George Mason University
Fairfax, Virginia

University Catalog 1982-1983

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

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Academic Calendar
1982-1983

Fall Semester 1982

Monday and Tuesday, Welcoming days, orientation programs August 23-24 for new faculty and for certain newly admitted students (by invitation only); English composition proficiency examination and mathematics and foreign language placement testing (Monday only)

Monday, August 23, Choral Audition (by appointment)

Monday, August 23, Registration (for times and through Thursday, priorities see Schedule of Classes) August 26

Thursday, August 26, First schedule adjustment day

Monday, August 30, First day of classes

Wednesday, September 1, Music Competency placement Testing

Thursday, September 2, Foreign language placement testing

Monday, September 6, Labor Day; University closed

Tuesday, September 7, Last day for adding new courses (except those meeting only once a week)

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

Tuesday, September 14, Last day to pick up Winter bachelor’s degree applications at the office of the Registrar (application must be completed and returned with fee by September 28)

Tuesday, September 14, Last day for adding those new courses which meet only once a week

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

Friday, September 17, Last day for filing Winter degree and certificate applications (master’s) in office of the Graduate Dean

Friday, September 17, Test of English as a Foreign Language (TOEFL)

Tuesday, September 21, Test of English as a Foreign Language (TOEFL)

Saturday, August 7, Test of English as a Foreign Language (TOEFL)

Monday, August 16, Fall registrations cancelled for early registered students who have not made arrangements for payment with Cashier (cancelled students who do not re-register for fall classes are assessed a $20 administrative fee)

Wednesday, September 22, Teacher Education Screening Committee (TESC) math and writing exams

Friday, October 1, Last day to apply for Acceptance to Junior Standing in the School of Business Administration for Spring 1983

Friday, August 20, BIOL 124-125 examination for nurses and music competency placement tests

Friday, August 6, Tuition and fees due for early-registered students

Saturday, August 7, Test of English as a Foreign Language (TOEFL)

Monday, August 16, Fall registrations cancelled for early registered students who have not made arrangements for payment with Cashier (cancelled students who do not re-register for fall classes are assessed a $20 administrative fee)

Wednesday, September 22, Teacher Education Screening Committee (TESC) math and writing exams

