine and Human Values (3) An examination of some of the major moral issues involved in the practice of medicine and arising from research in the life sciences. Examples of topics covered in both lecture and seminar: the role of the physician in defining the role of medicine in the lives of individuals, the family and the community.

311 Philosophy of Law (3) Prerequisite: Three credits in philosophy. An investigation of the theories of law and legal systems. Legal positivism, natural law, utilitarianism, and moral relativism. Distinctive philosophical approaches to the concepts of justice, legitimacy, morality, and the sources (3).

312 Philosophy of Religion (3) Prerequisite: Three credits in philosophy. A study of classical appeals to philosophy in support of belief in God's existence (Rationalism), the nature of God (Theism), and the problem of evil. Some problems to be considered: Can art be defined? What is the nature of an aesthetic experience? What is the role of art in society? Can one justify critical evaluations of works of art? Can one justify critical evaluations of works of art?

315 Philosophy of History (3) Prerequisite: Three credits in philosophy. An investigation of the development of the historical consciousness of humanity. The purpose of this course is (1) to distinguish the historical from the unhistorical attitudes of human consciousness and (2) to investigate the various forms of historical consciousness by studying different interpretations of history.

317 Philosophy of the United States (3) Prerequisite: Three credits in philosophy. This course is an examination of the development of philosophy in the United States from the colonial period to the present. Distinctive philosophers are examined in a historical context, emphasizing the philosophical problems of the time. Some problems surveyed: What is a good society? What is the role of science in society? What is the role of art in society? Can one justify critical evaluations of works of art? Is there a special method of scientific discovery?

320 Philosophy of Mind (3) Prerequisite: Three credits in philosophy. A study of the relationship between a philosopher's method, doctrine, and concept of truth. Philosophers studied vary from semester to semester, but include representatives from among the Empirical, Analytic, Formal, Continental, Hermeneutical, and Structuralist methodologies.

321 Theory of Knowledge (3) Prerequisite: Three credits in philosophy. A study of what constitutes the nature of knowledge, with special study of the relation of knowledge to perception, to belief, and to language.

324 Philosophy of Mind (3) Prerequisite: Three credits in philosophy. An investigation of such theories as dualism, behaviorism, materialism, and double-aspect as they pertain to some of the central philosophical questions about mind. What is mind? Is the relation of mind to body? What is the justification, if any, of our belief in the existence of minds other than our own?

325 Metaphysics (3) Prerequisite: Three credits in philosophy. A study of some basic problems concerning being in general and the foundations of individual being: traditional treatments of such problems and criticism of metaphysics. Selective readings from three or four leading figures such as Plato, Aristotle, Aquinas, Spinoza, Leibniz, Kant, Bradley, Heidegger, and others.

327 Minds and Machines in Philosophy (3, 3) No prerequisites unless otherwise stated in specific topic announcement. An examination of some philosophical topics of current interest, such as death and dying, the rights of children, and philosophical controversies in modern physics.

Foundations of European Civilization (3) (See EUST 300 under European Studies.) Up to 3 credits of listed European Studies seminars may be credited toward the major.
Physical Education (PHED)

Health and Physical Education Activity Courses

All activity courses—dance, individual sports, team sports, and recreational activities—meet for three contact hours each week with an additional one hour per week (or the equivalent of 14 hours of outside classwork) to be arranged during the semester.

Dance

107 Folk, Square, and Social Dance (2) This course is equally divided between folk, square, and social dance and offers the opportunity on basic steps, sequences, and style for each.

125 Beginning Modern Dance (2) This course develops in the inexperienced student knowledge, skills, and an appreciation and understanding of dance through the presentation of fundamental techniques and creative movement experience. This course is identical to DANC 125.

126 Beginning Intermediate Modern Dance (2) Prerequisite: PHED 125 or permission of the instructor. The course further develops the knowledge, skills, and appreciation of modern dance through the continuous exploration of the aesthetic and creative process. This course is identical to DANC 126.

207 Intermediate Folk, Square, and Social Dance (2) Prerequisite: PHED 107 or permission of the instructor. This course builds on the skills in the dance forms of folk, square, and social dance and the movement qualities desired in each of these three forms. The course includes more advanced skill in social dance and introduces new steps and styles to folk and social dance.

Individual Sports

103 Beginning Fencing (2) This course provides the student with the opportunity to learn the skills, techniques, and rules of foil fencing and prepares the student to be an intermediate-level foil fencer.

105 Aerobics, Basic Conditioning (2) This course provides the student with the opportunity to learn the basic skills, techniques, and rules of the sport of aerobics and prepares the student to enter aerobics classes.

108 Weight Training and Body Conditioning (2) This course teaches the student with the opportunity to learn the basic skills and techniques associated with weight lifting.

109 Beginning Ice Skating (2) This course acquaints the student with the fundamentals of skating. Opportunity is provided for the student to learn basic skating skills. Emphasis is placed on individual instruction and proper body alignment and balance.

110 Beginning Swimming (2) An introductory swimming course open only to those students who cannot swim safely in deep water. Emphasis is placed on individual instruction and proper body alignment and balance.

116 Combative Sports, Games, Unarmed Combat, and Wrestling (2) This course gives students a background in combat sports which may be taught in the physical education program. The course emphasizes the development of competitive skills.

133 Tennis for All (2) For individuals with no or some experience in tennis; introduction and review of basic ground strokes, volley, serve and smash, rules, and etiquette. Tennis is an outdoor activity and students must produce at least one major piece of written work (20 pages) to be arranged during the semester.

The Twentieth Century in Europe (3) (See EUST 450 for students who have completed six semester hours of European Studies.) Up to 2 credits of listed European Studies seminars may be credited toward the major.

531 Freud and Philosophy (3) May be taken by undergraduate students (see prereq uisites). Prerequisites: Six credits in philosophy, or a course in personal ity theory, or permission of the instructor. An exploration of the philosophical aspects of Freud's thought, focusing on Freud's philosophy of human nature and culture and its influence on contemporary thought.

800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to candidacy. An outline of studies designed by the student's director and approved by the student's doctoral committee which brings the student to participate in the current research at the DA Ed level. The student will complete a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed seminar. Enrollment in this course is repeated according to each student's program.

Team Sports

101 Soccer and Volleyball (2) This course for the beginning student provides an orientation to the fundamental skills, rules, and strategies of the game of soccer and volleyball.

102 Non-Contact Lacrosse (2) This introductory course provides the student with an opportunity to learn the basic skills of lacrosse.

111 Basketball and Soccer (2) The student is provided with the opportunity to learn the basic skills, techniques, strategies, and rules of basketball and soccer.

113 Golfing and Softball (2) An introduction to the basic skills, tactics, and strategy for golf and softball.

115 Rock Climbing (2) An introduction to rock climbing with emphasis on basic climbing skills, safety procedures, and proper use of tools and equipment. This course is offered on a pass-fail basis and can be taken with a WNC option fee.

116 Recreation—Fishing and Camping (2) The study of various fishing and camping techniques, and safety aspects involved in fishing and camping. This course is offered on a pass-fail basis and can be taken with a WNC option fee.

120 Recreation—Orienteering, Backpacking, and Canoeing (2) Introduces the student to the basic skills and knowledge related to leisure time activity. This course is offered on a pass-fail basis and can be taken with a WNC option fee.

190 Whitewater Canoeing (2) Prerequisites: Must be able to swim fully clothed for five minutes and to put on the PFD in less than 60 seconds. Introduction to level I course that provides instruction in basic canoeing skills and techniques. Once basic skills have been mastered on flat water, the student participates in two whittewater canoe trips. ($25 fee)

255 Basic Scuba Diving (2) Prerequisite: Intermediate level swimming ability. A preliminary course designed to give the student sufficient skill and knowledge to pass the PADI Open Water Diver Certificate. ($65-$75 fee)

Professional Courses

200 Gymnastics for Children and Youth (2) Prerequisite: PHED 106 or permission of the instructor. The study of the principles, analyses, fundamentals, and progressions in teaching gymnastics and tumbling to children and youth of preschool through secondary school age. Required fee—consult department.

300 Kinesiology (3) Prerequisite: BIOL 124, 125. Acquaints the student with the study of human movement. Fundamental joint movement, servomotor control, body mechanics, kinesiokinetic awareness, kinesiokinetics, and scientific and cinematographic analysis are emphasized.

301 Physical Education in Elementary School (3) Provides the prospective classroom teacher with information and knowledge concerning current trends, methods, and curriculum in physical education in the
elementary school. Field experiences in public schools are required. Not open to physical education majors.

303 (203) Child Development and Physical Education (3) An overview of the field of physical education and its relationships to health, recreation, and other academic disciplines provides the major with an introduction to teaching and learning, policy-presenting, and the organizational aspects of the field. Spring only.

304 Sport, Culture, and Society (3) Prerequisites: PHED 303 (201) or permission of the instructor. Deals with the impact of sport on society from historical, political, cultural, and organizational aspects. Fall only.

306 Psychomotor Learning (3) Prerequisites: EDUC 302, 313, or permission of the instructor. The study of one of man’s educational domains. The content of the course emphasizes learning theory, learning processes, the learner, conditions for learning, and individual differences in human performance. Field experiences are required. Spring only.

308 Developmental Education (3) Prerequisites: BIOL 124, EDUC 302, or permission of the instructor. This course is a synthesis of the developmental processes of the human body as it relates to movement and exercise. An in-depth study of various chronic and functional inadequacies which may interfere with an individual’s successful participation in physical education is included. Saturday morning motor development laboratory sessions with a variety of activities for nine weeks; adapted activities with the children on Tuesdays and Thursdays for five weeks. Two lecture hours, one activity hour. Fall only.

314 (214) Basketball, Weight Training, Conditioning, Track and Field, and Soccer (4) For physical education majors only. This course is designed for physical education majors to improve their skills and knowledge through instruction, skills progressions, and drills for teaching. Skill analysis and peer group teaching are included. Three laboratory hours. Classes meet for six contact hours each week and outside class work is required. Spring only. Fall only.

315 (215) Archery, Badminton, and Golf (2) For physical education majors only. This course is designed for physical education majors to improve their skills and knowledge through instruction, skills progressions, and drills for teaching. Skill analysis and peer group teaching are included. Three laboratory hours. Classes meet for six contact hours each week and outside class work is required. Spring only. Fall only.

316 Recreation and Outdoor Education (2) Techniques of recreational leadership; community resources, supervision and evaluation methods of converging leisure and cultural activities. Participation in such outdoor recreational skills as camping, map reading, firearms safety, hand loading, trap and skeet shooting, angling techniques, fishing, and archery. One lecture, three laboratory hours. ($20 fee)

365 Measurement and Evaluation in Physical Education (3) Prerequisites: PHED 300, 303 (201). The selection, administration, and evaluation of devices and techniques in physical education. Criteria for test construction and selection, survey of tests in both areas, and some emphasis on statistical analysis of data. Spring only. Fall only.

371 Curricular Experiences in Secondary School Physical Education (3) Prerequisites: PHED 300, 313 (213), and 314 (214). This course consists of a personalized approach in the analysis and practice of the skills of activities included in the secondary school physical education program. Progression of skills, presentation techniques, understanding of game strategy, and leadership are stressed. The course includes peer group teaching and 15 hours of field experience in public schools. Fall only.

371, 396 Fundamentals of Aging I, II (1, 3) Prerequisites: EDUC 303, 304, 305, 306, 309, and 314. An interdisciplinary approach to the study of aging. The 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. Three to six hours field experience required. Fall only.

403 Curricular Experience in Elementary School Physical Education (3) Prerequisites: PHED 300, 313 (213), and 374. An orientation in curricular experience and introduction to the elementary school physical education. A study of the elements of movement, activities for body management and refinement of basic skills as well as specialized sports skills, games, sports, safe exercise, and creative dance. Field experience in public schools is required. To be taken the semester prior to student teaching. Fall only.

405 Experience in Sport and Coaching (3) Illustrates the latest research, trends, and techniques of modern coaching. The course emphasizes practical as well as scientific principles of coaching.

408 Seminar in Special Education (3) Prerequisite: Permission of the department chairperson. Consideration of several sports usually coached at the secondary level. Each activity is scheduled on a semester basis and conducted independently for two credit hours. Each activity is considered a separate course. Special attention to principles and fundamentals of individual offensive and defensive play, individual and group strategies, and staff organization, and materials for coaching the participants.

430 Prevention and Care of Athletic Injuries (3) Prerequisites: BIOL 124-125. A study of preventive measures and the recognition and treatment of athletic injuries. Experience are provided in application of various methods of treatment of athletic injuries. Preventive taping, exercise techniques, and physical management and treatment of injuries. Spring only.

441, 442 Practicum in Athletic Training (1, 1) Prerequisite: PHED 430 and permission of the department. Application of the techniques and procedures in the care and prevention of athletic injuries in a protected environment such as a secondary school, college, professional sports team, or clinical setting. Work with aspects of athletic training and/or physical rehabilitation under faculty-certified trainer supervision. Includes at least 100 hours of participation in many aspects of athletic training.

443, 444, 445 Practicum in Physical Education (1, 1, 1) Prerequisite: permission of the department. This course is designed to provide supervised professional practice in a selected area of interest. Students participate under the direction of an on-site professional who guides the student throughout this experience. The student may repeat this course but no more than a total of three (3) hours credit may be given. Each credit hour requires a minimum of 60 hours of participation over a period of six weeks. The specific specialty areas selected include physical education, therapeutic recreation, gerontology, laboratory research, and physical therapy.

450 (350) Physiology of Exercise (3) Prerequisites: BIOL 124-125, PHED 300, 303 (201). A study of the physiologic response of the human body to acute and chronic exercise stress. Fall only.

460 Management and Organization in Physical Education (3) Prerequisites: PHED 303 (201), 304, 306, and 308. The course deals with the management and evaluation of the total physical education program in elementary and secondary schools. Administrative principles, organizational techniques, and evaluation criteria are tested in terms of physical and health education classes, intramural sports, and athletics. Six hours of field experience is required. Fall only.

462 Laboratory Programming for Older Adults (3) A general survey of recreation services and opportunities provided for the older population including those who are institutionalized and isolated. An overview of the need between individuals and behavior of older people toward leisure and the delivery of recreation services; trends in planning; diversity in programming; and evaluation of current programs. Observation and participation in local existing programs and the development of an appropriate program. Spring only.

472 The Physical Education Program, Grades K Through 12 (3) Prerequisite: PHED 403. The selection, design, and application of learning experiences appropriate for elementary, middle, and secondary school young people based on developmental needs. Includes philosophy, objectives, class control, methods, safety, curriculum planning, facilities, and equipment. Taught as a block during the professional semester. Coursework beyond the semester hours included in the professional semester is not permitted. May be repeated for credit with permission of the instructor in which student teaching is done. Spring only.

490 Internship in Physical Education with Selected Specialization (12) Directed internship in a physical education program offering an opportunity to work with a community agency, business, or industrial organization. An opportunity to observe and participate in planning and implementing physical education experience opportunities in a local community. Required weekly seminar.

499 Independent Study in Physical Education (1-3) Prerequisites: Senior standing and permission of the instructor. A study of a problem area in physical education research, theory, or practice under the direction of faculty.

500 Workshop in Physical Education (1, 2, 3) Corequisite: PHED 300, 302, 308, weekend seminars, and workshops dealing with selected topics in physical education and ancillary fields. Coursework may include educational tours, seminars, etc. This course may be repeated for a maximum of 6 hours of PHED 500 may be applied to degree credit.

508 Seminar in Special Physical Education (3) An analysis and discussion of current problems, issues, and trends in special education relative to physical education, school and recreation programs. Analysis and descriptions of specific disabilities with concentration on programming and exercise modifications. Practica may be included.

530 Exercise Physiology and Fitness Programs for Older Adults (3) Prerequisites: PHED 397 or permission of the department. Principles of exercise physiology related to fitness and health of older populations with emphasis on preventive, therapeutic, and rehabilitation applications. Three to six hours field experience required.

604 History of Sport and Physical Education Through the Middle Ages (3) An historical approach to the role of sport and physical education in the culture of ancient civilizations through the Middle Ages.

605 History of Sport and Physical Education From Renaissance to Present (3) This historical approach to the role of sport and physical education in Europe and its impact on developments in America.

610 Advanced Exercise Physiology (3) Prerequisite: PHED 450 (350) or equivalent, or permission of the instructor. Lecture, demonstration, laboratory research, and seminar experiences providing current information and examining contemporary issues relative to the role of exercise science in health and fitness.

616 Motor Behavior and Evaluation (3) This course considers human motor behavior research and theory with application to the evaluation of skill acquisition. Focus is on learning and education in the field of physical education.

671 Teaching Physical Education in the Secondary School (3) An advanced course in the methods, materials, content, and organization of physical education programs. Emphasis on curriculum planning, current methodologies, and trends.

706 Comparative Physical Education and Sport (3) A study of present-day physical education and sport and their impact on society in selected countries of the world.

Physics Courses (PHYS)

103, 104 Principles and Development of Modern Physics (4, 4) Prerequisite: PHYS 103 is prerequisite to PHYS 104. Course in physics for nonscience majors. Topics include mechanics, relativity, cosmology, atomic physics, electricity and magnetism, nuclear physics, and elementary particles. The course places equal emphasis on theoretical, conceptual, philosophical, and social aspects of modern physics. Three to six lecture, three laboratory or supervised work. Spring only.

106 Physics for the Life and Health Sciences (3) An introductory course in physics for majors. Topics include mechanics, thermodynamics, electricity and magnetism, gases, heat, electricity, sound, light, the atom and the nucleus, and radiation. The course concisely covers the basic principles of each topic emphasizing applications to the health sciences.

http://catalog.gmu.edu
111 Frontiers of Physics (1) An introductory overview of the subfields of physics, their interrelation, and the relationship of physics to other disciplines. A discussion of current and future trends and the technological opportunities in physics. This course is open to all students.

151 Physics for Elementary School Teachers (4) A study of the basic concepts of physics with emphasis on those subjects which are of particular importance to an elementary school teacher. Topics include motion, astronomy, electricity and magnetism, energy, heat, meteorology, light, the nature of waves, the ear, archetypical acoustics, sound recording and reproduction. This course may not be included for credit by physics majors within the 44 hours of physics courses required for the BS degree or within the 31 hours of physics courses required for the BA degree. Three hours lecture.

110 The World of Physics (1) An introduction to physics principles. An awareness of the relationship of physics to the environment. Open only to elementary education majors. Three hours lecture, two hours laboratory. Spring only.

201 Energy and Environment (3) A study of the basic ideas of energy and environment as they interact on their interaction with our contemporary culture. The course is designed for the science and nonscience major who has an interest in current concerns of energy and environment that deals with the various 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. The course may not be included for credit by physics majors within the 44 hours of physics courses required for the BS degree or within the 31 hours of physics courses required for the BA degree. Three hours lecture.

203 Introduction to Electronics (3) This course is an introduction to the characteristics and uses of various modern electronic devices, circuits, and instruments. Some applications relevant to the student's major are demonstrated. This course is not open to physics and engineering majors. Two hours lecture, three hours laboratory.

225 Problems in Physics I (1) Prerequisites: Sophomore status and 3 of 4 average in physics and mathematics. Individual study of physics problems of current interest. This course may be taken a maximum of three times.

250 University Physics I (4) Co-requisite: MATH 114. Mechanics, heat, and thermodynamics. Three hours lecture, one hour recitation.

301 Digital Electronics (3) Same as ENGR 301.) Prerequisites: PHYS 250 and 351, or permission of the instructor. Introduction to digital systems, circuits, and computers. Topics include binary systems and codes, digital logic gates and circuits, microelectronics and integrated circuits, coding and multiplexing, multivibrators, shift registers, and computer microprocessors, and interfacing techniques. Two hours lecture, two hours laboratory.

302 Electronics (4) Same as ENGR 302.) Prerequisite: PHYS 250. Oscillator circuits and computer microprocessors, interferometers, and instrumentation techniques. Two hours lecture, three hours laboratory.

303 Classical Mechanics (3) Prerequisites: PHYS 352, 353, and MATH 304. Motion of a particle in one, two, and three dimensions; systems of particles: non-inertial coordinate systems; equations of Lagrange and Hamilton. Three hours lecture.

305 Electromagnetic Theory (3) Same as ENGR 305.) Prerequisites: PHYS 352, 353, and MATH 304. Interaction of static charges, interaction of stationary currents, electromagnetic induction, Maxwell's equations. Three hours lecture.

306 Wave Motion and Electromagnetic Radiation (3) Prerequisite: PHYS 305. Vibration, standing, plane waves, interference of electromagnetic waves, dispersion, relativity. Three hours lecture.

307 Thermodynamics (3) Prerequisites: PHYS 250 and MATH 213. Classical concepts of energy and temperature, available energy, and the second law of thermodynamics. Three hours lecture.

311 Mathematical Methods in Physics and Engineering (3, 3) Prerequisites: PHYS 352 and MATH 304 or 306; PHYS 311 or MATH 313 is prerequisite for PHYS 312. A study of mathematical techniques as applied in theoretical and mathematical physics. Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices, and complex variables. Three hours lecture.

315 Physics of Musical Sounds (3) Prerequisite: MUSI 101 or 115 or permission of the instructor. A course in the physics of music. Topics include simple harmonic sounds and harmonics, the fundamentals of musical acoustics, sound recording and reproduction. This course may not be included for credit by physics majors within the 44 hours of physics courses required for the BS degree, or within the 31 hours of physics courses required for the BA degree. Three hours lecture.

316 Sound and Light in the Arts (3) Prerequisites: MUSI 101 or equivalent and MATH 111 or 115. Physical concepts. Magnitudes of vision and hearing, color and light. Musical acoustics, computer-generated music and art, lasers, holography and fiber optics, recording and reproduction of sound. Three hours lecture, one hour recitation.

326 Problems in Physics II (1) Prerequisite: Junior status and 2.50 average in physics and mathematics. Individual study of physics problems of current interest. This course may be taken a maximum of three times.


341-342 College Physics (4-4) (Replaces 101-102.) Prerequisites: Junior status, or one year of college-level science and one semester of college-level mathematics. Prerequisite for credit in this 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, sound, light, and nuclear physics. Three hours lecture, one hour recitation, and two hours lab.

350 University Physics II (3) Corequisites: MATH 213, PHYS 351. Physics 250. Electricity and magnetism, optics, waves. Three hours lecture, one hour recitation.

351 University Physics II Laboratory (1) Corequisites: MATH 213, PHYS 350. Experiments in electricity and magnetism. Emphasis on the use of the oscilloscope. Two hours lab.


353 University Physics III Laboratory (1-2) Corequisite: MATH 304, PHYS 352. Experiments in optics and modern physics. Physics majors should enroll for both lecture and lab. Recommended for their maj or advisor. Two hours laboratory for each credit taken.

402, 403 Introduction to Quantum Mechanics and Atomic Physics (3) Prerequisite: PHYS 303, or permission of the instructor. PHYS 402 is prerequisite to PHYS 403. The experimental basis of quantum mechanics; the wave function; systems in one, two, and three dimensions. Observations: the role of the wave function; noncommutativity of position and momentum. The theory of scattering. Three hours lecture.

405 Statistical Mechanics and Thermodynamics (3) Prerequisite: PHYS 402. Statistical methods, systems of particles, thermodynamics, macroscopic parameters, the ideal gas, kinetic theory, quantum statistics, and transport processes. Three hours lecture.

411 Microwaves and Communication (3) Prerequisite: PHYS 302. Electromagnetic waves, matched transmission lines, the microwave region, microwave circuits, waveguides, cavity resonators. Three hours lecture.

412 Computer Physics (3) Prerequisites: PHYS 311 or equivalent and MATH 265 or permission of the instructor. Solutions to current problems in physics with the aid of a personal computer. Four hours lecture.

414 Nuclear and Particle Physics (3) Prerequisite: PHYS 402. Accelerators, detectors, and related electronics; nuclear and elementary particle structure; symmetry, and Lorentz invariance; the electromagnetic, weak, and hadronic interactions; nuclear models; the quark model; nuclear science and technology. Three hours lecture.

415 Special Topics in Modern Physics (1) Prerequisite: Senior status. A study of topics of major current interest in modern physics with emphasis on the breadth of physical understanding needed to approach major physics problems. Two hours lecture/seminar every other week.

417 Geophysics (3) Same as GEO 417.) Prerequisite: GEO 101, 102, 201, 301; MATH 113, 114; PHYS 250. Co-requisite: MATH 213, PHYS 250, 351. This course surveys geophysical and gravitation theory and their application to an understanding of the earth's interior. The geology requirements may be waived for physics and engineering majors with sufficient background. Three hours lecture.

428 Relativity and Cosmology (3) Same as ASTR 428.) Prerequisites: PHYS 352, MATH 214 or 216; and MATH 215 or permission. Special relativity, relativity, four dimensional space-time, general relativity, non-euclidian geometries, geodesic and field equations, tests of general theory of relativity, black holes, gravitational collapse, models of the universe, big bang cosmology, Einstein's field equations, cosmology, and nuclear physics. Special emphasis is placed on conservation laws in physics, thermodynamics, radiation, atomic, and nuclear physics. Three hours lecture, three hours laboratory or supervised work.

500 Physics for High School Teachers (3) Prerequisite: Certification as a secondary school physics instructor or permission of the department. Techniques of teaching high school physics. Introduction to modern physics with emphasis in concepts rather than mathematical formalism. Recent developments in physics. Three hours lecture.

501 Physics Laboratory Techniques for High School Teachers (3) Prerequisite: Graduate standing. Theory and performance of experiments applicable to high school teaching with practical sessions on use of laboratory apparatus and conservation laws. Recommended for high school teachers of physics. Three hours per week.

511 Microprocessors, Microcomputers, and their Applications (3) (Same as ENGR 511.) Prerequisite: An undergraduate course in electronics (ENGR 301 or 302) or permission of the instructor. Introduction to microprocessors and microprocessor-based computer systems, microcomputer systems, microprocessors and microcontroller systems from the scientist's and engineer's point of view with their immediate applications. The emphasis is divided between hardware and software aspects of the microcomputer systems. The course requires some hands-on experience with microcomputer systems.

520 The Physics of Energy and Environmental Technology (3) Prerequisites: BA or BS degree in natural science or mathematics or permission of the instructor. A study of the contemporary problems of energy and the environment with emphasis on the pertinent underlying principles of physics within the practical implications of energy, energy conversion and conservation laws, the electromagnetic, weak, and hadronic interactions; nuclear models; the quark model; nuclear science and technology. Three hours lecture.

521 Math Methods in Physics (3) Prerequisites: PHYS 402. Crystal structures, binding, lattice vibrations, the free electron model, metals, semiconductors, superconductivity, and magnetism. Three hours lecture.

410 Solid State Physics (3) Prerequisite: PHYS 402. Crystal structures, binding, lattice vibrations, the free electron model, metals, semiconductors, superconductivity, and magnetism. Three hours lecture.
Psychology Courses (PSYC)

100 Basic Concepts in Psychology (3) Prerequisite: PSYC 100 or permission of the instructor. A survey of animal and human learning, perception, and motivation.

101 (3) Developmental Psychology (3) Prerequisite: PSYC 100 or permission of the instructor. An introduction to classical and contemporary theories of personality and a comparative evaluation of major theories in terms of research studies.

102 Industrial Psychology (3) Prerequisite: PSYC 100 or permission of the instructor. An examination of the experimental principles and methods of problems commonly encountered in business and industry.

103 Social Psychology (3) Prerequisite: PSYC 100 or permission of the instructor. A study of man's development in a social matrix including such topics as socialization, cultural behavior, group norms, and attitude formation.

200 (300) Analysis and Interpretation of Psychological Data (4) Prerequisite: Six hours of psychology including PSYC 100, or permission of the instructor. Descriptive and inferential statistics in design, analysis, and interpretation. Application of psychological research with practical application using calculators. Three classroom and two laboratory hours.

204 Principles of Learning (4) Prerequisite: PSYC 300 (200) or permission of the instructor. Experimental methodology within the context of the basic principles of learning including such topics as classical and instrumental conditioning and discrimination learning. Three classroom hours and two laboratory hours.

305 Human Learning and Memory (4) Prerequisite: PSYC 300 (200) or permission of the instructor. Experimental methodology within the context of discrimination and classical and instrumental conditioning and research on the role of memory, and the application of contemporary psychological principles to the achievement of increased intellectual, emotional, and social competence. Three classroom hours and two laboratory hours.

309 Perception (4) Prerequisite: PSYC 300 (200) or permission of the instructor. Experimental methodology within the context of perceptive psychology including such topics as psychophysics, perceptual organization, and constants. Three classroom and two laboratory hours.

310 Comparative Psychology (4) Prerequisite: PSYC 300 (200) or permission of the instructor. Experimental methodology within the context of the perceptual behavior through the physiological and nervous system, including such topics as species-specific behavior, early experience and learning. Three classroom and two laboratory hours.

311 Child Psychology (3) Prerequisite: Six hours of psychology including PSYC 100, or permission of the instructor. A study of the process of human psychological development from conception to adolescence including such topics as genetic factors, emotional and intellectual growth, and environmental influences.

312 Adolescence Psychology (3) Prerequisite: Six hours of psychology including interpsychological influences. Three classroom and two laboratory hours.

313 Learning Psychology (3) Prerequisite: PSYC 300 (200) or permission of the instructor. An examination and application of the principles underlying the theory, interpretation, and administration of psychological tests including a study of tests of intellectual, academic ability. Three classroom and two laboratory hours.

314 Counseling Psychology (3) Prerequisite: PSYC 325 or permission of the instructor. A review of the theories and methods in psychological counseling.

315 Behavior Modification (3) Prerequisite: PSYC 207 or PSYC 220 or permission of the instructor. An examination of experimental principles of human and animal learning within the theoretical framework of applied behavior analysis; includes the design, implementation, and evaluation of therapeutic intervention programs. Three classroom and two laboratory hours.

320 Psychological Tests and Measurements (4) Prerequisite: PSYC 300 (200) or permission of the instructor. An examination of the experimental principles of human and animal learning within the theoretical framework of applied behavior analysis; includes the design, implementation, and evaluation of therapeutic intervention programs. Three classroom and two laboratory hours.

322 Social Psychology Research Techniques (4) Prerequisite: PSYC 300 (200) or permission of the instructor. An introduction to the understanding and use of basic research techniques in clinical and counseling psychology. Three classroom and two laboratory hours.

325 Abnormal Psychology (3) Prerequisite: PSYC 220 or permission of the instructor. A study of the development of abnormal behavior patterns including such topics as mental retardation, personality disorders, and mental retardation.

331 Therapeutic Communication Skills (3) Prerequisite: PSYC 325 or permission of the instructor. An introduction to therapeutic psychology, diagnosis, and the application of contemporary psychological principles to the achievement of increased intellectual, emotional, and social competence. Three classroom hours and two laboratory hours.

330 Adjustment Psychology (3) Prerequisite: PSYC 100, or permission of the instructor. A study of the development of abnormal behavior patterns including such topics as mental retardation, personality disorders, and mental retardation.

332 Clinical Social Psychology Research Techniques (4) Prerequisite: PSYC 300 (200) or permission of the instructor. A study of the development of abnormal behavior patterns including such topics as mental retardation, personality disorders, and mental retardation.

333 Adjustment Psychology (3) Prerequisite: PSYC 100, or permission of the instructor. A study of the development of abnormal behavior patterns including such topics as mental retardation, personality disorders, and mental retardation.
or permission of the instructor. Rotating topics (e.g., Cognitive and Perceptual Development, Personality and Social Development) to be announced in advance. May be repeated with permission.

420 Clinical Methods in Psychology (3) Prerequisite: PSYC 325 or permission of the instructor. The historical and empirical foundations of clinical psychology, including a survey of current trends and key principles requiring work in a non-classroom situation.

421, 422 Undergraduate Practicum in Psychology (3, 3) Prerequisites: PSYC 325 and 326 and permission of the Clinical Review Committee. Supervised experience in professional psychology, and preparation toward internship. Special emphasis on the recent experimental research literature related to the selected topic.

461, 462 Special Topics (3, 3) Prerequisite: Permission of the instructor. Selected topics reflecting interest in specialized areas. Announced in advance.

506 Theories of Development (3) Prerequisite: PSYC 220. A comparative review of the prevalent theories of personality with special emphasis on their fundamental modalities of analysis.

507 Advanced Social Psychology (3) General theories of social psychology are studied in detail, including those of K. Lewin and F. Helder.

508 Theories of Development (3) Prerequisite: PSYC 313 (210) or 211 (310). A survey of the major theories of infant and child development including the works of Piaget, Freud, Erikson, and Spitz.

509 Senior Thesis (3, 3) Prerequisite: Permission of the instructor. An examination of current issues, research methods, and clinical evaluation techniques in the field of infant development.

524 Alcoholism: A Determined and Over-Determined Problem (3) Prerequisites: PSYC 100 and an introductory course in either biology or sociology, or permission of the instructor, or certification by the employer. Integrative course in the study of alcohol problems. Sociocultural, psychological, and physiological contributions to the field of alcoholism along with general principles of prevention, treatment and rehabilitation.

530 Human Factors Engineering (3) Prerequisite: PSYC 230 or an experimental laboratory course or permission of the instructor. Problem solving in an interactive environment. Complex man-machine interactions found in industry today. Extensive empirical research findings are examined.

533 Seminar in Organizational Psychology (3) Prerequisite: PSYC 230 or permission of the instructor. A review of the theories and research relating to such topics as motivation, leadership, and the development of behavior in organizations. Special emphasis on the recent experimental research literature related to the selected topic.

541 Advanced General Psychology I: Learning and Cognition (3) Prerequisite: PSYC 231, 232, 233 (200) and either 304, 305, 309, 311, or 316. A critical review of the major topics in psychology relating to the topics of learning, motivation, cognition, perception (the sense modalities), and thinking. A discussion of current theories and research on (1) the content of cognition, such as symbols, abstractions, and cultural tools; and (2) the nature of

563 Topics in Organizational Psychology (3) F Prerequisite: PSYC 230 or 632, or BUAD 591. Selected topics reflecting interest in a specialized area of organizational psychology. Special emphasis on the recent experimental research literature related to the selected topic.

564 Biological Foundations of Psychology (3) F, Sp, Su A critical review of the major topics in personality, development, and social psychology.

641 Advanced General Psychology II: Personality, Development, and Social Psychology (3) F, Sp, Su A critical review of the major topics in personality, development, and social psychology.