Friday, October 1, Last day to apply for Acceptance to Junior Standing in the School of Business Administration for Spring 1983
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Saturday, October 2</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
<td>Friday, December 10</td>
<td>Spring Semester (International Student deadline November 1)</td>
</tr>
<tr>
<td>Monday, October 4</td>
<td>Second deferred tuition payment due</td>
<td>Saturday, December 11</td>
<td>Test of English as a Foreign Language (TOEFL) and Test of Spoken English (TSE)</td>
</tr>
<tr>
<td>Sunday, October 10</td>
<td>Recess (Note: Monday classes and through Tuesday, laboratories meet on Wednesday this October 12 week only)</td>
<td>Saturday, December 11</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Wednesday, October 13</td>
<td>Monday classes and laboratories meet on Wednesday at Monday scheduled times and places: Wednesday scheduled classes and laboratories do not meet this week</td>
<td>Monday, December 13</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Thursday, October 14</td>
<td>Teacher Education Screening Committee (TESC) math and writing exams</td>
<td>Wednesday, December 15</td>
<td>Examinations (for times, see Schedule of through Monday, classes) December 20</td>
</tr>
<tr>
<td>Saturday, October 16</td>
<td>Graduate Record Examination (GRE)</td>
<td>Tuesday, December 21</td>
<td>Tuition and fees due for early registered students. Last day for mail-in and walk-in early registration</td>
</tr>
<tr>
<td>Saturday, October 23</td>
<td>Graduate Management Admission Test (GMAT)</td>
<td>Monday, December 27</td>
<td>Inter-semi-ter break begins</td>
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<tr>
<td>Thursday, October 28</td>
<td>Spring Semester Schedule of Classes (registration calendar) published. Mail-in registration commences for designated categories of students when schedules are distributed.</td>
<td>Monday, January 10</td>
<td>University closed through Friday, December 31</td>
</tr>
<tr>
<td>Monday, November 1</td>
<td>Last day for filing Graduate School admissions applications for Spring Semester</td>
<td>Saturday, January 15</td>
<td>Welcoming day; orientation programs for new undergraduates; English composition proficiency examination and foreign languages, music competency and mathematics placement testing for undergraduates</td>
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<tr>
<td>Monday, November 1</td>
<td>Last day for filing undergraduate admissions applications for Spring Semester for International Students (non-immigrant status)</td>
<td>Friday, January 14</td>
<td>BIOL 124-125 examinations for nurses; music competency placement tests</td>
</tr>
<tr>
<td>Thursday, November 4</td>
<td>Third deferred tuition payment due</td>
<td>Monday, January 17</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
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<tr>
<td>Friday, November 12</td>
<td>Last day for financial aid applications for Spring 1983</td>
<td>Saturday, January 15</td>
<td>Welcoming day; orientation programs for new undergraduates; English composition proficiency examination and foreign languages, music competency and mathematics placement testing for undergraduates</td>
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<tr>
<td>Friday, November 19</td>
<td>Winter master's theses due in office of the Graduate Dean</td>
<td>Monday, January 17</td>
<td>Choral Audition (by appointment)</td>
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<tr>
<td>Saturday, November 20</td>
<td>Test of English as a Foreign Language (TOEFL) and test of Spoken English (TSE)</td>
<td>Monday, January 17</td>
<td>Registration (for times and through Thursday, priorities see Schedule of Classes) January 20</td>
</tr>
<tr>
<td>Monday, November 22</td>
<td>Foreign Language placement testing for undergraduates</td>
<td>Monday, January 17</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Thursday, November 25</td>
<td>Thanksgiving recess; University through Sunday, closed November 28</td>
<td>Thursday, January 27</td>
<td>Foreign Language placement testing for undergraduates</td>
</tr>
<tr>
<td>Monday, November 29</td>
<td>Start counseling for Spring Extended Studies enrollees</td>
<td>Saturday, January 29</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Monday, November 29</td>
<td>Early registration (for times and through Friday, priorities see Schedule of Classes) December 10</td>
<td>Monday, January 31</td>
<td>Last day for adding new courses (except those meeting only once a week)</td>
</tr>
<tr>
<td>Wednesday, December 1</td>
<td>Last day for filing undergraduate admissions applications for</td>
<td>Monday, January 31</td>
<td>Last day for a full tuition refund (less $20 fee)</td>
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<td>Date</td>
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<tr>
<td>Tuesday, February 1</td>
<td>Last day to apply for Acceptance to Junior Standing in the School of Business Administration for Fall 1983</td>
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<td>Tuesday, February 1</td>
<td>Last recommended date for filing financial aid applications for Fall 1983</td>
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<tr>
<td>Friday, February 4</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
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<tr>
<td>Saturday, February 5</td>
<td>Graduate Record Examination (GRE)</td>
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<tr>
<td>Monday, February 7</td>
<td>Last day for adding those new courses which meet only once a week</td>
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<tr>
<td>Monday, February 7</td>
<td>Last day for partial tuition refund—second week</td>
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<tr>
<td>Tuesday, February 8</td>
<td>Last day to pick up Spring bachelor's degree applications at Office of the Registrar (must be completed and returned with fee by February 28)</td>
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<tr>
<td>Friday, February 11</td>
<td>Last day for filing Spring and Summer degree and certificate applications (master's) in office of the Graduate Dean</td>
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<tr>
<td>Friday, February 11</td>
<td>Second deferred tuition payment due</td>
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<tr>
<td>Monday, February 14</td>
<td>Last day for dropping a course without incurring a grade of F</td>
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<tr>
<td>Monday, February 14</td>
<td>Last day for a partial tuition refund—third and final week</td>
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<tr>
<td>Wednesday, February 16</td>
<td>Teacher Education Screening Committee (TESC) math and writing exams</td>
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<tr>
<td>Tuesday, March 1</td>
<td>Last day for filing Graduate School admissions application for Summer Session</td>
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<tr>
<td>Thursday, March 3</td>
<td>Teacher Education Screening Committee (TESC) math and writing exams</td>
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<tr>
<td>Tuesday, March 8</td>
<td>Last day to pick up Summer bachelor's degree applications at Office of the Registrar (must be completed and returned with fees by March 28)</td>
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<tr>
<td>Friday, March 11</td>
<td>Third deferred tuition payment due</td>
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<tr>
<td>Saturday, March 12</td>
<td>Test of English as a Foreign Language (TOEFL) and test of Spoken English (TSE)</td>
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<tr>
<td>Sunday, March 13</td>
<td>Mid-semester recess through Sunday, March 20</td>
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<tr>
<td>Saturday, March 19</td>
<td>Graduate Management Admission Test (GMAT)</td>
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<tr>
<td>Monday, March 28</td>
<td>Fall Semester Schedule of Classes (registration calendar) published. Mail-in registration commences for designated categories of students when schedules are distributed.</td>
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<tr>
<td>Friday, April 1</td>
<td>Last day for financial aid applications for Summer 1983</td>
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<tr>
<td>Monday, April 11</td>
<td>Foreign languages placement testing for undergraduates</td>
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<tr>
<td>Friday, April 15</td>
<td>Last day for financial aid applications for Fall 1983</td>
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<td>Friday, April 15</td>
<td>Spring master's theses due in office of the Graduate Dean</td>
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<tr>
<td>Friday, April 18</td>
<td>Test of English as a Foreign Language (TOEFL)</td>
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<tr>
<td>Saturday, April 23</td>
<td>Early registration (for times and through Friday, priorities see Schedule of Classes) April 22</td>
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<tr>
<td>Monday, April 28</td>
<td>Graduate Record Examination (GRE) and Medical College Admissions Test (MCAT)</td>
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<tr>
<td>Sunday, May 1</td>
<td>Last day for filing Graduate School admissions applications for Fall 1983</td>
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<tr>
<td>Monday, May 2</td>
<td>Last day for filing undergraduate admissions applications for Fall Semester</td>
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<tr>
<td>Saturday, May 7</td>
<td>Last day of classes</td>
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<td>Monday, May 9</td>
<td>Examinations (for times, see Schedule of through Monday, Classes) May 16</td>
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<tr>
<td>Saturday, May 14</td>
<td>Test of English as a Foreign Language (TOEFL) and Test of Spoken English (TSE)</td>
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<tr>
<td>Monday, May 30</td>
<td>Spring commencement</td>
<td></td>
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<tr>
<td>Friday, June 3</td>
<td>Memorial Day observed; University closed</td>
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<tr>
<td>Saturday, June 11</td>
<td>Test of English as a Foreign Language (TOEFL) and Test of Spoken English (TSE)</td>
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<tr>
<td>Wednesday, June 18</td>
<td>Graduate Record Examination (GRE)</td>
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<tr>
<td></td>
<td>Graduate Management Admission Test (GMAT) (not at GMU)</td>
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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 are competitive. Space available is determined largely by the availability of resources. Demand for resources is balanced to meet the University's many educational responsibilities. The University, therefore, engages in qualitative evaluation of students and makes selections based on performance and evidence of prospects for success.

Acceptance into junior-level courses, in particular, is limited in business, education, nursing, and social work. (See appropriate catalog sections.) Junior-level applicant selection is competitive with priority placed on potential for success. Grades are important, and necessary but may not be the only evidence used by selection committees.