651 Methodology and Research (3) F Prerequisite: PSYC 300 (200) and either 304, 305, 309, 311, or 316. A survey of statistical techniques and experiments in various fields of psychology culminating in individual experiments exemplifying proper research methods. Advanced experimental design is reviewed.

652 Analysis of Variance (3) Sp Prerequisite: PSYC 300 (200) and either 304, 305, 309, 311, or 316. The basic concepts in experimental design, the fundamental assumptions in analysis of variance, analysis of variance and covariance designs, and multiple comparison tests are reviewed.

653 Experimental and Research Design (3) F, Sp, Su Prerequisite: PSYC 300 (200) and either 304, 305, 309, 311, or 316. Advanced experimental design and the relevant statistical analytic techniques are reviewed. Examples of experiments in various fields of psychology are studied.

654 Naturalistic Methods in Psychology (3) F Prerequisite: PSYC 300 (200) and either 304, 305, 309, 311, or 316. The basic concepts in experimental design, the fundamental assumptions in analysis of variance, analysis of variance and covariance designs, and multiple comparison tests are reviewed.

656 Psychopathology (3) F, Sp Prerequisite: PSYC 325. An intensive survey of the major types of psychopathological disturbances, the causes, symptoms, and treatments of these disturbances. Techniques of the field are surveyed with special emphasis on the theories and research literature related to the selected topic.

657 Child Psychopathology (3) F Prerequisite: PSYC 313 (210) or 211 (310) and 325. An intensive survey of the major types of psychopathological disturbances of infancy and childhood.

658 Industrial Personnel and Testing Evaluation (3) F Prerequisite: PSYC 300 (200) and 325. A study of the administration, scoring, and interpretation of tests used in industry for the selection and assessment of personnel.

659 The Psychology of Aging (3) Prerequisite: An understanding of the aging process is required. A review of the psychological literature on the aging process, including intellectual functioning, personality and adjustment, and age differences in personality and adjustment. The focus of the course is on research on specific aspects of the aging process.

661 General Psychopathology (3) F, Sp Prerequisite: PSYC 325. An intensive review of the major types of psychopathological disturbances, the causes, symptoms, and treatments of these disturbances. Techniques of the field are surveyed with special emphasis on the theories and research literature related to the selected topic.

662 Human Learning and Retention (3) Prerequisite: A course in learning. The literature in verbal learning, transfer, and retention is reviewed with special emphasis on recent research. Topics studied include paired-associate and serial learning, free recall, organization in memory, concept identification, and physiological aspects of learning.

663 Perception (3) Prerequisite: PSYC 309. Important issues related to neurophysiological, sensory, and cognitive aspects of perception are surveyed. These topics include the general theories of Gibson, Brunswik, and the Gestaltists, and some specialized models developed in recent years, especially information-processing models.

664 Experimental Research in Psychology (3) Prerequisite: PSYC 300 (200) or permission of the instructor. An examination of the research techniques which are specifically designed for the evaluation of the human effectiveness of organizations and mental health programs.

665 The Social Psychology of Industry (3) F Prerequisite: PSYC 300, 200. A study of the psychological aspects of the individual and society in the work setting. Interaction effects among individuals are the focal point of the topics surveyed.

666 Seminar in Cognition (3) Prerequisite: A course in psychology. A seminar in psychological and computer science. Understanding and thinking. An introduction to the topics of cognition, such as symbols, abstractions, and cultural tools; and (2) the nature of
human mental processes that enable the acquisition, organization, and use of knowledge, such as attending, remembering, and thinking.

659 Social and Personality Development (3) Prerequisite: Graduate standing or permission of the instructor. Survey of socialization theory and research relevant to infant social relationships; development of aggressive and altruistic orientations; measurement of the child; cognitive development; parent and adult influences; social class and cultural influences.

671 Role and Function of the School Psychologist (3) F An examination of the roles and functions of the school psychologist within the educational environment. Certification and ethical standards of the school psychologist are also considered along with current issues in the field.

678 Topics in School Psychology (1-6) F Prerequisite: Permission of the instructor. Selected topics reflecting interest in a specialized area of school psychology. Specific content varies and is announced before registration. Open to practicing school psychologists and advanced students in school psychology. May be repeated.

680 Ego Psychology and Related Personality Theories (3) F Prerequisite: PSYC 220 or 325. A review of psychoanalytic ego psychology and its extensions to other personality theories. Applications of ego psychology to major developmental issues of the normal individual. Implications of ego psychology theory for community psychology and the positive mental health movement.

682 The Theoretical Basis of Vocational and Occupational Psychology (3) Sp A review of theories and basic research underlying vocational development and occupational choice. Current practices in occupational guidance.

687 Intervention Strategies in Alcohol and Polydrug Dependency (3) Prerequisite: PSYC 524 or equivalent and PSYC 728 or equivalent, or permission of the instructor. Multidisciplinary theory and practice in treatment of the alcoholic or polydrug-dependent client. Emphasis is placed on the coordination of relationship counseling and psychotherapy with interventions derived from corrective education and vocational rehabilitation. Problems of transition from institutional to open community settings are also considered.

711 Psychological Assessment (4) Sp Open only to degree students in psychology. Prerequisite or co-requisite: PSYC 616 or 617 and PSYC 715. Limited enrollment; permission of the department required. A study of the major instruments used in clinical assessment; the development and predictive use; administration and scoring of the major techniques for evaluation of personality and psychopathology; principles of interpretation of these procedures. Three lecture hours, three laboratory hours.

712 Advanced Adolescent and Adult Assessment (3) F Open only to degree students in psychology. Prerequisite: PSYC 617 and testing experience in the Psychological Clinic. Limited enrollment; permission of the department required. An advanced course dealing with problems of differential diagnosis of psychoses, character disorders, neuroses, and brain damage; assessment problems with adolescents and suicide indicators are also considered.

715 The Measurement of Intelligence (4) F Open only to degree students in psychology. Limited enrollment; permission of the department required. Prerequisite or co-requisite: PSYC 616 or 617 and PSYC 320 or the equivalent. Administration, scoring, and interpretation of the major intelligence tests, with emphasis on individual tests. Development of IQ tests; theories of intelligence; and current trends and developments in individual assessment. Three lecture hours, three laboratory hours.

722 Advanced Child Assessment (4) F Open only to degree students in psychology. Prerequisites: PSYC 711 and 715 and testing experience for the Psychological Clinic. Limited enrollment; permission of the department required. The problems involved in the diagnostic assessment of children with various handicapping conditions such as brain dysfunction, learning disabilities, emotional disturbances. Three lecture hours, three laboratory hours.

728 Psychotherapy Techniques (3) F, Sp Prerequisite or co-requisite: PSYC 616, 617, or 680. A survey of the major individual and group psychotherapeutic techniques currently utilized by clinical psychologists. Emphasis is on the application of techniques in clinical practice.

729 Behavior Therapy (3) Sp Open only to degree students in psychology. An investigation of specific procedures for altering emotional distress and behavior disorders; application of these techniques in the conceptual framework of clinical psychology.

740 Seminar in Psychosocial Issues (3) Prerequisite: Enrollment limited to advanced psychology graduate or law graduate or with permission of the instructor. An intensive examination of selected aspects of the law-psychology interface. Focus is on how psychology contributes to the legal process and how laws affects the field of psychology. Students select issues relevant to their career goals, search the literature, and present their findings to the class.

750 Psychological Practicum (1-6) F, Sp, Su Prerequisite: PSYC 716, 717, 715, or 786; and testing experience in the Psychological Clinic. Enrollment limited. Students must apply in writing to the department 60 days prior to the beginning of the semester in which they intend to enroll. Practical experience in a clinical setting as assigned.

755 Advanced Analysis of Psychological Data (3) F Prerequisite: PSYC 651, 652, or 653, or equivalent. Advanced topics in the analysis and interpretation of data. Analysis appropriate for applied problems in psychology.

756 Multivariate Techniques in Psychology (3) Sp Prerequisite: PSYC 728 or equivalent required. PSYC 755 strongly recommended. A survey of multivariate statistical techniques as applied to psychological research. The course emphasizes the analysis of complex designs and the interpretation of multivariate data analyses resulting from computer processing.

765 School Psychology Internship (3, 3) F, Sp Prerequisite: Completion of required courses in school psychology and/or permission of the program coordinator. A one-semester supervised experience in the intern's school district during which the advanced school psychology student functions as a full-time staff member within a school system. Activities include psychological educational assessment; consultation with students, parents, and administrators; and involvement in the complete range of functions required of the school psychologist. Internship is given credit on a pass/fail basis.

772 Seminar in Behavioral Assessment of Toxic Effects (3) Sp Prerequisite: A graduate course in physiological psychology or animal behavior, and a course in drugs and behavior, or equivalent. Focus: The effects on behavior of heavy metals, inhalants and gases, and abused drugs.

784 Psychological Counseling Techniques I (3) Sp Open only to degree students. Prerequisite: PSYC 728. Limited enrollment; permission of the department required. Application of various counseling techniques generated by current dynamic and interpersonal approaches to counseling. The focus is on growth and supervision, concerning the student's experience in techniques used in contemporary practice. Tapes of students' counseling sessions are required for course credit.

785 Psychological Counseling Techniques II (3) F Open only to degree students. Prerequisite: PSYC 728. Limited enrollment; permission of the department required. Application of various counseling techniques generated by current dynamic and interpersonal approaches to counseling. The focus is on individual counseling approaches, giving the student experience in counseling techniques used in contemporary practice. Tapes of students' counseling sessions are required for course credit.

786 Functional Assessment and Treatment in Gerontology (3) Sp Prerequisite: A course in the psychology of aging and related courses. The functional assessment of older adults is considered, including the conceptual and methodological problems involved in assessing the functioning of elderly persons. Intervention strategies with older adults are examined, including intervention, group work with older persons, milieu therapy, reality therapy, and biofeedback.

792 Special Topics in Psychology (3) Prerequisite: Admission to graduate program or permission of the instructor. Selected topics reflecting specialized areas in psychology. Specific content varies and is announced before registration. May be repeated.

797 Directed Reading and Research (1-3) F, S, Su Directed reading and research on a topic agreed to by a student and a faculty member. May be repeated once, except it may not be repeated for degree credit by students who also register for PSYC 799: Thesis.

798 Practical Research in School Psychology (4) Prerequisite: Completion of the graduate program in school psychology program and/or permission of the program coordinator. A practical project in the school system under the supervision of a faculty member. The student completes the project and has it reviewed and approved by advisor and at least one other faculty member. Not available to students enrolled in EDUC 499 or PSYC 799.

799 Thesis (3 or 6) F, Sp 800 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to study in psychology. A program of study designed by the student in consultation with the student's advisor and approved by the student's doctoral committee which brings the student to participate in the current research of the discipline director and results in a paper of publishable quality. Credit is granted for the student's contributions to the study. The paper is presented in a subsequent DA Ed seminar summer. Enrollments in this course are repeated according to each student's program.

Public Administration Courses (PUAD) Public Affairs

502 Theory and Practice of Public Administration (3) Prerequisite: Graduate standing or permission of the department. Survey and review of the field of public administration to include the development of government and public administration in the United States, theories of administrative organization and behavior, administrative processes, management of people and money, administrative responsibility, and the public policymaking process.

503 The Political Environment of Public Management (3) Prerequisite: Graduate standing or permission of the department. An examination of the skills involved in public administration with public agencies, groups, legislative bodies, advisory committees, the press, other administrative agencies, political executives, and other levels of government. Case studies of administrative cooperation in the political process of public policy making.

596 Directed Readings and Research (3) Prerequisite: permission of the instructor and the program director and the instructor. Reading and research on a specific topic, under the direction of a faculty member. A written report is required; an oral examination over the research and report may be required. Course may be repeated once.

611 Methods of Analysis for Public Managers I (3) Prerequisites: PSYC 250, 729, 730, 785, 786, or 787. Skills and techniques available to, and used by, public managers to solve practical problems or to analyze data and policy issues. Course focuses on problem definition, research design, and problem solving under conditions of uncertainty in the public sector. PUAD 611 is a prerequisite to PUAD 612.

612 Methods of Analysis for Public Managers II (3) Prerequisite: PUAD 611. Techniques and skills available to, and used by, public managers to solve policy-related problems or to analyze data and policy issues. Course focuses on data gathering and analysis, the use of computers, systems theory and analysis, and operations research.

613 Legislative Law (3) Examination of law as a guiding and controlling force in public sector operations. Emphasis on the application of legal processes to administrative practices and situations. Discussion of administrative determination of private rights and obligations.

620 Organization Theory and Management Behavior (3) Consideration of behavior within the context
of public organization and the consequent changes required in management. Focuses on such issues as perception, need satisfaction, attitude formation, motivation, leadership, systems theory, communication and information, organizational behavior, decision theory, group dynamics, innovation, interpersonal negotiation, and decision theory.

621 Principles and Practice in Government Organization and Management (3) Prerequisite: PUAD 620. Review of major management theories applicable to the American federal system, with emphasis on organization, structure, and operations. Relationship of management practices in contemporary American administration.

622 Program Planning and Implementation (3) Prerequisite: PUAD 621. Practical exploration of operationalizing public policy in the American federal system. Construction of organizational apparatus, development of operational plans, and systems of control and evaluation necessary to implement government programs. Emphasis on coordination of tasks and resources required for effective program implementation.

640 Public Policy Process (3) An overview of the processes of public policy making. Includes the detection of public issues, the consideration of alternatives to solution, and the adoption and implementation of solutions to public problems. Highlights the major actors and agencies, as well as the environment within which they work.

541 Policy Analysis (3) Prerequisite: PUAD 611. Study of substantive issues in the clarification of public policy goals, the development of new public policy, the selection of the appropriate method for policy determination, and the practical application of policy formulation, program formulation, and program implementation.

642 Program Evaluation (3) Prerequisite: PUAD 611. Practical exploration of evaluating public programs in the American federal system. Assessment criteria utilized by central and local government including program impact and program strategy, efficient strategy evaluation, cost analysis, field experiments, productivity studies, and evaluation research. Emphasis on application of relevant methodologies to the government setting.

560 Intergovernmental Relations in the United States (3) An in-depth study of intergovernmental relations, with emphasis on contemporary patterns of fiscal relations and cooperation among the major levels of government and other aspects of governmental finance.

561 Administration in the Commonwealth of Virginia (3) An analysis of the cultural, demographic, constitutional, and socioeconomic environment of public administration in the Commonwealth of Virginia, including intergovernmental functions, executive leadership, state agencies, and administrative customs peculiar to Virginia.

661 Public Budgeting Systems (3) Prerequisite: PUAD 660 or permission of the department. Development, theory, and structure of budgeting as found in American government. Political, economic, and managerial aspects of public budgeting are examined. Public policy implications are explored. Particular attention is paid to budgetary reform movements and their successes and failures.

562 State and Local Financial Management (3) Prerequisite: PUAD 660 or permission of the department. Systems of public finance at the state level. The impact of budgetary systems and taxation on state government, the impact of federal grants-in-aid, revenue sources, and the relationship of national, state, and local jurisdictions as partners in a federal system. Program audit and control, budgetary techniques are examined for their applicability at the state level.

670 Personnel Administration in the Public Sector (3) Discussion of the difference between public and private personnel systems and the development of the civil service. Major emphasis on the processes involved in the selection and management of personnel in public organizations. Selected problems and their impact on public personnel systems are also considered.

671 Employee Labor Relations (3) Prerequisite: Theor­ ies to management practices in contemporary innovation, in terpersonal negotiation, and decision making. Focuses on the conceptualization and practical application of policy to articulation, program formulation, and program implementation.

Prerequisite: Completion of the seminar and the participant's advisory committee. Doctoral students from other programs may enroll only by permission of the seminar professor and the participant's advisory committee. Doctoral students from other programs who can demonstrate sufficient background and interest in the seminar may enroll only with the permission of the seminar professor and the participant's advisory committee.

829 Doctoral Tutorial in Leadership (3) Prerequisites: DPA students from other programs who can demonstrate sufficient background and interest in the seminar may enroll only with the permission of the seminar professor and the participant's advisory committee.
the quantitative and qualitative approaches and tech-
niques used in recognizing, defining, and assessing
public issues and problems. Especially involved are
conceptualizing and assessing problems, employing
and judging the strengths and weaknesses of tools and
techniques, and identifying and categorizing the infor-
mation required for competent analysis and evaluation.
849 Doctoral Tutorial in Analysis and Evaluation
(1-3) Prerequisites: BPA and permission of the pro-
tessor. The purpose of this course is to prepare students
for the successful completion of the doctoral dis-
sertation. The student and the professor will work
in concert to develop a thesis proposal which is
be based on the student's dissertation research. The
student will work under the direction of a faculty
member. The course can be repeated for a maximum
total of 12 credits.
998 Doctoral Dissertation (1-18) To be taken only
with the permission of the participating advisor.
Regulations regarding the total credit hours may be
spread over a two-semester contiguous period.

Public Affairs Courses (PUAF)
850 Studies for the Doctor of Arts in Education
(variable credit) Prerequisite: Open only to DA Ed
students approved by the advisor. This course is
reserved for advanced graduate students who are
planning to write a dissertation. The student and his
advisor will work together to define the student's
research project, which will be based on the student's
dissertation research. The student will work under
the direction of a faculty member. The course can
be repeated for a maximum total of 12 credits.