Accreditation

University

George Mason University is fully accredited by the Southern Association of Colleges and Schools.

Chemistry

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 is accredited by the Council on Social Work Education.

Privacy of Student Records

Annually, George Mason University informs students of the Family Educational Rights and Privacy Act of 1974. This Act, with which the institution intends to comply fully, was designed to protect the privacy of education records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the Act.

Local policy explains in detail the procedures to be used by the institution for compliance with the provisions of the Act. The Office of the Registrar keeps a copy of the policy and also maintains a Directory of Records listing all education records maintained on students by this institution.

Questions concerning the Family Education Rights and Privacy Act may be referred to the Office of the Registrar.

Equal Opportunity/Affirmative Action

George Mason University is an Equal Opportunity/Affirmative Action institution committed to the principle that access to study or employment opportunities afforded by the University, including all benefits and privileges, be accorded to each person—student, faculty, or staff member—on the basis of individual merit and without regard to race, color, religion, national origin, sex, age, or handicaps (except where sex or age is a bona fide occupational qualification). Appropriate procedures have been adopted for the promotion of this principle in every phase of University operations. Furthermore, affirmative action will be taken to ensure that opportunities afforded by the University are fully available to ethnic minorities, women, and the disabled. The University will make every reasonable accommodation to enable the handicapped to undertake work or study for which they qualify.

The University is also committed to the principle prescribed in Title IX of the Education Amendments of 1972, which specifically prohibits discrimination on the basis of sex in educational programs or activities which receive federal funds.

The University is also committed to the principles set forth in the Rehabilitation Act of 1973, Section 504, regarding disabled students.

Students, employees, or applicants for admission or employment who believe that they have not been dealt with by this University in accordance with the principles and requirements stated above may address the Office of Affirmative Action, George Mason University, stating the facts that occasioned the complaint, presenting any relevant documents or correspondence, and requesting assistance in resolution of the matter.

Student Consumer Information

Prospective and enrolled students may obtain information related to the cost of attending the University, financial aid programs available, and academic programs by consulting the appropriate office. For information related to the cost of attending the University and tuition refund policies, contact the office of the Cashier (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 (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 1982

The University Catalog is published annually by the Office of Design and Publications, George Mason University, 4400 University Drive, Fairfax, Virginia 22030. Preparation and editing by the Office of Academic Affairs.

Summer Session

Summer Session consists of several terms, ranging in length from five to eight weeks, during the period May 31 through August 6. Classes are offered during both day and evening hours. For details, consult the Summer Session Catalog which is available mid-March.
PROGRAMS

Degree Programs
Existing, or planned for 1982-83. (See Reference Section for further information)

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
Dance BA, BFA
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 BIS
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
Spanish BA
Speech Communication BA
Theatre BA
Vocational Education BS Ed

Graduate
Applied Physics MS
Applied Psychology PsyD

Biology MS
Business Administration MBA
Computer and Electronics Engineering MS
Computer Science MS
Conflict Management MS
Creative Writing MFA
Economics MA, PhD
Education DA Ed
Elementary Education M Ed
English MA
Environmental Biology and Public Policy PhD
Foreign Languages MA
Geographic and Cartographic Sciences MS
Guidance and Counseling M Ed
History MA, MAT
Information Systems MS
Interdisciplinary Study MAIS
Mathematics MS
Music MA
Nursing MSN
Operations Research and Management Science MS
Physical Education MS
Psychology MA
Public Administration MPA, DPA
Reading M Ed
School Administration and Supervision M Ed
Secondary Education M Ed
Sociology MA
Special Education M Ed

Professional
Law JD

Certificate Programs
Cartography
Environmental Management
Gerontology
Nursing Administration at the Middle Management Level
Nursing Education
Psychology Technician
Teaching of English as a Second Language

Preprofessional Study
Predental
Predivinity
Prelaw
Premedical
Preveterinary
Profile of George Mason

The University: Beginnings

George Mason University is the outgrowth of the Northern Virginia Center of the University of Virginia that opened in fall, 1949. In 1955, 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. One year later the Virginia General Assembly authorized a Northern Virginia branch of the University of Virginia. In September, 1957, this branch, called the University College, opened in a renovated elementary school building at Bailey's Crossroads with seventeen students.

Late in 1958, the Town of Fairfax (now City of Fairfax) purchased 150 acres for a permanent branch campus and donated it to the University of Virginia in 1959. Early the following year, the Board of Visitors of the University of Virginia selected the name of the Virginia statesman, George Mason, for the new college. Subsequently, the General Assembly passed legislation formally constituting the college as a branch of the University of Virginia, thereby separating it from the Northern Virginia Center.

In August 1963, construction began at the new campus site south of Fairfax City as the College's first master plan, calling for the construction of nineteen buildings and a peak enrollment of 2,500 nonresident fulltime students, to shape. One year later, the first stage of the campus was completed and 365 students occupied four buildings simply designated as North, South, East, and West.

In March 1966, the General Assembly authorized the expansion of George Mason College into a four year degree granting institution and gave it the long range mandate to develop into a major regional university. 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 fulfill the Commonwealth'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. By the early 1970's, the College's Main Campus reached its current size of 571 acres.

Having established and fostered the institution through its first fifteen 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 with university status. The General Assembly in 1979 authorized the establishment of the George Mason University School of Law and, in 1980, the elevation of the University to doctoral status.

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 the opportunity for innovative educational methods and programs; and it will enhance the 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 University. 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 Virginia 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. Historical Richmond, capital of the Commonwealth, and Charlotteville, 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. Beyond the cities, the Atlantic Ocean beaches to the east, and the Appalachian Trail and the Blue Ridge 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 natural 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 undergraduate, graduate, and professional degree programs at three Northern Virginia campus locations: the 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.

Currently, the University serves more than 14,000 day and evening students through the College of Arts and Sciences, the College of Professional Studies, the School of Business Administration, the Graduate School, 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 undergradu-
ate 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. New construction, that includes two dormitories, an academic building, a five-story addition to Fenwick Library, a second Student Union, and a field house, also was designed to take full advantage of the hundreds of wooded acres on the Main Campus.

The North Campus houses the Department of Performing Arts. In addition to music, dance, and theatre areas, other features of the 16-acre campus are an 800-seat auditorium, a specialized library, 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 North 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 ventures 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.

Academic Structures, Programs, Facilities

Academic Organization and Programs

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

College of Arts and Sciences (1972)

The College of Arts and Sciences is the largest and most diverse of the academic units. It grows out of what was earlier College I of George Mason College of the University of Virginia. The College has 15 departments—Art, Biology, Chemistry, Communications, Economics, English, Foreign Languages and Literatures, History, Mathematical Sciences, Performing Arts, Philosophy and Religion, Physics, Psychology, Public Affairs, and Sociology.

With more than 350 faculty, the College provides over 1100 courses leading to the BA, BFA, BS, and BM degrees. The College also administers several interdisciplinary and interdepartmental programs and certificates. The College plans additional programs to complement current offerings. The broad range of graduate work of the Arts and Sciences departments, leading to MA, MS, MFA, MAT and PhD degrees is coordinated by the Graduate School.

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 College II of George Mason College of the University of Virginia. More than 85 faculty in the College prepare students for specific professions, and aim to make them thoughtful, skilled, and informed members of their professions.

Three academic departments—Education, Health and Physical Education, and Nursing, and—offer seven undergraduate degree programs leading to BS, BS Ed, or BSN degrees. The wide range of graduate work is coordinated by the Graduate School of the University.

Administrative offices are in Robinson Hall.

School of Business Administration (1977)

The School of Business Administration, offers 6 undergraduate programs of business study leading to the BS degree. Graduate study (the MBA) is coordinated by the Graduate School of the University.

The School is composed of more than 60 faculty, organized into 5 faculty units: Accounting/Business Legal Studies; Decision Sciences; Finance/Real Estate and Urban Development; Management; and Marketing.

Administrative offices are in Robinson Hall.

Graduate School (1972)

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

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

The School plans significant numbers of new master's programs, together with implementation of select doctoral programs.

Administrative offices are 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 one of three Virginia law schools functioning under the direction of state institutions. The School enrolls over 500 students and offers a regular curriculum for full-and part-time study, leading to the Juris Doctor (JD) degree.

Division of Continuing Education (1973)

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

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

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

Administrative offices are in East Building.

Summer Session

The Summer Session at George Mason University has markedly increased educational opportunities for students in Northern Virginia. The offering of summer courses is controlled by a funding pattern more restrictive than that for the regular se-
mesters. 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. Summer Session is presented in a separate catalog available from the Summer Session Office.

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. On-line 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, radiocripts, 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 Library by the Library of Congress, the collection also includes gifts from private individuals and an oral-videotape 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 19,1937, until December 1934. The collection consists of over 25,000 of his prints and negatives.


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 valued at over $1,000,000 contains a number of rare historical maps, atlases, geographies, and law books relating to Virginia, all from Mann’s private collection.

Wolf Trap foundation for the Performing Arts Archive. The collection contains the correspondence, reports, memoranda, photographs, posters, and press releases of the foundation. (The collection will be available to researchers after processing is complete, sometime in 1982.)

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.

Computer Facilities

The University operates an administrative computer center with a Hewlett-Packard 3000 computer and an academic computing center with a CDC 720 and a Hewlett-Packard 2000 computer. Academic computing facilities are at the disposal of faculty and students for instructional and research purposes. The two centers are located in the basement of Thompson Hall.

Computer terminals, keypunches, and work areas are located in the basement of Thompson Hall and in Room 1618 of Robinson Hall. Offices for the consultants are located adjacent to these areas in Room 29 of Thompson Hall and Room 1600 of Robinson Hall.

Various software packages such as SPSS, BMDP, TOTAL, and UNIPILOT as well as languages such as BASIC, FORTRAN, COBOL, PL/I, and Pascal are available on several of the computer systems. Consultants are on duty to assist users in their programming and job control language problems.

Hours for each computer center are posted in the centers and are also available by calling 323-3384.

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.

Holbert L. Harris Theatre

The Holbert L. Harris 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.

Centers, Clinics, Laboratories, Institutes

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

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

Science and technology involves the broadest possible definition, including physical sciences, natural sciences, social sciences, and management sciences.
The University will emphasize the development of centers of excellence which will be of maximum interest to industry and the government. Typical of these areas are: computer science, computer and electronic engineering, decision science, environmental biology, finance, and economics.

The University will provide a faculty liaison person as a point of contact for each GMI corporate member. The programs of the Institute will emphasize instructional programs, research, professional exchange, professional services, and an industrial liaison program.

**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 students across the curriculum. A five-week Summer Institute trains these faculty members as Teacher/Consultants who conduct workshops for colleagues. The FWP also publishes a newsletter of successful teaching practices for all George Mason faculty.

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

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

**The Educational Child/Youth Study Center.** The Center, which offers diagnostic and tutorial services to primary and secondary pupils in public and private schools in the Northern Virginia area, enables graduate students in special education to observe and interact with exceptional children and youth. The Center is directed by Donald R. Gallehr, Department of Education.

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

**Federal Facilities.** Many federal laboratories and related facilities—such as the National Institutes of Health, the National Bureau of Standards, the Naval Research Laboratories, the NASA-Goddard Space Flight Center, and the Smithsonian Institution—enhance the educational environment for graduate students.