Real Estate and Urban Development Courses (REUD)
School of Business Administration
301 Introduction to Real Estate and Urban Devel-
opment (3) A survey of the many dimensions and
specialties involved in the public control and private
development, management, and ownership of real
estate. The subject areas include land planning, land use con-
trol, appraisal, finance, brokerage, property manage-
ment, and investment.
411 Real Property Appraisal (3) Prerequisites: REUD
301 or permission of the instructor. This course covers
the theory of real estate appraisal including the three
traditional approaches of the determination of real property
values. An individualized course is offered at the
request of student and approval of instructor.
412 Real Estate Finance (3) Prerequisites: REUD
301 or permission of the instructor. The study of
the financial aspects of real estate investment.
413 Real Estate Investment (3) Prerequisites: REUD
301 or permission of the instructor. An intro-
cutory course in the fundamentals of real estate invest-
ment covering the factors that should be considered in
developing an overall real estate investment strategy;
the analytical skills needed to conduct investment
analysis; and the role of the investor in the decision-
making process of the different types of real estate
investment opportunities.
421 Real Estate Law (3) Prerequisites: BULE 301
and 302, or permission of the instructor. The study of
the basic principles of real estate law including
the classification of property, types of ownership, acquisi-
tion and transfer, leasing, government regulation, and
taxation. Emphasis is placed on the real estate sale
involving the contract of sale.
431 Real Property Management (3) Prerequisite:
REUD 301 or permission of the instructor. This course
examines the responsibilities of managing income-
producing real estate, including selection of tenants,
collection of rents, maintenance and repair, solving
tenant problems, paying taxes and insurance, manag-
ing tenant relationships, and other areas.
432 Residential Development (3) Prerequisite:
REUD 301 or permission of the instructor. This course
examines the steps in the planning, approval, and con-
struction processes of building housing. Topics include
market demand analysis, financing, development,
merchandising, and managing the project.

Regional Cultures (LAC)
History
151 Latin America (3) An interdisciplinary intro-
duction to Latin America. Focus is placed upon crucial
contemporary issues and their related cultural and his-
torical origins, uses and methods of the social sciences
and humanities. Problems of social change and assimilation, nationalism, and interna-
tional relations in selected areas are among the themes emphasized in the course.
152 Sub-Saharan Africa (3) An interdisciplinary
introduction to Sub-Saharan Africa. Focus is placed
on crucial contemporary issues and their related cultural
and historical origins, using the perspectives and methods of the social sciences and humanities.
Problems of social change and assimilation, nationalism, and international relations in selected areas are among the themes emphasized in the course.
154 North Africa and the Middle East (3) An interdis-
ciplinary introduction to North Africa and the Middle
East. Focus is placed upon 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 are among the themes emphasized in the course.
155 Asia and the Western Pacific (3) An interdisci-
plinary introduction to Asia and the Western Pacific.
Focus is placed upon 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 are among the themes emphasized in the course.

Religion Courses (RELI)
Philosophy and Religion
The courses of study are designed to serve a variety of
needs and interests. With careful planning, students
can acquire the necessary intellectual tools and schol-
arly background for further academic or professional
study. The Religion Track within the philosophy major
is an excellent vehicle for this endeavor.
Areas of study may be identified by the second digit
of the course numbers as follows:
1—Religion
2—Religious Studies
3—Religion and Culture
4—Religious Literature
5—Religious Thought
132 Religion in the Modern World (3) An intro-
duction to several views of the nature of religion, with
particular emphasis given to the religious understanding of
humanity and reality. Its relationship with the modern
understanding of humanity and reality is explored as
expressed in contemporary anthropology, sociology,
psychology, philosophy, and literature.
211 Religions of the Near East (3) A survey of the
origin, developments, and patterns of humanity's re-
ligions: primitive, ancient national, and the Near East or
major religions (Zoroastrianism, Judaism, Christian, islam,
and Dervish). The course is arranged and will be
presented by the instructor.
212 Religions of the Orient (3) A survey of the
religions of India and the Far East: Hinduism, Jainism,
Sikhism, Buddhism, and the Chinese and Japanese
religions.
213 Hindu Religion and Philosophy (3) A study of
Hindu religious and philosophical developments from
their origins through their formative periods. Emphasis
is on tracing the development of Hindu religious
philosophy, and the worship of Shiva, Vishnu, and the
Female Power.
231 Religion in America (3) A survey of the reli-
gion in America, the growth of denominations and sects; the development of theology and ethics, the interrelationship of religion and the socio-political life, and consideration of the modern secular society.

237 Religious Dimensions of Contemporary Dra-
matic Literature (3) An examination of contemporary
religious thinking through the study of selected modern plays and the playwrights. The course is designed
as the self, human finitude, loneliness and alienation,
love and redemption, personal guilt and social responsi-
bility, suffering and death.

239 Religion and the Old Testament (3) A survey
of the development of the Old Testament and inter-
testamental literature, with attention given to the liter-
ary, historical, and theological aspects.

252 Byzantine Religion and the New Testament (3) The
Greco-Roman world. Hellenistic and Palestinian Juda-
ism, Dead Sea Scrolls, New Testament origins and teachings, the early Christian community and its faith.

261 Contemporary Religious Ethics (3) Prerequi-
site: Sophomore standing or higher, or permission of
the instructor. A philosophical examination of some of
the major theoretical and practical issues in contempo-
rary religious ethics. Issues include the following: the relationship between religious and non-religious ethics; deontological and teleological ethical reasoning; situation ethics; and religious ethical judgments made in such areas as politics, economics, medicine, and sex.

328 Bibliology in Religion (3) Prerequisite:
RELI 231 or permission of the instructor. A study of
the development of religious life and thought in the
popular and regional folk religion; emphasis on revi-
volution; pietism, perfectionism, other-worldliness, anti-
intellectualism; the framework of cultural isolation,
theological individualism; religious thinking through the
development of religious life and thought in the

Student Registration and Action (3) Prerequisite: RELI 231 or permission of
the instructor. An in-depth study of the churches' involve-
ment in social thought and action. Issues in social
analysis include: interaction of church and culture; the churches and the nation's wars; slavery, segregation, and racial problems; nineteenth-century moral crusades; social views of churches, sects, and cults; the economic order and the "social gospel"; social issues in modern America.

333 Contemporary Religion in America: Diversity
and Dissent (3) Prerequisite: RELI 231 or permission
of the instructor. The nature and development of the
character of dissent in the categories of denomination (schismatics), intellectual (heretics), and religio-cultural (sects, cults, minority, non-normative groups and movements); the question of non-Western religious diversity being part of American diversity or separate from the mainstream, relationship to religious freedom and pluralism.
334 Religion in the Theatre of Asia (3) Prerequisite: RELI 212 or permission of the instructor. A study of certain Indian and Japanese theatre genres and their dramatic literature on their relation to the great religions of India and Japan.

336 Religion and Art of Asia (3) Prerequisite: Three credits in religion or art (recommended RELI 212, 213, or ART 101), or permission of the instructor. A study of Hindu and Buddhist beliefs expressed in Asian art and architecture. Emphasis is on tracing the development of a set of religious themes from Indian art through South East Asian and Far Eastern human art and culture.

337 Mysticism: East and West (3) Prerequisite: Three credits in religion, or permission of the instructor. A survey treatment of the major expressions of mysticism in the great Eastern religions. Analysis of the mystical experience in Hinduism, Buddhism, and Islam are considered, as well as aspects of Christian and Judaic mysticism. An attempt is also made to speculate on the nature of that particular human experience called the mystical experience.

338 Mythologies of the Orient (3) Prerequisite: Three credits in religion, or permission of the instructor. The course will cover several great mythic themes: myths of creation and origins; myths of the nature and power of the divine; myths of the general nature of the universe and of the earth. These themes are carried through Hindu and Buddhist traditions of India, in the folk beliefs and Buddhism of China, and in the Shinto religion of Japan. The presentation of oriental myths by major themes permits in-depth understanding of the myths within a specific cultural context as well as within a comparative religion framework.

371 History of Western Christian Thought I: Classical and Christian (3) Prerequisite: RELI 252 or permission of instructor: suggested PHIL 232 (303) or 234 (302). An examination of the development of Christian doctrine from the close of the New Testament period to the 16th century. The relationship between Greek, Roman, and Medieval philosophy and the theological expressions of belief are emphasized.

372 History of Western Christian Thought II: Modern (3) Prerequisite: RELI 252 or permission of instructor: suggested PHIL 232 (303) or 234 (302). An examination of the development of Christian doctrine from the Reformation to the present. The effects of scientific empiricism, existentialist and linguistic analysis on Protestant and Catholic theology are the focus.

374 Islamic Thought (3) Prerequisites: RELI 211. Junior or senior standing or permission of the instructor. An examination of the major components of Islamic thought and its role in regulating the various aspects of social life in the Muslim World. Emphasis is placed on the religious foundation of Islamic society and culture, the impact of Islamic thought on the development of social institutions, and the constant interplay between religion and society in the face of change and modernization. Current issues and contemporary problems are also considered.

376, 377 Special Topics in Religious Thought (3) Prerequisite: Three credits in philosophy or religion, or permission of the instructor. An intensive examination of selected topics from a philosophical perspective. Topics vary depending on interest and currency, and include, but are not limited to, the following: Black Religion, Death of God Theology, Process Theology, Paul Tillich, Edgar Scidmore, Religion in History, Martin Buber, Religion and Science Fiction, Methodology of Religious Studies, New Hermeneutics, Form Criticism, Christianity and Judaism, Contemporary Judaism, and Existential Theology.

Russian Courses (RUSS) Foreign Languages and Literatures


151, 152 Elementary Russian (4, 4) Intensive introduction to Russian, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of Russia through selected readings and in the language laboratory. Four classroom hours, two laboratory hours per week. 151 and 152 must be taken in sequence.

251 Intermediate Russian (4, 4) Prerequisite: RUSS 152 or equivalent. Intensive review of grammar; practice in writing; development of reading proficiency and of aural and oral skills; continued study of the life and culture of Russia. Russian instruction is an integral part of the course. Four classroom hours, two laboratory hours per week.

252 Russian Conversation and Composition (3) Prerequisite: RUSS 251 or permission of the instructor. Development of the students’ ability to express themselves orally on topics of current interest and everyday situations; composition provides practice in more difficult forms of Russian.

254 Readings in Russian Literature (3) Prerequisite: RUSS 251 or permission of the instructor. Readings of Russian literary works in the original language with oral lectures, discussions, and examination in Russian.

300 Field Study in Russian Culture (1, 2, 3) Prerequisite: One of the following courses: HIST 328 or 329; GEOG 253 or 254; or permission of the instructor. A directed study tour to the Soviet Union of between two and three weeks. Students must attend a series of lectures before the tour and must consult with other students on a creative project on a topic in Russian culture resulting in a term paper or report.

303 Russian Advanced Conversation (3) Prerequisite: RUSS 251 or equivalent. Development of oral proficiency by materials and expressions of the students’ own interest.

311 Contemporary Soviet Short Fiction (3) Prerequisite: RUSS 251 or equivalent. Reading and discussion of recent short stories by the best-known Soviet writers. Emphasis is on the general characteristic of the short story as the development of the students’ ability to express themselves orally on topics of current interest and everyday situations; composition provides practice in more difficult forms of Russian.

325 Major Russian Writers (3) Prerequisite: ENGL 102 or equivalent or permission of the instructor. Study of the works of major Russian writers, (e.g., Dostoevsky, Tolstoy, Gogol, Turgenev, Dostoevsky, etc.) in the original language, with lectures and discussion partly in English, partly in Russian. This course may be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

327 A Survey of Russian Literature (3, 3) Prerequisite: Junior standing or permission of the instructor. RUSS 326 consists of a survey of Russian literature from its beginning to 1880, with special emphasis on Russian folk and peasant life. RUSS 327 consists of a survey of Russian literature from the late nineteenth and the twentieth centuries, with special emphasis on Tolstoy, Chekhov, Mayakovsky, Pasternak, Sholokhov, and Pasternak’s, Dostoevsky, etc. Readings and discussions are in English.

353 Russian Civilization (3) Prerequisite: Junior standing or permission of the instructor. A survey of Russian history and society from the 18th to the present. In addition to readings and lectures, the course includes films, slides, and music. All coursework is in English. This course may be taken toward fulfillment of the non-Western Culture requirement for the BA degree.

354 Contemporary Soviet Life (3) Prerequisite: Junior standing or permission of the instructor. A study of the life, art, economics, education, view of life, and personal aspirations of the Soviet citizen today. All classroom discussions and reading assignments are in English. A number of Soviet films are shown. This course may be taken toward fulfillment of the non-Western Culture requirement for the BA degree.

401 Readings in the Social Sciences (3) Prerequisite: Fifteen hours of Russian or equivalent. Reading, translation, and discussion of Soviet materials in the fields of history, sociology, and political science.

402 Scientific Russian (3) Prerequisite: Fifteen hours of Russian or equivalent. Reading, translation, and discussion of Soviet materials in the natural and physical sciences.

407 Russian Theater and Drama (3) Prerequisite: Junior standing or permission of the instructor. Study of the development of Russian theater including directing techniques in the Moscow Art Theater. Reading and discussions of selected plays from the early eighteenth to the twentieth centuries. All reading and discussion are in English. Knowledge of Russian is not required.

410 Russian Poetry (3) Prerequisite: Fifteen semester hours of Russian or equivalent. Study of the historical development of Russian poetry, and of representative works of the major poets. All reading is in Russian. Lectures and discussions are in both English and Russian.

415 The Slavs: A Cultural Survey (3) Prerequisite: Junior standing or permission of the instructor. Study of the development of Slavic culture through the ages, with special emphasis on the Western (Polish, Czech) and Southern (Yugoslav, Bulgarian) Slavs. All readings, lectures, discussions, and examinations are in English.

498, 499 Senior Seminar (3, 3) Prerequisite: Senior standing as a major in (area in) Russian studies and permission of the department chairperson. Research, analysis, and examination of a selected topic in Russian language, literature, and culture. Preparation of a seminar report. A maximum of six hours of Senior Seminar may be applied to fulfillment of requirements in the major.

Social Work Courses (SOCW) Sociocultural Studies

101 Introduction to Social Work (1) This course provides an introduction to the field by testing and identifying an interest in social work through introductory classroom discussion and field observation. The student has the opportunity to discuss with social work faculty, social agency personnel, and senior social work students the functions of the social work profession, opportunities, obligations, and limitations of social work in helping people.

105 Field Visits and Optional Readings Supplement Discussion (1) Laboratory in Personal Interpersonal Communication (3) Prerequisite: SOC 101, PSYC 100, or permission of the instructor. An exploration of the dynamics of personal contact and the role of the student’s suitability for a helping role. Emphasis is on experiential learning of the biological, psychological, social, and cultural influences on the behavior of those who need and those who give help. Individual and group exercises and simulations are supplemented by service experiences in the field to provide live learning content. 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.

132, 134 Human Behavior in the Social Environment I, II (3) Prerequisites: SOC 101, BIOL 104, or permission of the instructor. A social systems approach unifying and integrating concepts and knowledge from biology, anthropology, sociology, and psychology. Human behavior and social institutions of the groups and environments in which the knowledge in professional practice are examined in the social work literature and in the student’s field experiences.

351 Social Welfare Policy and Services I (3) Prerequisites: SOC 101, PSYC 100, or permission of the instructor. Introduction to social welfare, its historical development, central concepts, institutional nature, and the functions of social work as a profession. Exploration of underlying human needs and services organized to meet them. Field investigation and analyses of human service delivery systems, settings, and roles of social work.

352 Social Welfare Policy and Services II (3) Prerequisites: Junior or senior standing or permission of the instructor. 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 citizens.

357 Methods of Social Work Intervention I (3) Prerequisite or co-requisite: SOCW 301 or permission of the instructor. The course examines the general orientation of social work practice from a systems perspective. Particular emphasis is given 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. From this generic base the following problem-solving activities are examined: data gathering, problem assessment, use of community re-
sources, and development of feasible plans of action. Emphasis is placed on identifying change objectives and the methods and techniques of achieving them. Dynamics of interviewing and use of relationships are explored.

358 Methods of Social Work Intervention II (4) Prerequisites: SOCW 301, 357, or permission of the instructor. This course continues a general problem-solving model, focusing on group and macro-intervention systems, settings, and skills. Emphasis is placed on working with groups from treatment to task purposes. Group goal formation, contract setting, composition, termination, skills, and techniques necessary for effective worker intervention are partial knowledge base of the course. Macro content focuses on the processes of activity most commonly encountered by social work in macro systems such as organizations and communities. Field service of 40-60 hours is required for this course.

423 Sociology of Adolescents (3) Prerequisite: Junior or senior standing and concurrent field experience, or permission of the instructor. Examines the major needs of adolescents with their implications for social work. This course continues a general problem-solving model, focusing on group and macro-intervention systems, settings, and skills. Emphasis is placed on working with groups from treatment to task purposes. Group goal formation, contract setting, composition, termination, skills, and techniques necessary for effective worker intervention are partial knowledge base of the course. Macro content focuses on the processes of activity most commonly encountered by social work in macro systems such as organizations and communities. Field service of 40-60 hours is required for this course.