**Metro Campus Professional and Conference Center.**

The University’s 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) 544-1221. The mailing address is 3401 North Fairfax Drive, Arlington, VA 22201.

**University Information**

**Affirmative Action**

The primary objective of the Office of Equal Employment Opportunity/Affirmative Action is to ensure compliance throughout the University with the institution’s policy of nondiscrimination in employment on the basis of race, color, religion, national origin, sex or age (except when sex or age is a bona fide occupational qualification); to foster and monitor affirmative action in employment on behalf of target groups; to investigate and make recommendations for resolution of grievances in which discrimination on the basis of membership in 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.

**Minority Student Services**

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

**Consortium Membership**

George Mason University is the host institution of the Consortium for Continuing Higher Education in Northern Virginia. The other members are Marymount College of Virginia, Northern Virginia Community College, the University of Virginia, 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.

Office of Alumni Relations

The Alumni Association of GMU

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

The office, located at 4210 Roberts Road near the Main Campus, is open Monday through Friday from 8:30 a.m. until 5 p.m. The director encourages inquiries on all aspects of alumni relations and will arrange evening and weekend appointments for alumni who cannot visit during regular hours.

The Office of Alumni Relations maintains address and biographical information on approximately 14,500 graduates; publishes GMU ALUMNEWS magazine four times yearly, focusing on alumni achievement, travel, academic programs, special on-campus events, and Alumni Association activities, such as reunions, awards banquets and receptions. The staff also hosts a monthly alumni get-together in various zip code areas around Washington and encourages regional participation of GMU alumni in “Old Dominion Days” through the United States—reunions of all Virginia alumni.

Alumni make investments of time, effort and money in the University. The Alumni Association of GMU provides a variety of opportunities for service and support by alumni to assist George Mason University to become a stronger and more dynamic institution. The Alumni Association is organized under a Board of Directors, which includes representation from various chapters, and concentrates on developing student scholarships, and library funds, as well as other benefits to alumni, to the local community, and to the University.

Both the staff of the Office of Alumni Relations and the volunteers from the Alumni Association of GMU participate in the advance program through the University Development Office.

President
John W. Thyson

Secretary
Frances Batchelder

President-Elect
Jonathan C. Thacher

Treasurer
Carol Susko

Vice President
Executive Director
Robert C. Melton II

Carren Bersh Roberts

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 George Mason Gazette, an internal weekly newsletter covering items of general interest to University faculty and staff.

Design and Publications

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

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 conformity 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 $15 fee 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 Union Buildings 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 Eligibility

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 or run for elective or appointive office in any organization or activity associated with the University, or to participate in any athletic or other activity representing the University on either an intercollegiate or club level. 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.

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 Student Union, the Coordinator of Services for students with disabilities, and the Director of Minority Student Services; the offices of Student Health Services, Housing Services, Career Services, Cooperative Education, Veterans Affairs, Financial Aid, the Counseling Center, the Campus Ministry, and the Academic Advising Center; 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. When Student Union II opens, the bookstore will be located there.

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 Student Union I houses a cafeteria, and a rathskeller. Student Union II, when it opens will have a large cash cafeteria and a separate cafeteria for students on the meal plan. Vending machines are also located in various buildings. The Food Service Manager on the Main Campus can provide information concerning catering.

The Student 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 Student Union I, as explained in the following section. When Student Union II opens, additional facilities will be available to students for scheduled activities. The scheduling clerk will move to Student Union II also.

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 (323-2184). Scheduling will be conducted in Student Union II when that facility opens. 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 student-athletes competition with universities and colleges in the Washington, D. C. area, the State of Virginia and throughout the East and South.

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

The men's program is a member of the National Collegiate Athletic Association Division I and the Eastern College Athletic Conference (Southern Division). The Patriots also compete in the Capital Collegiate Conference with American, Catholic, Georgetown, George Washington, and Howard universities in baseball, soccer and golf.

In basketball, the Patriots' men's team is a member of the ECAS South along with William & Mary, Richmond, Navy, Old Dominion, James Madison and East Carolina. Additional outside competition for all sports is furnished by members of the Atlantic Coast Conference and other Division I schools throughout the East and South.

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

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

The University is affiliated with the Association of Intercollegiate Athletics for Women (AIAW), the Virginia Association of Intercollegiate Athletics for Women (VAIAW), and the Southeastern Region II of the AIAW. All women's teams except tennis compete in Division II of the NCAA. Tennis is a Division I sport.

In 1981, the women's basketball team won the regular-season championship in the VAIAW. In the fall of '81, the women's cross country team captured the Mason-Dixon Conference Championship. Of the last 10 Mason-Dixon championships in track and field and cross country, the Patriots have won seven times.

Also in 1981, three women qualified to represent George Mason in the AIAW National cross-country championships at Pocatello, Idaho.

Among the men, the soccer team produced a 12-1-3 record and at one time was the 10th ranked Division I team in the nation. The Patriots were ranked No. 1 in the Mid-Atlantic Region for much of the season.

The men's tennis team swept all six of its matches against Capital Collegiate Conference with a 6-1 record in meets with area schools. The Patriot runners were ninth in the IC4A and District II NCAA qualifying meet.

The men's basketball team faced increasingly tougher competition, because of the University's efforts to upgrade both the quality of its teams and opponents.

More than 250 student athletes carry the banner of George Mason on the courts and playing fields throughout the East and South. Scholarship support for the University's student-athletes is generated by the Patriot Club and private fundraising. The significant growth of the athletic program is in keeping with the rapid expansion of the entire University community.

Performing Arts Activities

George Mason offers students the opportunity to participate in many arts events throughout the school year. The George
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 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 lighting and sound, costumes, and publicity. Information concerning auditions, crew work, and performance dates may be obtained from the Department of Performing Arts (691-7900/7950).