424 Social Work Practice: Family and Group (3) Prerequisite: SOCW 358 or permission of the instructor. This course is taken simultaneously with SOCW 453 or 454 (Senior Practicum). Designed to provide an in-depth examination of theoretical and applied concepts in social work practice with the family and the group. Students should have the 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) Prerequisite: Senior standing or permission of the instructor. An overview of community organization and planning, with specificities in the practice of "grass-roots" community organizations. Following areas include the community development approach, neighborhood study and analysis, direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent social action, and role of the social worker. Uses various theoretical orientations and evidence from research. Analyzes both individual and group approaches to counseling and teaching and gives attention to the use of family and group resources to promote and sustain constructive growth and change.

Sociology Courses (SOCl)

101 Introductory Sociology (3) An introduction to basic sociological concepts. Aspects of human behavior; interaction and social control; the social/mobility; organizational roles, both male and female, in contemporary society. Using historical and comparative data, the differential socialization of males and females is seen in relation to
the changing social structure in which this socialization takes place.

325 Sociology of War and Conflict (3) Prerequisite: Six hours of sociology or permission of the instructor. This course is an in-depth analysis of war as a sociopolitical phenomenon in our society and in other societies. Total war and other conflict alternatives—such as limited war, non-nuclear war, subversion and sabotage, terrorism, guerilla warfare—are primary units of analysis. Both macroscopic sociological and social psychological perspectives are utilized for analysis of relevant sociological variables. History, current events, and future trends of organized and manifest force as a sociopolitical action are studied.

326 Military Sociology (3) Prerequisite: Junior or senior standing or permission of the instructor. This course examines the military as a sociopolitical phenomenon in our society and in other societies. Total war and other conflict alternatives—such as limited war, non-nuclear war, subversion and sabotage, terrorism, guerilla warfare—are primary units of analysis. Both macroscopic sociological and social psychological perspectives are utilized for analysis of relevant sociological variables. History, current events, and future trends of organized and manifest force as a sociopolitical action are studied.

332 Sociology of Urban Communities (3) Prerequisite: Six hours of sociology including SOCI 101, or permission of the instructor. An analysis of the urban community: historical development, demography, and sociology 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) Prerequisite: Six hours of any social science course, or permission of the instructor. This course examines the political power of the military from a sociological perspective. Topics include the role of the military in society, politics, civil-military relations, the military as a professional, social structure, and the growth of multinational corporations.

350 The Sociology of the Life Cycle (3) Prerequisite: Three hours of sociology, or permission of the instructor. Colonial, national, and industrial development in the timing of the life cycle. Topics include cultural variations in defining age roles, the historical social development of generational subcultures, youth and age as new minorities, community structure, and socialization process, the mass media, and the American cult of youth, and explorations of alternative patterns of generational interaction.

373 The Community (3) Prerequisite: Six hours of sociology, or permission of the instructor. An examination of small to moderately-sized communities ranging through the village, rural community, small town, and city community. The latter category includes the city itself, the metropolis, and suburban communities. Includes study of case communities, participant observation and field trips.

382 Education in Contemporary Society (3) Prerequisite: Six hours of sociology including SOCI 101, or permission of the instructor. This course makes the study of education a social institution. It functions as a socialization agency for social stability and social change. The influences of social class elements on the educational process and the socialization of the U.S. public school system are emphasized.

385 Sociology of Religion (3) Prerequisite: Three hours of sociology, or permission of the instructor. A sociological analysis of religious phenomena. The personal and institutional dimensions of religious life are studied within major sociological conceptualizations such as role, status, group, and social stratification. The student selects an aspect of religion to study in depth.

390 Medical Sociology (3) Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. This course is an in-depth analysis of the social context of disease and medical care, the position of the professions in the medical care structure, the delivery of medical care and the physician-patient relationship under different systems of practice. The causes and prognosis of disease, and the restoration of patients to their normal social functions are studied in relation to the social environment.

392 Family Sociology (3) Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. An analysis of types of large, complex organizations in society; a study of the bureaucracy and of the informal group formation which is often a part of the larger structure. Effectiveness of the formal organization and its administration are features of the course.

397, 398 Fundamentals of Aging I, II (3, 3) Prerequisite: Eight hours of biology, anatomy, or physiology and three hours of psychology or sociology; or permission of the instructor. An introduction to sociological approaches to the study of aging. The physical, psychological, and social aspects of normal aging are examined as well as issues in health care, mental health, social services, and the aging process in the field of gerontology. A field experience is required. Students who have taken PSYC 216 may not receive credit for Fundamentals of Aging I, and students who have taken UNIV 397 may not receive credit for Fundamentals of Aging II. SOCI 397 may not be taken for sociology major credit.

401 Social Stratification: The Study of Inequality (3) Prerequisite: Twelve hours of sociology including SOCI 101 or permission of the instructor. An examination of the structure of social inequality from a stratification framework. Topics include the nature of hierarchical and vertical social mobility, the permanence or transience of inequality. Social class systems are analyzed through economic, political, and prestige structures and include the study of social mobility and differential life stages and statuses.

402 Sociology of Punishment and Corrections (3) Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. Historical overview of the American correctional system, with emphasis on the adult and juvenile offender. Includes discussion of the origin and development of punishment, correction, rehabilitation, residential treatment, and the halfway house. The roles and agencies in the treatment process are compared and contrasted.

403 Sociology of Law (3) Prerequisite: Junior or senior standing, or permission of the instructor. The course deals with the social relations and reciprocal definitions of development, problems related to the implementation of change strategies, the contexts of national, regional, and institutional change are examined and compared.

410 Social Survey: Attitude and Opinion Measurements (3) Prerequisite: Twelve hours of sociology including SOCI 221 and 303; or permission of the instructor. Survey research methods and techniques using theoretical and statistical social data, the research processes and methods of measuring social attitudes and opinions are studied.

412 Contemporary Sociological Theory (3) Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. The course examines the theoretical perspectives and meth­odological skills learned in prerequisite offerings.

420 Regional and Social Issues: Import of the Instructor. An in-depth consideration of the social dimensions of economic growth and development with particular emphasis on the specific rules of interpretation; on the sex, class, race, and setting specific uniformities in the production of talk; and on language as constraining on individuals.

426 Urban Sociology (3) Prerequisite: Junior or senior standing, or permission of the instructor. Urban sociology; an examination of the interaction of language and social structure. Attention is focused on language as a resource for social interaction; the specific rules of interpretation; on the sex, class, race, and setting specific uniformities in the production of talk; and on language as constraining on individuals.

429 Social Deviance and Social Control (3) Prerequisite: Junior or senior standing, or permission of the instructor. Alternative models will be advanced which stress recidivism, law ideology of punishment and incapacitation. The course deals with the social relations and reciprocal definitions of development, problems related to the implementation of change strategies, the contexts of national, regional, and institutional change are examined and compared.

431 Seminar in Social Issues (3) Prerequisite: Senior standing and 12 hours of sociology. The Seminar in Social Issues provides an opportunity for ad­vanced students of sociology to apply to contemporary relevant issues the theoretical perspectives and meth­odological skills learned in prerequisite offerings.

432 Sociological Analysis of Juvenile Delinquency (3) Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. This course examines the interaction of language and social structure. Attention is focused on language as a resource for social interaction; the specific rules of interpretation; on the sex, class, race, and setting specific uniformities in the production of talk; and on language as constraining on individuals.

437 The Sociology of Aging (3) Prerequisite: Six hours of sociology, or permission of the instructor. The course examines aging from a sociological perspective. Topics covered include demographic trends and the social psychological, sociological, and individual effects of aging. The course presents a critical assessment of the American adult and juvenile correctional systems for the purpose of shed­ding light upon alternative approaches to crime control. An in-depth analysis is made of the current American incarceration and incapacitation policies. Alternative models will be advanced which stress community-based, community-controlled program­
mation. Also to be discussed are the problems of: institutional programming, correctional decision-making; prisoners' rights and legal protections; planning, research, and policy development; and change strategies.

510 Qualitative Research Methods (3) Prerequisite: Graduate standing or permission of the instructor. An examination of available methods, their strengths and weaknesses, and their application. Emphasis on observation and other techniques used in qualitative research.

511 Classical Sociological Theory (3) Prerequisite: Graduate standing or permission of the instructor. An introduction to classical social thought, including Marxist, functionalist, and conflict perspectives.

512 Contemporary Sociological Theory (3) Prerequisite: Graduate standing or permission of the instructor. An introduction to contemporary social thought, including symbolic interactionism, structural-functionalism, and social constructionism.

520 Design of Social Research (3) Prerequisite: Graduate standing and undergraduate statistics and research methodology, or permission of the instructor. An introduction to advanced strategies of social research.

521 Human Ecology and the City (3) Prerequisite: Graduate standing or permission of the instructor. An introduction to urban ecology and the social dynamics of urban development.

522 Metropolitan and Regional Development (3) Prerequisite: Graduate standing or permission of the instructor. An examination of metropolitan and regional development, including the process of urban development.

523 The Suburban Community (3) Prerequisite: Graduate standing or permission of the instructor. This course deals with the systematic sociological study of the suburban phenomenon and development (demographic and geographic); (b) its varied types; (c) its relation to the inner city; (d) as part of the metropolitan area and megalopolis; (e) its structure as a community including its problems of social order and of change, the role of values and of social structure. The social and intellectual context of theories is emphasized. In addition, the logic of formal theory construction is examined.

531 Social and Cultural Change (3) Prerequisite: Graduate standing in sociology or permission of the instructor. An examination of social change in a transcontinental and transcultural (or comparative) perspective, with particular attention to theories, research methods, and conclusions concerning development and modernization in post-Colonial and "Third World" societies and cultures. Course discussions, lectures, and readings focus on selected examples of recent social and cultural change in various world areas (e.g., sub-Saharan African, Arabian, Oceanian, Near and Middle East, Southeast and Island Asia, etc.) with an effort to understand the dynamics of such change.

532 Design of Social Research (3) Prerequisite: Graduate standing and undergraduate statistics and research methodology, or permission of the instructor. An introduction to advanced strategies of social research.

540 Social Theory and Social Policy (3) Prerequisite: Graduate standing or permission of the instructor. Seminar in which major theories of social organization and social change are examined as a means of understanding social policy development.

550 Health Systems Delivery (3) Prerequisite: Graduate standing or permission of the instructor. An analysis of the social factors associated with the delivery of health care. Several theoretical perspectives are used to highlight relevant elements. Planning for health from individual to federal processes is studied. The problems and processes of measuring the quality of medical care, and the restoration of patients to normal social functions are studied in relation to the social environment.

551 Medical Sociology (3) Prerequisite: Graduate standing or permission of the instructor. An examination of the social context of disease and medical care, the position of the professions in the medical care structure, the delivery of medical care, and the physician-patient relationship under different systems of practice. The etiology, incidence, and prognosis of disease, and the restoration of patients to their normal social functions are studied in relation to the social environment.

580 Clinical Sociology (3) Prerequisite: Graduate standing or permission of the instructor. An introduction to the practice of clinical sociology. The course introduces students to the theoretical principles, methods, and procedures necessary to practice clinical sociology as an independent consultant or within public organizations. Such special applications as family counseling, organizational change, medical sociology, and educational sociology are covered.

585 Sociology of the Handicapped (3) Prerequisite: Graduate standing or permission of the instructor. An overview of social movements relating to the handicapped including questions on how persons with disabilities manage living in their homes, in their schools, and in their workplace. A major portion of the course addresses itself to an analysis of legislation and public programs as they relate to various handicapping conditions.

586 Sociology of Aging (3) Prerequisite: Graduate standing or permission of the instructor. Analysis of sociological issues in aging. Issues include class and cultural factors, problems of work, of retirement, of attitudinal and life-cycle changes. Different theories of aging are examined. Implications for social policy and for programmatic design and analysis are explored.

980 Studies for the Doctor of Arts in Education (variable credit) Prerequisite: Open only to DA Ed students admitted to study in sociology. A program of studies designed by the student's discipline director and approved by the student's doctoral committee which provides the student, in the course of research under the direction of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are arranged according to each student's program.

Spanish Courses (SPAN)

Foreign Languages and Literatures

Placement: See Academic Procedures.

151, 152 Elementary Spanish (4, 4) Intensive introduction to Spanish, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of Spanish-speaking countries through selected readings and through programs in the language laboratory. Four classroom hours and two laboratory hours per week. 151 and 152 must be taken in sequence.

153 Review of Elementary Spanish (4) An intensive review of elementary Spanish designed for students who have had two years of secondary school Spanish, but whose level of proficiency does not qualify them for 151 and 152. Study of life and culture of Spanish-speaking countries through selected readings and through programs in the language laboratory. SPAN 153 may not be taken for credit in combination with 151 and 152. Four classroom hours, two laboratory hours per week.

251 Intermediate Spanish (4) Prerequisite: 152 or 153, or equivalent. Intensive review of grammar; practice in speaking, reading, and writing the language. Life and culture of Spanish-speaking countries. Language laboratory instruction is an integral part of the course. Four classroom hours and two laboratory hours per week.

141, 142 Applied Spanish for the Social Services (4, 4) A practical Spanish course designed specifically to meet the professional needs of majors in the social services area. Language laboratory instruction is an integral part of the course. Social Welfare. Four classroom hours and two laboratory hours per week. SPAN 141 and 142 must be taken in sequence, and may be taken in lieu of SPAN 151 and 152 to fulfill the first two semesters of the language requirement.

252 Spanish Conversation and Composition (3) Prerequisite: SPAN 251 or equivalent. Development of students' ability to express themselves orally on topics of current interest and everyday situations; compositions provide practice in more difficult forms of expression.

301 Advanced Grammar and Syntax (3) Prerequisite: 152 or 153, or equivalent. Continuation of SPAN 142. Four classroom hours and two laboratory hours per week. SPAN 241 may be taken in lieu of SPAN 251 to fulfill the final semester of the language requirement.

252 Spanish Conversation and Composition (3) Prerequisite: SPAN 251 or equivalent. Development of students' ability to express themselves orally on topics of current interest and everyday situations; compositions provide practice in more difficult forms of expression.

301 Advanced Grammar and Syntax (3) Prerequisite: 152 or 153, or equivalent. Continuation of SPAN 142. Four classroom hours and two laboratory hours per week. SPAN 241 may be taken in lieu of SPAN 251 to fulfill the final semester of the language requirement.

252 Spanish Conversation and Composition (3) Prerequisite: SPAN 251 or equivalent. Development of students' ability to express themselves orally on topics of current interest and everyday situations; compositions provide practice in more difficult forms of expression.

301 Advanced Grammar and Syntax (3) Prerequisite: 152 or 153, or equivalent. Continuation of SPAN 142. Four classroom hours and two laboratory hours per week. SPAN 241 may be taken in lieu of SPAN 251 to fulfill the final semester of the language requirement.

252 Spanish Conversation and Composition (3) Prerequisite: SPAN 251 or equivalent. Development of students' ability to express themselves orally on topics of current interest and everyday situations; compositions provide practice in more difficult forms of expression.
317 The Literature of Spain (3) Prerequisite: 15 semester hours of Spanish language or permission of the instructor. An examination of the main periods, trends, genres, and most representative works of Spanish peninsular literature from the twelfth century to the present. Required for the Spanish major.

318 The Literature of Spanish America (3) Prerequisite: 15 semester hours of Spanish language or permission of the instructor. An examination of the development of Spanish American literature; the main authors, periods, and literary trends. Required for the Spanish major.

325 Major Hispanic Writers (3) Prerequisite: ENGL 102 or equivalent, or permission of the instructor. Designed for the non-major student, the course provides study of the works of major Hispanic writers (e.g., García Lorca, Cela, Delibes, Zorrilla, Ferlosio, and others). The writers studied vary and are announced in each semester's Schedule of Classes. May be taken for credit with prior approval of the department.

331 Literature of the Golden Age (3) Prerequisite: SPAN 317 or permission of the instructor. Advanced study of major literary works of the Spanish Golden Age (1577-1648) of the Golden Age of Cervantes, Lope de Vega, Tirso de Molina, Ruzafa, Alarcón, Quevedo, and Calderón. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees. May be repeated for credit with prior approval of the department.

333 Spanish Literature of the Nineteenth Century (3) Prerequisite: SPAN 317 or permission of the instructor. A study of the major works of nineteenth-century Spanish literature and the works of authors of the Romantic and Post Romantic period such as Rivas, Zorra, Alarcón, Bequer, and the rise of Realism and Naturalism as found in the works of Galdós, Clarín, Blasco Ibañez, and other authors of the second half of the nineteenth century. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

334 Spanish American Short Story (3) Prerequisite: 15 semester hours of Spanish or permission of the instructor. The development of the short story in Spanish American literature from the early nineteenth century to the 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 requirement in literature for baccalaureate degrees.

335 Commercial Spanish (3) Prerequisite: 15 semester hours of Spanish or permission of the instructor. Introduction to the terminology and usage of Spanish in business with attention to the composition of business reports and letters.

359 Translation of Texts in Specialized Fields (3) Prerequisite: 15 semester hours of Spanish or permission of the instructor. Translation of technical texts selected from current periodicals and newspapers in the following areas: economics, political science, psychology, sociology, history, etc. Recommended for all students who wish to improve their reading and writing of Spanish and for Latin American Studies majors.