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

Forensics

George Mason's nationally ranked Forensics Team, which includes individual events and debate, competes in over 30 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 Teams in the Nation" for the last six consecutive years. The combined efforts of both squads led to the George Mason University Forensics Team being named the "National Sweepstakes Champions for 1977, 1978, 1979, 1980, and 1981." During the past six years, the Forensics Team has won over 3,000 awards in intercollegiate competition.

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

Student Organizations

In addition to intercollegiate and intramural athletics, student publications, student government, and numerous student or group student organizations provide opportunities for students to exercise and develop their talents, as well as complement the curricular offerings at George Mason University. 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. Membership in student organizations is open to any registered George Mason University student and can open vistas to new friendships, informal contact with faculty, learning opportunities, and leadership experience.

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 305 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 staff 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 minicourse 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 and a dental plan 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 1982-83 dealt with areas such as blood pressure checks, Pap testing, and Cardio-Pulmonary Resuscitation.

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, outpatient 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 at 323-2523 for more information.

Housing

The University offers on-campus housing for 1,000 students. Each of two new residence halls houses 250 residents in mostly double occupancy units. Between every two rooms is a private bath that serves no more than four people. The rooms are provided mirrored wardrobes, chests of drawers, desks with study carrels, study chairs, beds, carpeted floors and drapes. Each floor has a study lounge, and the first floor level provides a main lounge, two meeting rooms, vending facilities and the hall offices. The student apartment complex is composed of nine three-story structures containing 121 apartments. The 121 apartments are divided into one-, two-, or three-bedroom units with accommodate two, four, or six students, respectively. Each apartment unit has its own entrance from the outside, and includes a kitchenette, bathroom, and carpeted living room in addition to the bedroom(s). Five hundred students live in the apartment complex. Utilities, with the exception of telephone, are included in the rent. Complete information concerning the University's on-campus housing is available from the Director of Housing Services, George Mason University, 4400 University Drive, Fairfax, Virginia 22030. Telephone (703) 323-2354/55.

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

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 professional counselors and psychologists, including a minority counselor who is available to the University’s minority students.

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 (323-2185). Center offices are open Monday through Friday from 8:30 a.m. until 5 p.m., and Tuesday and Wednesday until 8 p.m.

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 educational development 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 323-2018)

Black Peer Counseling. Trained black undergraduates provide informal assistance for other black students. (Trailer 104; phone 323-2131)

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.

Career Counseling Groups Career Seminars and Workshops include: Orientation to Career Planning, Career Identification, Choosing/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 career workshops days and times. Evenings 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, paid work experience. Two calendar plans are available: the preferred traditional plan in which students alternate periods of full-time work with periods of full-time study, and the parallel plan in which students work and study concurrently. Positions are open to both undergraduate and graduate students in all disciplines. The University recognizes satisfactory performance on work assignments through notation on academic transcripts. Orientation sessions are offered weekly to provide more complete information.

Internships. Information on 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 directly outside the Career Services Office, 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 first attending an orientation session, then 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 Reference Library and posted on a job bulletin board.

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

Veterans Affairs
The 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 (323-2381) as soon as they are sure of the number of hours to be carried in a particular semester or summer session.

Campus Ministry
The Campus Ministry Association is an ecumenical group of chaplains available on campus to be of help to students, faculty, and staff. Their ministry includes: religious, educational and social counseling, bible study, social-action opportunities, educational programs, social activities, seminars, retreat workshops, and fellowship gatherings. 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. For more information, please contact Kay Adams, United College Ministries, (820-2146). Father Joseph E. Keating, (978-3583); Father John J. Jones, (273-8056); or Father Phil Kapela, Roman Catholic, (250-5024).

Office of International Programs and Services
The Office of International Programs and Services is responsible for the coordination of all aspects of international education at George Mason University. It provides evaluation of credentials for international students, pre-arrival information, and

STUDENT SERVICES/PROGRAMS 9

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orientation, and housing assistance. It advises international students and American students who would like to study in a foreign country. The office is responsible for the administration of Fulbright grants, for study and research abroad, as well as a university grant program to encourage George Mason University faculty to undertake research projects with an international focus. Moreover, it helps faculty members bring internationally known speakers into their classrooms.

The office also coordinates the George Mason University English Language Institute, various intercultural communication workshops and study abroad programs. In addition, it sponsors the George Mason University Critical Language Program in cooperation with the Department of Foreign Languages and Literatures. It is expected that Chinese, Japanese, Arabic, Portuguese, and Italian will be offered for credit in the Fall of 1982. Other languages will be available on demand. With the assistance of groups such as the GMU Women's Association and the Fairfax Community, a home-hospitality program for newly-arrived students has been established. Other services include personal advising as well as social and educational activities such as International Week, United Nations Day, ethnic days, Great Decisions, coffee hours, and other 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 keeps the George Mason University community informed on activities of the Office of International Programs and Services.

**English Language Institute**

International students who wish to enroll in the English Language Institute, either full time or part time, must have completed the equivalent of a U.S. high school education (twelve years of school) or be at least seventeen years old at the time of enrollment. Students should send official certified copies of high school and/or university transcripts and a notarized statement of financial support along with the required application form and deposit. Students applying for admission to the English Language Institute do not need to take the Test of English as a Foreign Language (TOEFL), but are encouraged to do so if they contemplate applying for admission to George Mason University or other universities soon after attending the English Language Institute. Students who are accepted are sent a formal letter of acceptance and a Certificate of Eligibility (Form I-20) for a student visa if one is required. Government sponsored students will be issued an IAP-66 form. Admission to courses in the English Language Institute does not imply eligibility for admission to any program or course of study at George Mason University. Immigration regulations require that a student entering on an I-20 or IAP-66 form at a particular institution attend that institution for at least a semester.

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) 323-2001.

**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 1842. The Honor Code is an integral part of University life; 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 6, 1982, and December 15, 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.

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Tuition and Fees, full-time
(12 through 17 semester hours)

<table>
<thead>
<tr>
<th>In-State Students</th>
<th>Out-of-State Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$15.00</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td>$49.00</td>
</tr>
<tr>
<td>per semester</td>
<td>$93.00</td>
</tr>
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</table>

Tuition and Fees, part-time
(11 semester hours or less)

<table>
<thead>
<tr>
<th>In-State Students</th>
<th>Out-of-State Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$15.00</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td>$5.00(b)</td>
</tr>
<tr>
<td>per semester, per hour</td>
<td>5.00(b)</td>
</tr>
<tr>
<td>Graduation Fee</td>
<td>15.00</td>
</tr>
<tr>
<td>Special Registration Fee</td>
<td>15.00(c)</td>
</tr>
<tr>
<td>Private Instruction (music)</td>
<td>(d)</td>
</tr>
<tr>
<td>Nursing Liability Insurance</td>
<td>(e)</td>
</tr>
</tbody>
</table>

Check due dates to the University.
Checks are due in two payments:
First Semester: Second and third payments due October 4 and November 4, 1982.

Checks and Refunds
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 $10 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 and fees are refunded on a graduated scale for subsequent voluntary drops and withdrawals during the second and third weeks of classes. The calculation of the amount of refund is based on the date of the drop or withdrawal form as certified by the Registrar. Hours dropped after the third week of classes must be paid for in full. The refund scale is shown below and is posted on the bulletin board at the Cashier's office; it is the student's responsibility to be familiar with the refund scale.

<table>
<thead>
<tr>
<th>Refund Scale (per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 (100%)</td>
</tr>
<tr>
<td>Fall 1982</td>
</tr>
<tr>
<td>Spring 1983</td>
</tr>
<tr>
<td>In State</td>
</tr>
<tr>
<td>Out of State</td>
</tr>
<tr>
<td>Week 2 (66.7%)</td>
</tr>
<tr>
<td>8/30-9/7</td>
</tr>
<tr>
<td>2/1-2/7</td>
</tr>
<tr>
<td>$24.00</td>
</tr>
<tr>
<td>$24.00</td>
</tr>
<tr>
<td>Week 3 (33.3%)</td>
</tr>
<tr>
<td>9/15-9/21</td>
</tr>
<tr>
<td>2/8-2/14</td>
</tr>
<tr>
<td>$12.33</td>
</tr>
<tr>
<td>$12.33</td>
</tr>
</tbody>
</table>

Off-Campus
Students enrolled 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
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 unequivocal 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.

Penalties

A student who provides false information or refuses or conceals information for the purpose of achieving in-state status, or who fails to notify the University of a change of facts which might affect reclassification from in-state to out-of-state status, shall be required to pay retroactively any tuition fees 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, Thursday and Friday from 8:30 a.m. until 5 p.m., and Tuesday and Wednesday until 7:00 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:

1982-83 Academic Year ........................................ April 15, 1982
1983-84 Academic Year ........................................ April 1, 1983

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

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

Federal Programs

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

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

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

The Pell Grant (BEOG). 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.

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

Guaranteed Student Loan Program. Students with family incomes of $30,000 or less may borrow directly from lenders in order to finance educational expenses. While most of these loans are made by commercial lenders, some states are also lenders.

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 and are available to graduates and undergraduates. The application deadline for students previously enrolled in a nursing program

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is March 1 and for new students entering a nursing program, the deadline is June 1. Applications are available in the Financial Aid Office.

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

**Army ROTC Scholarships.**

The 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, inclass materials, and travel pay. Additionally, the student receives an allowance of $100 per month for up to 10 months of each school year. George Mason University students may participate in the Army ROTC Program offered on campus by enrolling in the Military Science (MLSC) courses. For more information, contact the Army ROTC Instructor at George Mason or call 625-4087.

**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.

- **In-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.

**Veterans Affairs.**

**Veterans Educational Benefits.** Students who are eligible to receive 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 DD214. 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, or in Continuing Education). *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 immediately).

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

5. **VA payments are paid on the following basis:**

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

**Tutorial Services for Veterans.**

The **VA will pay $76 per month, not to exceed $911, for needed tutorial services.**

**Foundations and Associations.**

George Mason University Foundation, Inc.
President Carrington Williams
Executive Vice President Joan M. Fisher

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 to establish permanent library, build student scholarships, and community 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. Srebnick

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.

Departmental Scholarships

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

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

Awards

George Mason University recognizes students for excellence at the university, college, school, and department level through awards given by various administrative offices and academic departments. The Student Activities Office (323-2574) coordinates the Annual Student Awards Ceremony and maintains the most comprehensive listing of awards given.
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.¹

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.

Degree Programs (Except Engineering, Computer Science, and Mathematics)

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>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>Foreign Language</td>
<td>3 units¹</td>
</tr>
<tr>
<td>Social Studies</td>
<td>2 units²</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>

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

Engineering, Computer Science, and Mathematics

For admission in engineering, computer science, and mathematics, an applicant must take the Scholastic Aptitude Test¹ 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>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 units³</td>
</tr>
<tr>
<td>Electives</td>
<td>5 1/2 units</td>
</tr>
<tr>
<td>Minimum Total</td>
<td>15 units</td>
</tr>
</tbody>
</table>

¹Or the College Entrance Examination of the American College Testing Program. These units must be two of algebra, one of plane geometry, and 1/2 unit of advanced mathematics—trigonometry, solid geometry, advanced algebra, functions-analytic, or calculus. ²Chemistry and physics are recommended. Not more than four units of vocational subjects relevant to engineering will be accepted.

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

Transferring 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. 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.