361 Spanish Civilization and Culture (3) Prerequisite: 15 semester hours of Spanish or permission of the instructor. Introduction to the history and culture of Spain with emphasis on the composition of business reports and letters.

366 Latin American Civilization and Culture (3) Prerequisite: 15 semester hours of Spanish or permission of the instructor. A general survey of Latin American civilization and culture, from the pre-Columbian era to the twentieth century.

420 Studies in Spanish Linguistics (3) Prerequisite: SPAN 301 or permission of the instructor. Studies in Spanish phonetics, phonology, morphology, syntax, semantics, dialectology, or historical linguistics. The topic for a given semester may be obtained from the Department of Foreign Languages and Literatures in advance. May be repeated for credit with the permission of the department.

425, 426 Independent Study (1-3, 1-3) Prerequisite: Senior standing as a major in Spanish and permission of the instructor. Research and analysis of a selected problem in literature or linguistics in consultation with a member of the department. A maximum of six hours of independent study may be applied to fulfillment of requirements in the major.

431 Readings in Medieval Spanish Literature (3) Prerequisite: SPAN 317 or permission of the instructor. A study of medieval Spanish literature, especially El Cid, the works of authors such as Berceo, prestes de Hita, Juan Manuel, Santillana, Manrique, and Rojas. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

432 Cervantes (3) Prerequisite: SPAN 317, or permission of the instructor. A study of the major works of Cervantes, with emphasis on Don Quixote. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

433 Contemporary Spanish Literature (3) Prerequisite: SPAN 317, or permission of the instructor. In-depth examination of the main authors of the "genera- tion of 1920" and later, such as Caro Baroja, Azorín, Benavente, Antonio Machado; and an analysis of contemporary post-Civil War authors: Cela, Lafcadio, Delibes, Buero Vallejo, Sastre, Sanchez Ferlosio, Garcia Lorca, and Goytisolo. The various genres are studied in the works of these leading writers. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

441 Spanish American Poetry (3) Prerequisite: SPAN 318 or permission of the instructor. Study of the more representative poets of Latin America from the colonial period to the present. Attention is given to the poetry of Martí, Dario, Lugones, Vallejo, Huido­ bro, Neruda, Mistral, Villaurrutia, and Paz. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

443 Spanish American Novel (3) Prerequisite: SPAN 318 or permission of the instructor. The evolution and development of the novel in Spanish America from the colonial period to the present. Reading and discussion of selected novels by writers representative of the various literary movements or trends. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

497, 498 Senior Honors Tutorial (3, 3) Prerequisite: Senior standing as a major in Spanish, with an overall grade point average of 3.00 and 3.0 in the major. The student must have permission of the instructor. The student must be candidly admitted to candidacy upon submission of a letter of application to the department Honors Committee, which is a prerequisite to the work. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

500 History of the Spanish Language (3) The scientific study of the evolution of the Spanish language from its origin in vulgar Latin to its present forms. 501 Applied Linguistics (3) A course providing an analysis of Spanish grammar to expand on its application to the teaching of language skills. The terminology and methodology for the teaching of Spanish and Spanish as a second language are covered. Emphasis is placed on intensive practice in the preparation of drills, exercises, and tests to further develop teaching and understanding of grammatical structures.

510 Hispanic Sociolinguistics (3) Introduction to sociolinguistics with special emphasis on bilingualism and language contact in the Spanish-speaking world including the United States. 520 Applied Language for Baccalaureates (3) A study of creative writing, its form and expression, through text analysis from two or more 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) An intensive study of a major work of a literary genre of the medieval period. Specific literature of the course is announced before registration.

525 Studies in Renaissance Literature (3) Study of a literary movement or selected authors of the Spanish Renaissance.

530 Studies in the Literature of the Golden Age (3) Study of a literary genre or a major author of Spanish literature of the Golden Age.

540 Studies in Nineteenth-Century Literature (3) Intensive study of a writer, genre, theme, or movement of this period.

545 Studies in Hispanic Literature (3) Study of one or more playwrights who have made a major contribution to the development of the theate. Special attention is given to social and philosophical themes.

560 Seminar in Spanish American Poetry (3) Study of major poets from another major poet of a given period. The literary and social atmosphere of the period is emphasized.

565 Seminar in Spanish American Drama (3) Study of three or more playwrights who have made a major contribution to the development of the theatre. Special attention is given to social and philosophical themes.

650 (formerly MATH 553) Survey Sampling (3) Prerequisite: A course in probability or statistics. A review of probability and statistics, basic definitions of sampling, simple random sampling, stratified sampling, systematic sampling, cluster sampling, estimation problems. The course emphasizes practical problems encountered in conducting a survey as well as the theoretical treatment of the sampling problem.

654 (formerly MATH 554) Applied Statistics (3) Prerequisite: MATH 351 or equivalent, or MATH 651. Sampling theory, estimation, hypothesis testing, comparison of data, various classical tests, linear models.

Statistics Courses (STAT) Mathematical Sciences

653 Studies in Applied Statistics (3) Prerequisite: A course in probability or statistics. A review of probability and statistics, basic definitions of sampling, simple random sampling, stratified sampling, systematic sampling, cluster sampling, estimation problems. The course emphasizes practical problems encountered in conducting a survey as well as the theoretical treatment of the sampling problem.

654 (formerly MATH 554) Applied Statistics (3) Prerequisite: MATH 351 or equivalent, or MATH 651. Sampling theory, estimation, hypothesis testing, comparison of data, various classical tests, linear models.
and analysis of variance, decision theory.

655 (formerly MATH 558) Analysis of Variance (3) Prerequisite: STAT 654 or MATH 352 and a working knowledge of matrix algebra. Single and multifactor analysis of variance, planning sample sizes, introduction to the design of experiments, random block and Latin square experiments, analysis of covariance.

656 (formerly MATH 555) Regression Analysis (3) Prerequisites: STAT 654 or MATH 352 and a working knowledge of matrix algebra. Simple and multiple linear regression, polynomial regression, general regression, search techniques for best regression equation, multicollinearity, autocorrelation, normal correlation models.

657 (formerly MATH 552) Mathematical Statistics (3) Prerequisite: MATH 651. Sampling distributions, point and interval estimation (Cramer-Rao theorem), testing of hypotheses (Neyman-Pearson tests, uniformly most powerful tests, sequential tests), linear models, distribution-free methods.

Theatre Courses (THR)

Fine and Performing Arts and Communication

101 (160) Introduction to the Theatre Experience (3) An overview of the theatre as the composite art of playwright, director, actor, designer, and technician; and an examination of the interrelationship of play, physical theatre, and audience through the study of representative plays of various periods of theatre history.

207, 208 Color (3, 3) (Same as ART 207, 208) The first semester covers studies in color as pigment—examination of various color theories and their application, using aqueous paints and color paper. The second semester covers theories of color in light and their application using a variety of light sources and color media. Six hours per week.

220 Acting I (3) A laboratory-performance course. Basic training in acting, emphasizing the actor's use of voice and body in theatre games, improvisation, non-scripted situations, and short scenes.

221 Body Movement (1) A lecture-laboratory course. A development of the body movement emphasizing theatrical movement, theatrical dance, and mime. Three hours per week.

230 Introduction to Theatre Technology (formerly Stagecraft) (3) Prerequisite: THR 101 (160). A lecture-laboratory course in the fundamentals of costume design and construction and the techniques of stage makeup. Two-thirds of the course is given to the design, one-third to the application. Stage costume is studied in relation to historical periods, with experience in design, pattern cutting, and application.

270 Theatre Criticism (3) The objectives of the course are to further the students' basic understanding of the way in which the elements of theatre work together, to increase their ability to make critical appraisals of theatrical productions, and to enhance their enjoyment of the theatre experience. The course is organized around attendance at productions, discussion and evaluation of productions, and reviews of productions and the writing of reviews.

302 Scripts in Performance (3) The objective of this course is to focus on the process by which written scripts (drama) become live performance (theatre). The course is non-major, non-major, and non-major, seeks to promote awareness and understanding of the process described rather than the writing of dramatic criticism. Attendance at productions, rehearsals, interviews with directors, actors, designers, and—but only as possible.

playwrights form the structure of the course. The course is especially appropriate for students in literature and theatre who plan to transfer to the University of Maryland at College Park and major in theatre. It will only be offered in Fall of each academic year.

320 Play Performance Practicum (1-2) Prerequisite: Consent of the instructor. An after-school supervised study and practice of acting and directing through rehearsal and public performance. Approximately 15 hours of rehearsal and performance per credit hour. May be repeated for a maximum of 4 credits.

325 Acting II (3) Prerequisite: THR 220 or permission of the instructor. An intermediate laboratory-performance course. Scene-playing in a variety of genres and styles. Emphasis on the development of performance skills. Discussion of character, ensemble playing; designed to extend the principles acquired in Acting I.

326 Acting III (3) Prerequisite: THR 325 or permission of the instructor. Advanced acting and research in the development of performance skills. Discussion of character, ensemble playing; designed to extend the principles acquired in Acting II.

336 Advanced Theatre Technology (3) Prerequisite: THR 230 or permission of the instructor. A lecture-laboratory course in the fundamentals of stage lighting design. Provides a working knowledge of the tools, equipment, and techniques of stage lighting and an introduction to the lighting design process. Includes terminology, basic electricity, design theories, projections, and specialized drafting techniques.

337 Art of Theatre Design (formerly Stagecraft III) (3) Prerequisite: THR 336 or permission of the instructor. A lecture-laboratory course in basic scenic design and scenic drawing. Analysis of a script for visual interpretation; the devising of a set based on the director's design. Includes the study of the use of light and shadow; the use of stage props; the design of costumes and scenic elements to scenes from Asian and Western plays.

330 Scene Design (formerly Stagecraft III) (3) Prerequisite: THR 336 or permission of the instructor. A lecture-laboratory course in the fundamentals of stage lighting design. Provides a working knowledge of the tools, equipment, and techniques of stage lighting and an introduction to the lighting design process. Includes terminology, basic electricity, design theories, projections, and specialized drafting techniques.

360 Directing I: Basic Concepts (3) Prerequisites: THR 101 (160), 220, and 230, or permission of the instructor. An introduction to the 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 real design and technical problems, with particular emphasis on sound, lighting, and technical direction.

374 (354) Creative Dramatics and Oral Interpretation in the Elementary School (3) Prerequisite: Permission of the instructor. Experiences in the development of creative dramatics and oral interpretation in children's literature. Emphasis on creative, dramatic, and effective techniques in the development of oral interpretation of children's literature. Special attention to the needs of very young children. Two three-hour seminars and weekly drama exercises. Students who have taken LAC 355 or 361 cannot take this course.

375 (355) Puppets, Plays, and Poems: Theatre Techniques for Children and Young People (3) Prerequisite: Permission of the instructor. Experiences in a variety of 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 the techniques studied. Although this course may be taken by majors as an elective, it is designed primarily for non-majors, especially students who plan to work with children and young people or who are considering a career in children's theatre.

380 (350) Playwriting Workshop (3) Prerequisite: 12 hours of English credit or permission of the instructor. A practical workshop in writing plays, with emphasis on the one-act form. May be repeated once, but only three hours are accepted in the theatre major.

385, 386 (303, 304) Special Topics in Theatre (3, 3) Prerequisite: THR 101 (160) or permission of the instructor. An advanced study in a specialized area of theatrical production. Possible topics include puppetry, stage combat, voice and body, directing, directing, costume design, lighting design, design history, or costume design.

401 (401) Theories of the Theatre (3) Prerequisite: THR 360 or 361, 355, 356, 361, 362, and 363. Theories of production from Aristotle to Brecht in the West, and Indian and Japanese theories from Asia.

461 Directing Problems (3, 3) Prerequisite: Advanced standing, permission of the instructor and the theatre faculty. An advanced laboratory performance course given to in-depth individual or group research into specialized areas of acting theory and/or style.

431 Design Problems (3, 3) Prerequisite: Advanced standing, permission of the instructor and the theatre faculty. An advanced laboratory performance course given to in-depth individual or group research into specialized areas of theatrical scenery design, lighting design, design history, or costume design.

457 (401) Theories of the Theatre (3) Prerequisites: THR 220, 360, 361, and 362, or permission of the instructor. A study of theories of production from Aristotle to Brecht in the West, and Indian and Japanese theories from Asia.

460, 461 Directing Problems (3, 3) Prerequisite: Advanced standing, permission of the instructor and the theatre faculty. An advanced course in directing intended to complement Directing I and Directing II, by providing extensive applications of advanced directing concepts in productions for public performance. The directing of two or more short plays or one long play.

480, 481, 482, 483 (403, 404, 405, 406) Seminar in Shapers of the Modern Theatre (3, 3) Prerequisite: THR 220 or permission of the instructor. An advanced seminar course providing an opportunity for intensive study of the ideas and practices of three or four directors, playwrights, designers, playwrights, or theorists who have significantly influenced Western theatre. Possible directors may include Strindberg, Pirandello, Grotowski, and Grotowski. The multiple number allows seminars to be designed around outstanding theatre practitioners in any of the following areas of the program: directing and acting, designing, theory, and playwriting.

494 (400) Field Experience (3) Prerequisite: Advanced standing, permission of the instructor and the theatre faculty. An opportunity for the student with educations or community or professional theatre to provide the student with an opportunity to apply classroom training, knowledge, skills, and theory to an actual situation. 398, 498 (410, 411) Independent Study (3) Prerequisite: Open only to theatre majors with senior
standing and by special permission of the department chairperson. Individual research or a creative project in close consultation with an instructor. A student may select from projects in performance, directing, technical theatre and design, or theatre history and criticism.

University Courses (UNIV)

Academic Affairs

401 Visions of the End in America (3) An interdisciplinary study of the radical shift from visions of America as the land of endless promise to foreboding suspicions of cataclysmic endings. Examination of the myth of apocalypse—a projection of how time will progress toward its end—in art, literature, and popular culture. Mixed-media project and guest lecturer. Students are expected to develop a more sophisticated understanding of “the American apocalyptic mentality.” Offered Fall 1979. Professor L. P. Zamora.

402 Myths of the Twilight Years (3) Prerequisite: Six hours of psychology, or sociology, or nursing, or equivalent and permission of the instructor. At least three of the six hours must be in a 300-level course. An inter-disciplinary course in aging designed to expose students to advanced theoretical and applied issues in gerontology. The course uses a variety of media methods to deliver the content. Guest speakers from government and voluntary organizations are invited for University presentations, as well as GMU faculty from selected departments. Offered Spring 1978, Spring 1979. Professor F. W. McGuire.

401 Alcoholism: A Determined and Over-Determined Problem (3) Prerequisite: Introductory courses in biology, psychology, and sociology, or permission of the instructor. The study of alcohol problems. Sociocultural, psychological aspects to the problem of alcoholism are studied along with general principles of prevention, treatment, and rehabilitation. Offered Spring 1978, Spring 1979. Professor G. D. Cooper.

404 Politics and the Arts in Western Culture (3) Introduces students to Western art, literature, history, and art movement of the ages. Government and political arts are studied as part of the Western art, literature, and history. Offered Fall 1978, 1979. Professor A. Kolker.

405 Anthropology of Health (3) Provides a cross-cultural perspective of health and illness issues. Health and disease are examined from the standpoint of medical anthropological theory. Cultural dimensions of health care delivery systems are explored. Guest medical anthropologists supplement GMU faculty presentations. Offered Fall 1978. Professor R. L. Allen.

406 The Opportunities and Dangers of the Peaceful Use of Nuclear Energy (3) A comprehensive study of the physical, economic, and social factors which determine the opportunities for the growth of nuclear energy. Biological health and other aspects of environmental impact are investigated, including particular attention to the problems of radioactive waste disposal. The prospects for new technology concepts such as the breeder reactor and nuclear fusion are included in the study. Offered Spring 1979, Spring 1980. Professor W. F. Lansford.

407 An Introduction to Irish Studies (3) Introduces participants to the literature, folklore, music, and art of Ireland, and to the history of the Irish people from the Celts to today’s diaspora. The course is coordinated with the series of presentations by the visiting lecturers and performers during the Irish Fortnight in April. Each participant is expected to take a final examination and write a research paper. Offered Spring 1979, Professor C. D. Owens.

408 The Nature of Time (3) This course delves into the nature of time from a variety of viewpoints. While the primary emphasis is on physical time and the role of time in physical laws, the course also explores the subject from the perspective of the natural sciences, the social sciences, and the humanities. Students are expected to deal with some elementary mathematical formulas. Offered Fall 1979. Professor R. Ehrlich.

409 Japan: The Living Tradition (3) A survey of the early history and traditional culture of Japan. The course uses various materials, including films, to introduce students to an overview of the Japanese people; history leading to and including the Tokugawa period; and such aspects of culture as the visual arts, literature, the performing arts, and religious experience. Guest speakers from George Mason University and from outside the University are invited. Offered Fall 1979. Professor N. T. Keith.

410 Assassination and Terrorism as Political Weapons (3) Concentration on assassination and terrorism in the United States but includes discussion of events in other parts of the world in the twentieth century. Included is a discussion of the development and mission of Secret Service, psychology of terror, and sociology, as related to assassination and terrorism, are discussed. Offered Fall 1980. Professor R. W. Lykes.

411 Electronic Communication (Television) and the Representation of Reality (3) Examination of the ways in which television interacts with and constantly modifies our view of reality. Topics include the image of the public process in television, the impact of public affairs programming, the ideal of the family as it appears in prime time dramas, and the prevailing assumptions about male/female roles as embodied in dramatic characterizations. Offered Fall 1980. Professor J. E. Foreman.

412 Family Law (3) Prerequisite: Junior standing or above. Examination of the salient aspects of the law as it affects the family in our changing society. Topics include the history of marriage and divorce, sources of family law, the constitutional aspects of family law, the nature and formalities of the marital relationship, modifications of the marital contract, the support obligation, intra-family torts and crimes, annulment, divorce, alimony, child custody and support, adoption, separation agreements, and tax aspects of separation and divorce. Offered Fall 1980. Professor R. L. Coffinberger.

413 Life in the Universe (3) Prerequisite: Sophomore standing or permission of the instructor. An introduction to the topic of extraterrestrial life beginning with an overview of the structure of the universe, the origin of matter and chemical evolution, and the formation of stars and planetary systems. It considers the physical and chemical basis of life and the origin of life in the solar system and examines the prospects of life in other planetary systems, the possibility of interstellar communication and interstellar travel as well as UFO’s and the question of whether the earth has been visited by alien beings. Emphasis is on physical, chemical, and biological aspects; but the topic is also explored from the perspective of the social sciences and humanities. Students are expected to deal with some elementary mathematics. Offered Fall 1980. Professor M. Kafatos.

414 Feminist Perspectives on Sexual Liberation (3) An interdisciplinary course designed for students who are interested in seriously exploring various contemporary approaches to sexual roles and relations. Emphasis is placed on current reflections of sexuality in the mass media. Much class discussion and a number of guest speakers. Offered Spring 1981. Professor L. M. Lasky.

415 The New Deal: Its Impact on American Society, 1933-1980 (3) This course examines the New Deal and the 1930s, as well as the continuing heritage of New Deal programs and policies from Truman’s Fair Deal to the recent past. Government involvement in the arts is also examined, drawing heavily on the resources of GMU’s Center for Government, Society, and the Arts and the Institute on Federal Theater Project and New Deal Culture. Guest speakers are invited from within and outside the University. Offered Fall 1981.

416 Intelligence in the Universe (3) This course is an introduction to the topic of intelligence in the Universe. Starting with an overview of the origin and structure of the Universe, the course covers the origin and evolution of life on earth to modern man, examining the nature of intelligence and its evolution. Other areas considered: the human brain and brains of other higher species; human psychology; the subconscious and the dream realm; other possible life forms, as well as the mediative state and its relationship to the other states; attempts to understand human intelligence in the philosophies and modern science of the West as well as the theoretical and practical models found in the East, such as Hinduism, Tao and Zen; and the emergence of the major religions and their quest for a Universal Intelligence. After examining attempts to communicate with non-human intelligence on earth, the course examines the prospects of the existence of life and intelligence elsewhere in the Universe, and the possibility of communicating with it. The course concludes with a number of interesting questions as to the nature of intelligence and humanity’s role in the Universe as intelligence continues unfolding. Offered Fall 1981. Professor M. Kafatos.

417 Energy Alternatives for the 1980s (3) An interdisciplinary course for the general audience from all fields. The course surveys various projections of future energy needs and considers the available and anticipated ways to meet those needs. The consequences of these choices on our economic, social, moral, and physical state are considered drawing on guest speakers with insight into these areas. Offered Fall 1981. Professor W. F. Lansford.

418 Corporate-Government Relations in the International Environment (3) This course analyzes the legal, political, and economic aspects of the business-government interface in the United States in international transactions. The course establishes where we are today, how we arrived at this point, and presents options for the 1980s. In particular, it reviews existing legal rules and traditional American ideas toward international business and today’s business reality with substantial attention to the existing disincentives currently existing concerning great international trade by United States firms. Offered Fall 1981. Professor S. S. Malawer.

Vietnamese Courses (VIET)

Foreign Languages and Literatures

301, 302 Vietnamese Culture and Civilization (3) Prerequisite: Junior standing or permission of the instructor. A survey of the Vietnamese culture and civilization, including language, philosophy, religion, and family life, and discussion of the problems of cross-cultural understanding. The coursework is in English.

361, 362 Vietnamese Literature (3) Prerequisite: Knowledge of the Vietnamese language. A survey of Vietnamese literature from the Early Period to the twentieth century. A study of the vernacular genres of verse and prose in Vietnam. This course may be taken toward fulfillment of the Humanities requirement in “Literature.”
Board of Visitors

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James W. Fonseca, PhD, Coordinator of Bachelor of Individualized Study (BIS)
Donna A. McHugh, MS, Acting Coordinator of Community Services

School of Law

Ralph N. Norvell, LLB, Dean

Summer Session

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John P. Korb, BS, Director, Administrative Data Processing

Bonnie M. Paulson, Director, Word Processing

Office of the Vice President for Student Affairs

Donald J. Mash, PhD, Vice President

Athletics and Recreation Sports

Robert Epskamp, MA, Director

Jay W. Marsh, BS, Assistant Director

Alan K. Srbnick, BS, Associate Director of Development for Athletics

Coordinator of Sports Information (vacant)

Norman W. Gordon, MA, Coordinator of Intramurals

Career Services

Patricia J. Carretta, MA, Director

Janice L. Sutera, MA, Coordinator of Career Programs

Joan S. Pedersen, MEd, Career Information Specialist

Linda Kaufman, BS, Placement Counselor

Phyllis C. Siegal, BA, Coordinator of Cooperative Education

Victoria H. Robinson, MEd, Assistant Coordinator of Cooperative Education

Counseling

Ralph K. Roberts, PhD, Director

Frances Keller, MA, Counselor and Group Coordinator

Richard S. Paritzky, PhD, Counselor and Coordinator of Training

Student Aid

Rita M. Bodie, MS, Director

Mary Y. Neal, MA, Coordinator of Financial Aid

Aileen L. Ferguson, BS, Financial Aid Counselor

Rachael Kent, MA, Financial Aid Counselor

Carol A. Elstad, Coordinator of Veterans Affairs

Student Services

Kenneth E. Bumgarner, MA, Associate Vice President for Student Services

Ellis F. Delphin, MA, Coordinator of Housing

Carol J. Sudol, RN, Coordinator of Student Health Services

John L. Spaldo, MA, Coordinator of the Student Union

Student Activities

Kenneth E. Kelly, MA, Director

Office of the Vice President for Business and Finance

Maurice W. Scherrens, JD, Vice President

Andrew K. Soll, MBA, Assistant Vice President

Buildings and Grounds

Eimer V. McKeever, MS, Director

Campus Police

Arthur Jb. Sanders, MA, Director

Comptroller

Hope A. Williams, Comptroller

Facilities Planning

Joseph L. Garfinkle, MS, Director

Internal Auditing

H. J. Panther, Internal Auditor

Personnel

R. Douglas First, EdD, Director

Purchasing

Wilford L. Clark, Agent

Office of the Vice President for Public Affairs

Martha A. Turnage, EdD, Vice President

Office of the Vice President for University Development

Joan M. Briskin, MPA, Vice President

Elizabeth Dahlin, MA, Administrative Assistant

Charles Pickell, ThM, Development Officer

Alumni Relations

Carren Bersch Roberts, BA, Director

Design and Publications

Susan Egerman, MA, Director

Paul Hoffman, BA, Coordinator

News and Information Services

Helen J. Ackerman, BA, Director
Faculty

Emeritus Faculty

Lorin Andrew Thompson, BA, MS, PhD, President Emeritus.
Robert Charles Krug, BS, MS, PhD, Emeritus Professor of Chemistry.

Retired Faculty

Henry P. Adams, BS, Professor.
Louis John Abeischer, BS, MS, EdS, Associate Professor of Higher Education.
Virginia Larose Austin, BSN, MED, Professor of Education.
Marion Bartlett, BS, PhD, Associate Professor of Psychology.
Hubert Merrill Cole, BS, MS, Associate Professor of Mathematics.
Haym I. Feinstein, AB, MA, Associate Professor of Chemistry.
John Walter Godbold, BMA, Assistant Professor of Government.
Ralph W. Morgan, AB, MA, DSW, Associate Professor of Social Work.
Helen Ludwig Sehrt, AB, AM, Assistant Professor of German.
James Max Snyder, BS Ed, MA, Ed D, Professor of Education.
Robert A. Turner, BS, MAT, Associate Professor of Mathematics.
Ludolph Frisch Welnetz, MME, PhD, Assistant Professor of Engineering.

Faculty 1980-81

Abbott, Linda C., Lecturer in Biology. BS 1977, Florida Southern College; MS 1981, George Mason University.
Abrams, Edward, Lecturer in Sociology. BS 1968, State University of New York at Albany.
Acharya, Ulois John, Associate Professor of Computer Science. AB 1954, University of Florida; MS 1955, University of Pennsylvania; PhD 1962, University of Chicago.
Aebischer, John Emeritus, Faculty.
Acharya, John, Associate Professor of Biology. BS 1969, University of Illinois; PhD 1973, University of California at Berkeley.
Angelino, Henry D., Lecturer in Government and Politics. AB 1953, Cornell University; MS 1954, Columbia University; PhD 1964, New York University.
Anthony-Welch, Lillian Dooris, Associate Professor of Interdisciplinary Studies, Director of Minority Affairs Program. BSE 1968, University of Maryland; MRE 1953, Pittsburgh State University; EdD 1976, University of Massachusetts.
Arafat, Fadel H., Associate Professor in Economics. LL 1959, University of Damascus; MA 1972, University of Maryland.
Ahrilano, Richard G., Lecturer in Marketing. BA 1956, MA 1962, PhD 1968, University of Texas.
Argoff, Norma Jeanne, Lecturer in English. AB 1967, University of California at Berkeley.
Arnett, Nancy, Lecturer in History. BS 1958, New York University; MA 1974, University of Maryland.
Arrillaga, Dagoberto, Lecturer in Mathematics BSCE 1976, The Citadel; BS 1962, University of Missouri; MSEE 1972, Georgia Institute of Technology.
Ashbrook, Beulah, Lecturer in Education BS 1955, Murray State University; MA 1964, Duke University; MEd 1971, Memphis State University; EdD 1973, University of Tennessee at Knoxville.
Auclair, Allan Nelson Douglas, Associate Professor of Biology. BS 1964, McGill University; PhD 1968, University of Wisconsin at Madison.
Audit, Devereux Oldfield, Lecturer in Biology. BS 1965, Mary Washington College; PhD 1973, Georgetown University.
Avila, Wanda, Lecturer in English. BA 1959, AM 1969, Southern Illinois University; AM 1963, University of Chicago; PhD 1970, University of California at Berkeley.
Avrich, Kevin Andrew, Assistant Professor of Anthropology. BA 1972, University of Chicago; MA 1973, PhD 1978, University of Wisconsin at Madison.
Azarowicz, Marjory Frances Brown, Professor of Education. BA 1950, University of British Columbia; BEd 1953, University of Alberta; ARCT 1953, University of Toronto; AMUs 1954, University of Alberta; MA 1956, PhD 1962, University of Washington.
Bach, William, Lecturer in Economics. BS 1941, Berea College; MS 1947, University of Kentucky; PhD 1952, Iowa State University.
Ball, Galia, Assistant Professor of Associate Research Professor. BA 1959, Cairo University; MA 1963, Ein- Shams University; MA 1969, Howard University; MPhil 1972, PhD 1974, The George Washington University.
Batford, Donna R., Coordinator of Program Development. BA 1966, Trinity College; MEd 1978, George Mason University.
Baguio, Oscar Pacana, Assistant Professor of Engineering. BSME 1932, University of Philippines; MS 1945, University of Illinois.
Baldwin, Patricia J., Associate Professor of Nursing. BS 1955, Florida Southern College; MSN 1967, Medical College of Georgia; DSN 1975, The Catholic University of America.
Barilla, Anthony F., Lecturer in Spanish. BA 1968, MA 1971, University of Maryland.
Bartholomew, Robert M., Lecturer in Accounting/Business. BA 1964, University of Washington; MS 1965, University of Richmond.
Batt, Robert Edward, Lecturer in Finance. BS 1961, Marquette College; MBA 1965, University of Denver; PhD 1976, University of Nebraska.
Baum, Richard Frederick, Assistant Professor of Business Administration. BA 1962, Oberlin College; MS 1964, PhD 1969, University of Michigan.
Bausch, Richard C., Assistant Professor of English. BA 1972, George Mason University; MFA 1975, University of Iowa.
Baxter, Ralph Clayton, Professor of English. Associate Vice President for Academic Affairs. AB 1958, University of Detroit; MA 1960, University of Chicago.
Bednash, Geraldine D., Assistant Professor of Nursing. BS 1965, Texas Woman's University; MSN 1977, The Catholic University of America.
Bennett, James Thomas, Professor of Economics. BS 1964, MS 1966, PhD 1970, Case Western Reserve University.
Bennett, Judy Anne Gainer, Assistant Professor of Nursing. BSN 1963, Northwestern State University; MSN 1970, University of Maryland.
Benninger, Raymond B., Professor of Law. BS 1962, CarnegieMellon University; JD 1971, LLM 1973, Georgetown University.
Berg, Tamara, Lecturer in English. BA 1965, PhD 1980, Temple University.
Bergmann, Johann Dietrich, Associate Professor of English (on leave). PhD 1953, University of Heidelberg, Germany; MS 1964, PhD 1969, University of Connecticut.
Bergoffen, Debra Beth, Associate Professor of Philosophy. BS 1968, Washington & Lee University; MA 1966, PhD 1974, Georgetown University.
Berkowitz, Steven Jay, Lecturer in Accounting. BS 1974, George Mason University; MBA 1977, University of Maryland.
Berli, Tatiana Grivskiy, Lecturer in Russian. BS 1966, MA 1969, George Mason University.
Bever, David L., Assistant Professor of Health Education. BS 1970, University of Dayton; MA 1973, EdS 1974, Ball State University; PhD 1977, University of Illinois, Champaign-Urbana.
Better, John, Professor of Education. BS 1950, MA 1951, Eastern Kentucky University; EdD 1971, University of Maryland.
Bizzaro, Patrick Anthony, Lecturer in English. BA 1970, MA 1971, University of Massachusetts College at Brockport; PhD 1975, Miami University.
Birkland, Robert Leo, Assistant Professor of Business Marketing. BS 1958, Wagner College; MA 1961, PhD 1971, University of Massachusetts, DBA 1977, Indiana University.
Black, Peter Weston, Assistant Professor of Anthropology. BS 1964, Columbia University; MA 1971, PhD 1972, University of California at San Diego.
Black, Wilson Murray, Associate Professor of Engineering. BEE 1962, University of Virginia. MSEE 1967, MS 1971, Pennsylvania State University.
Blackburn, Marguerite Bell, PhD, Professor of Chemistry. BS 1953, PhD 1978, University of Florida.
Blaha, John, Associate Professor of Psychology. BS 1965, State University of New York at Stony Brook; MA 1968, PhD 1971, Ohio State University.
Bleichner, Michael N., Adjunct Professor in Mathematics. BS 1978, California State University at Los Angeles; MS 1980, PhD 1983, University of Pennsylvania; MA 1985, Tulane University; Doctorat 1961, University of Rome.
Bloch, Howard Ruben, Associate Professor of Economics. BS 1958, Duke University; PhD 1964, Princeton University.
Bodger, Steven A., Associate Professor of Government and Politics. BSEd 1976, MA 1977, Central Michigan University.
Boecker, Victor, Jr., Assistant Professor of Media Services. BS 1942, University of Pennsylvania; AM 1950, University of Southern California.
Blount, Clenton Alden, Jr., Associate Professor, Assistant to the Vice President for Academic Affairs. BS 1962, Virginia Union University; MA 1968, Hampton Institute.
Bodie, Rita M., Assistant Professor, Director of Student Aid. BA 1974, Marymount College; MS 1977, Polytechnic Institute of New York.
Bollieu, Don Michael, Lecturer in Communication. AB 1966, University of Florida; MA 1966, PhD 1972, University of Oregon.
Boland, M. Lucille, Assistant Professor of Nursing. BS 1963, State University of Maryland; MSN 1977, The Catholic University of America.
Bolce, William J., Jr., Assistant Professor of Management. BA 1947, University of California at Los Angeles; MA 1962, Rollins College; PhD 1974, The American University.
Bolstein, Arnold Richard, Associate Professor of Mathematics. BS 1962, Wagner College; MS 1964, PhD 1967, Purdue University.
Bolstein, Holle Ermann, Lecturer in Mathematics. BS 1965, PhD 1971, Purdue University; PhD 1973, George Mason University.
Bonneau, Alan C., Professor of Psychology. Chairman, Department of Psychology. BA 1950, MA 1951, University of Cincinnati; PhD 1957, Duke University.
Bordini, John E., Associate Professor of Education. BS 1959, State Teachers College at California, Pennsylvania.
nania, MED 1964, California State College; PhD 1976, Virginia Polytechnic Institute and State University.

Bonner, William R., Lecturer in Finance. BS 1941, West Virginia University.

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Ceperley, Peter Hutton, Associate Professor of Engineering. BS 1967, University of Michigan; PhD 1973, Stanford University.

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Visiting the Campuses

Visitors are always welcome at the University, and prospective students are especially encouraged to visit the campuses, preferably while the University is in session. Administrative offices are open Monday through Friday, but because hours vary, it is best to make appointments.

Enforced parking regulations are in effect Monday through Friday from 7:30 a.m. to 5:30 p.m. Visits to the campuses during these times require a special parking permit. Special parking places are also provided for disabled persons. Parking permits and assistance in parking are available at each campus through the Campus Police Office. University buildings are fully accessible to persons in wheelchairs, except as noted below.

1. FINLEY BUILDING
   (First floor only accessible to wheelchairs.)
   Accounting
   Admissions (Undergraduate)
   Affirmative Action
   Board of Visitors
   Cashier
   Comptroller
   George Mason Foundation, Inc.
   Information
   Institutional Analysis

2. KRUG HALL
   (Ground and first floors only accessible to wheelchairs.)
   Biology Laboratories
   Chemistry Department

3. WEST BUILDING
   (Ground and first floors only accessible to wheelchairs.)
   Engineering
   Physics Department

4. EAST BUILDING
   (First floor only accessible to wheelchairs.)
   Admissions Processing
   BIS Degree Program
   Community Service
   Dean, Continuing Education
   Extended Studies Enrollment

5. FENWICK LIBRARY
   Alumni Office
   Facilities Planning
   Government, Society, and the Arts Center
   Library Offices
   Media Services Center
   Special Collections

6. LECTURE HALL

7. THOMPSON HALL
   Composition Tutorial Center
   Dean, Arts and Sciences
   English Department
   Foreign Languages and Literatures Department
   History Department
   Mathematical Sciences Department
   Media Services (distribution)
   Northern Virginia Writers Project
   The Writing Place
   University Computing Services

GMU CAMPUS

Off-Campus Coordination
Payroll
Personnel
Public Service
Registrar
Summer Session
8. PHYSICAL EDUCATION BUILDING
Athletics
Health and Phys. Ed. Department
Sports Information

9. ROBINSON HALL
Admissions (Graduate)
Art History
Biology Department
Child-Youth Study Center
Dean, Graduate School
Dean, Professional Studies
Economics Department
Education Department
Instructional Resources Center
Media Services (distribution)
Nursing Department
Philosophy and Religion Department
Psychology Department
Public Affairs Department
School of Business Administration
Sociology Department
Social Work Department

10. STUDENT UNION
Academic Advising Center
Arts and Crafts Center
Associate Vice President, Student Life
Bank
Bookstore
Broadside (student newspaper)
Cafeteria
Campus Ministry
Career Services
Cooperative Education
Counseling Center
Dry Cleaners
Financial Aid
Honor Committee
Minority Student Services
Services for Disabled Students
Student Activities
Student Government
Student Health
Student Organizations
Veterans Affairs
Vice President, Student Affairs

11. STUDENT HOUSING
Apartments (A)
Dormitories (B)
Student Housing Office

12. GREENHOUSE
(Inaccessible to wheelchairs.)

13. ACADEMIC III (under construction)

14. STUDENT UNION II (under construction)

15. MAINTENANCE BUILDING
Buildings and Grounds

16. FIELD HOUSE

- INSET—NORTH CAMPUS
(10675 Lee Highway)
(First floor only accessible to wheelchairs.)
Advocate (yearbook)
Auditorium
Cafeteria
Campus Police (North Campus)
Central Shipping and Receiving
Citizens Applied Research Institute (CARI)
Design and Publications
Fine and Performing Arts and Communication Department
Library (specialized)
Media Services (distribution)
Phoebe (literary magazine)
Public Management Institute
Student Affairs (for North Campus)
ROTC
University Journals

- INSET—METRO CAMPUS
(3401 N. Fairfax Dr., Arl.)
Admissions (Law)
Cafeteria
Campus Police (Metro Campus)
Dean, School of Law
Library (Law)
Professional/Conference Center

http://catalog.gmu.edu
Reference Section

Honor Code

In order to promote a stronger sense of mutual responsibility, respect, trust, and fairness among all of the members of George Mason University, and with the desire for greater academic and personal achievement, we, the members of George Mason University, have set forth the following code of honor.

I. The Honor Committee

Duties of the Honor Committee:

The Honor Committee is to be a group of students elected from the student body whose primary and indispensable duty shall be to instill the concepts and spirit of the Honor Code within the student body. The secondary function of this group shall be to sit as a hearing committee on all alleged violations of the code.

II. Extent of the Honor Code

The Honor Code of the George Mason University shall deal specifically with:

(A) Cheating and attempted cheating
(B) Plagiarism
(C) Lying
(D) Stealing

A. Cheating encompasses the following:

1. The willful giving or receiving of an unauthorized, unfair, dishonest, or unscrupulous advantage in academic work or other students.
2. The above may be accomplished by any means whatsoever, including, but not limited to, the following: fraud, duress, deception, theft, trick, talking, signs, gestures, copying from another student, and the unauthorized use of study aids, memoranda, books, data, or other information.

3. Attempted Cheating.

B. Plagiarism encompasses the following:

1. Presenting, as one’s own the words, the work, or the opinions of someone else without proper acknowledgment.
2. The borrowing of the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

C. Lying encompasses the following:

The willful and knowable telling of an untruth or falsehood as well as any form of deceit, attempted deception, or fraud in an oral or written statement relating to academic work. This includes but is not limited to:

1. Lying to administration and faculty members.
2. Falsifying any University document by mutilation, addition, or deletion.
3. Lying to Honor Committee members and councils during investigation and hearing. This may constitute a second charge with the committee members (who are acting as judges during that specific hearing) acting as Accusers.

D. Stealing encompasses the following:

The taking or appropriating without the right or permission to do so, and with the intent to keep or to make use of wrongfully, property belonging to any member of the George Mason community or any property located on the University campus. (This section is relevant only to academic work and related materials.)

III. Responsibility of the Faculty

In order to alleviate misunderstanding, each professor is required to delineate at the beginning of each semester what constitutes a violation of the Honor Code in his class. This should include an explanation of:

(A) the extent of group participation that is permissible in preparing term papers, laboratory exhibits or notebooks, reports of any kind, tests, quizzes, examinations, homework, or any other work;
(B) the extent to which the use of study aids, memoranda, books, data or other information is authorized during recitations, tests, quizzes, examinations, reports of any kind, laboratory sessions, or any other work; and
(C) the nature of plagiarism.

Each professor is required to send the Honor Committee a written copy of his policy, which will be kept on file.

Any faculty member who witnesses an Honor Code violation should proceed as outlined under Procedures for Reporting a Violation.

IV. Responsibility of the Students

Students are required to sign a letter of acceptance of the Honor Code. They are expected to fully understand the rules and regulations of the Honor Code. Each member of the community, both students and faculty, is expected to abide by the Honor Code. Any violation of the Honor Code will result in severe punishment.

V. Procedure for Reporting a Violation

Any student or faculty member witnessing a violation of the Honor Code shall report it to a member of the Honor Committee. The accused must be given a letter of accusation provided by the Honor Committee. All requests for such appearances shall be issued by the Chairman of the Honor Committee. The appearance of the accused is required unless otherwise exempted by the request of both counsels, or the Chairman of the Honor Committee.

VII. Appearance of Witnesses

The Honor Committee may require any member of the University community to appear as a witness before the Committee at the time of the hearing. All requests for such appearances shall be issued by the Chairman of the Honor Committee. (The appearance of the accuser is required unless otherwise exempted by the request of both counsels, or the Chairman of the Honor Committee.)

VIII. Verdict

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, but is not made part of the student’s scholastic record.

C. Nonacademic Probation:

Exclusion from holding an elected or appointed office in any student activity or organization. A student on nonacademic probation will be ineligible to participate in any athletic or other activity representing the University and will be ineligible to serve as a working staff member of any student organization. This action is noted in the Judicial Administration’s file but not made a part of the student’s scholastic record.

D. Failing Grade:

Recommendation in writing to the instructor of a grade of F for work involved, or for the entire course, is made. The student’s permanent record

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State Domicile Legislation

The legislation (Section 23-7 of the Virginia Code), as amended in 1977, relating to persons entitled to certain privileges at state institutions of higher education is as follows.

1. For the purposes of this section, the domicile of an unemancipated minor may be the domicile of either parent; provided, however, that if one parent has custody, the domicile of the unemancipated minor shall be the domicile of the parent having custody. 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 if there are no circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on such emancipated minor.

2. Except as provided in 23-7.2, no person in attendance at a State institution of higher education shall be entitled to reduced tuition charges, unless such person is and has been domiciled in Virginia for a period of at least one year immediately prior to the commencement of the term, semester, or quarter for which any such reduced tuition charge is sought.

3. A person who enrolls in any such institution while not domiciled in Virginia does not become entitled to reduced tuition charges by mere presence or residence in Virginia. In order to become so entitled, any such person must establish that, one year before the date of the alleged entitlement, he or she was at least 18 years of age or, if under the age of 18, in emancipated minor, and he had abandoned his or her domicile and was present in Virginia with the unqualified intention of remaining in Virginia for the period immediately after leaving such institution and indefinitely thereafter.

4. A person who is classified or classifiable as at the date of his or her marriage as eligible to receive the privileges herein described, may receive or continue to receive such privileges until he or she abandons his or her Virginia domicile otherwise than through any presumption of law attaching to the ceremonial aspects of marriage.

5. A student who is not a member of the armed forces and who is not otherwise eligible for reduced tuition charges and whose spouse or parent is a member of the armed forces stationed in this State pursuant to military orders shall be entitled to reduced tuition charges if such spouse or neither parent, for a period of at least one year immediately prior to and at the time of commencement of the term, semester or quarter for which reduced tuition charges are sought, has resided in Virginia, been employed full-time and paid personal income taxes to Virginia. Such student shall be eligible for reduced tuition through such parent under this section only if he or she is claimed as a dependent for Virginia and federal income tax purposes. Such student shall be entitled to reduced tuition charges so long as such parent or spouse continues to reside in Virginia, to be employed full-time and to pay personal income taxes to Virginia.

6. Entitlement to reduced tuition charges must be by convincing evidence and the burden of establishing entitlement shall be on the person claiming such entitlement.

7. The State Council of Higher Education for Virginia shall, in conjunction with the Office of the Attorney General, seek to ensure that all State institutions of higher education will apply uniform criteria in determining eligibility for reduced tuition charges.

Definitions

1. Domicile: A person's true, fixed and permanent home as distinguished from a temporary place of abode, where he remains and intends to remain when not called elsewhere for labor, studies or other special or temporary purposes, and to which he returns in seasons of repose. A person at any one time has but one domicile and a domicile cannot be gained until another is lost. A student's domicile is assumed to be that of either parent or guardian until such time as the student becomes emancipated and actually establishes his own domicile. Physical presence in the state for the predominant purpose of attending an institution of higher education shall not constitute nor necessarily preclude the acquisition of a domicile in the state, nor shall absence from the state for the predominant purpose of attending an institution of higher education deprive a person of a domicile previously established. Ownership of property in the state; employment in the state; registration as a voter in the state; licensed driver and automobile registration in the state; membership in civic, community and other organizations in the state and elsewhere; location of bank accounts and insurance; admission to a licensed practicing profession in the state; plans after graduation; and the severance of all present and future connections and contacts outside the state as some of the factors which may be considered in determining domicile. None of them, standing alone, shall be sufficient evidence of domicile to warrant in-state classification for tuition purposes, and the absence of any one shall be sufficient to disqualify a student from such status. Rather, a composite review of the individual's circumstances will determine classification.
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<th>BA Degree Offered</th>
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Social Policy Analysis

- MPA Public Administration

Special Education

- M Ed Special Education
- M Ed Special Education
- M Ed Guidance and Counseling

Student Personnel, College

- M Ed Guidance and Counseling

Writing

- MA English
- MA English
- MA English

Teaching Literature

- MFA Creative Writing
- MA English
- MA English

Professional

- JD Law

Guide for Preparing the Master's Thesis and the Doctoral Dissertation

The thesis or dissertation is expected to demonstrate a candidate's capacity to carry out independent research. The research project is to be closely related to the candidate's general educational objectives, providing an opportunity to contribute creatively to knowledge rather than constituting mere fulfillment of an academic requirement.

The candidate's research topic should be in view as early as possible in the graduate career. The candidate should consult with the program adviser on the choice of a thesis or dissertation topic. The choice of topic should take into consideration the candidate's background and interests, ability to handle the problem, accessibility of course materials, and the probable worth of the study. Early formulation of the topic will enable the student to acquire the necessary tools of research, such as languages, statistics, or some other procedures. The student can then plan with the program adviser more purposefully the courses to be included in a program that will best prepare the student for the comprehensive examinations related to the major interest. All of these requirements should be embodied in a well-conceived plan of graduate study.

Regulations that are contained in this Guide apply to all theses and dissertations submitted in fulfillment of requirements for the master's or doctoral degree at George Mason University.

Procedure for Submitting the Thesis or Dissertation Proposal. The candidate should submit six copies of a typed proposal to the chairperson of the department of academic study. A model title page for the proposal follows. The proposal must include the following items:

1. The candidate's full name.
2. The date of submission of the thesis or dissertation proposal.
3. The candidate's general educational objectives, providing an opportunity to contribute creatively to knowledge rather than constituting mere fulfillment of an academic requirement.
4. The degree sought by the candidate.
5. The tools of research, if required for the degree, together with certification.
6. The tentative title of the thesis or dissertation (subject to modification in consultation with the committee).
7. The signatures of the members of the thesis or dissertation committee.
8. The approval of the department chairperson.
9. A cogent and concise statement of the major problem of research and supporting problems, not to exceed six double-spaced pages. This statement might well include a selected bibliography pertinent to the subject.

Upon approval of the proposal by the chairperson of the department, copies of the proposal will be distributed to the Dean of the Graduate School, the chairperson of the department, the chairperson and members of the thesis or dissertation committee, and to the candidate.

Acceptance and approval of the proposal indicates that the topic is considered to be a suitable one, and that the thesis or dissertation, if developed, will be accepted. The chairperson of the department will notify the candidate of the action taken on the proposal.

The student will be permitted to register for Thesis or Dissertation courses and pursue research only after a proposal has been submitted and approved as prescribed above.

The Thesis or Dissertation Committee. The committee is named by the chairperson of the candidate's department, who designates the committee chairperson. The committee will be appointed after consultation with the candidate and adviser, and normally will consist of three persons, one of whom may be chosen initially, or at a later date, from outside the department.

Preparation of Copy of Thesis or Dissertation. The candidate is expected to prepare the text of the thesis or dissertation in accordance with the usual practices of good English. The candidate is also expected to provide copies of the manuscript (either in draft or final form) for all members of the committee to examine.

Following acceptance of the thesis or dissertation by the committee, the candidate will prepare an original and two copies of the final text. The two copies may be either carbon or photo copies. One copy must be deposited with the chairperson of the candidate's department. The original manuscript
and one copy must be deposited with the Graduate Dean. The dean forwards the original manuscript and the copy to the University Library for binding and permanent reference.

The following regulations govern preparation of the thesis or dissertation:

1. The manuscript must be typed on bond paper of either 16 or 20 pound weight. The paper used must be uniform in weight throughout the thesis. Paper must measure 8 x 11 inches.
2. The title page must be prepared in correspondence with the sample shown.
3. Only pica, elite, or bookface type is acceptable. The typeface chosen should be used consistently throughout the thesis or dissertation. A black ribbon must be used to produce a clear, dense copy suitable for microfilming. Clean type is essential to good reproduction of the manuscript. Diagrams and charts must be prepared in India ink. All errors must be corrected in type; ink corrections are unacceptable. Professional appearance is required of the finished manuscript.
4. Unless departments specify otherwise, candidates are advised to consult the current edition of William G. Campbell's *Form and Style in Thesis Writing* (Houghton, Mifflin Co.) for guidance concerning style.
5. The manuscript must contain a table of contents; a list of references used; and, if appropriate, a list of tables, maps, or illustrations.
6. The text must be typed double-spaced, with footnotes single-spaced. Footnotes must appear on the page to which they relate. Margins of the text must be: one and one-half inches on the left, one inch on the right, and approximately one and one-quarter inches at the top and bottom of the page.
7. In footnotes, lists of references or other bibliographic entries, the titles of books, pamphlets, and journals should be underlined (words only—not spaces). Titles of articles or chapters in books should appear in quotation marks.

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### Sample of Cover Page of Thesis or Dissertation Proposal

**George Mason University**

**Graduate School**

**THESIS OR DISSERTATION PROPOSAL FOR MASTER'S OR DOCTORAL DEGREE**

<table>
<thead>
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<th>Student's Name:</th>
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<tr>
<td>Department/Program:</td>
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<td>Names of Committee Members:</td>
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**Signature**

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Approved by Department Chairperson

**Signature**

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</table>

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### Sample Title Page of Thesis or Dissertation

**DISSERTATION/THESIS TITLE HERE**

**SINGLE-SPACED IN CAPITALS AND UNDERLINED**

by

John William Doe

A Thesis (Dissertation) Submitted to the Faculty of the Graduate School of George Mason University in Partial Fulfillment of the Requirements for the Degree of

(Master of Arts) (Doctor of Public Administration) (Field)

**Signature of Committee:**

______________________________________(Chairperson)

**Dean of the Graduate School**

**Date:**

Semester 19

George Mason University

Fairfax, Virginia
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# Telephone Directory

Note: The general information number for George Mason University is (703) 323-2000. The University exchange is "323" except where indicated.

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