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

Admission of International Students

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

1. Students must meet all requirements and regulations of the University, the school, and the department.
2. With the application for admission, students must present documents certifying their previous educational training and achievements; such documents should show completion of the equivalent of a U.S. high school diploma. Non-English documents must be presented in original form together with certified translations.
3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained a satisfactory level of English proficiency on both the total and subscores. Official test scores must be sent directly from Educational Testing Service. TOEFL examinations are given monthly at the University. Information concerning the time and place of the TOEFL can be obtained from the University or from:

TOEFL, Educational Testing Service, Princeton, NJ 08540
4. Students requesting non-immigrant visas must provide a statement of financial support.

http://catalog.gmu.edu
5. After acceptance, the 1-20 form is available to those who wish to secure an F-1 student visa. Students sponsored by their government are required to enter the U.S. on a J-1 visa. The IAP-66 is automatically provided by the University.
6. Students admitted on F-1 or J-1 visas to study at the University must register for at least the number of courses each semester (excluding summer sessions) that will qualify them as full-time students (12 credits for undergraduates).
7. Students must meet and conform to all current regulations of the U.S. Department of Justice, Immigration and Naturalization Service.
8. Health insurance is mandatory for students on nonimmigrant visas. Students who do not enroll in the Office of International Programs insurance program must show proof of comparable coverage.
9. Students with F-1 or J-1 visas must initially attend the educational institution which issued the Certificate of Eligibility (Form I-20 or IAP-66). Transfer from one U.S. educational institution to another must be authorized by the U.S. Immigration and Naturalization Service. Forms are available from the international student adviser.
10. Questions concerning U.S. Immigration and Naturalization Service regulations should be directed to the international student adviser.

Summer Session Enrollment

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

Extended Studies Enrollment

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

Procedures

Submission of Application

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

Application Deadlines

Undergraduate applications should be submitted no later than May 1 for fall admission and December 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 SAT or the ACT. Official test scores must be sent directly by the appropriate testing service.

Notice of Acceptance

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

Right to Withdraw Offer of Admission

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

Admissions Committee

An Admissions Committee reviews undergraduate admission decisions and appeals.

Other Stipulations

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

Academic Policies and Procedures

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

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

Placement, Proficiency, and Testing

Administered by the Office of Academic Assistance Programs, the Tutorial Service, Academic Assistance, and Academic Testing are located on the Main Campus.

Academic Assistance

The Academic Assistance Office provides non-classroom academic opportunities for learning and 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 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 for taking College Level Examination Program (CLEP) tests and the Test of Standard Written English (TSWE) and may obtain application for the Test of English as a Foreign Language (TOEFL), the Graduate Record Examination (GRE), Law School Admission Test (LSAT), Graduate Management Admission Test (GMAT), Medical College Admission Test (MCAT), Dental Admission Test (DAT), Veterinary Aptitude Test (VAT), and the Miller Analogies Test (MAT).

Test of Standard Written English (TSWE)

Scores from the 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 Composition Tutorial Center. Students are notified of their need to complete this writing sample. If performance on this essay indicates a probable difficulty with college writing assignments, students must attend the Composition Tutorial Center in conjunction with enrollment in a regular section of ENGL 101 (or 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 credits 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 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 an 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 and complete the program within their first 30 hours of coursework.

Advanced Placement Program with Credit

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

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, to each candidate 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 in foreign languages offered at the University and prior to registration.

Transfer Credit

Students may not earn by examination partial or complete credit for courses in which they are enrolled beyond the time allotted for adding courses in that semester, or in courses already audited or failed at the University.

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 the University.

2. Students may not earn by examination partial or complete credit for courses in which they are enrolled beyond the time allotted for adding courses in that semester, or in courses already audited or failed at the University.

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

Foreign Language Placement, Testing, and Credit by Examination

A placement test is mandatory for all students with two or more years of foreign language study in high school who wish (1) to continue study of that foreign language at the University and/or (2) to fulfill the foreign language area requirement by examination and earn credit in the process. This test may be taken only once in each language. The testing dates are listed in the Academic Calendar; 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. Students should contact the Department of Foreign Languages and Literature.

Students who have taken the CEEB achievement test in a foreign language must present their score to the Department of Foreign Languages and Literatures when applying to take the placement test. Students who elect to enroll in a lower level course after being given 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 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 appropriate dean.

On the basis of examinations administered by the department, 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 Colleges must consult the department to determine their correct placement. All students are urged to start or to continue their foreign language studies in their initial year. It is particularly important to complete elementary and intermediate courses in immediate succession.

College Level Examination Program (CLEP)

The University currently does not recognize credits earned by CLEP General Examinations. As part of the Credit by Examination process, certain departments may utilize CLEP Subject Examinations in A and B for certain courses. Consult the appropriate department.

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 this examination can be obtained from the Testing Office.

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

In general, credits are accepted from institutions 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 George Mason. 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. A University manual facilitates
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 6 semester hours may be transferred from correspondence courses sponsored by regionally accredited institutions.

Credit Earned at Nonaccredited Colleges

Credits of a student transferring from a nonaccredited college are tentatively evaluated upon admission. Transcript information is used for purposes of advanced placement, and transfer credit is recommended after the performance of the student at George Mason has been established. Transfer credit is not granted for study in non-collegiate institutions, except in the BIS.

Credit to be Earned at Other Colleges

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

Study Abroad

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

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

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

The Reserve Officers' Training Corps (ROTC)

Army ROTC

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

The program consists of 2 components: military skills and leadership, referred to as the core curriculum; and professional military education, which encompasses certain academic electives and the successful completion of requirements for a baccalaureate degree. The core curriculum is comprised of classroom instruction and practical exercises in leadership and general military subjects and skills. The professional military education component consists of a curriculum required for a baccalaureate degree which must include academic courses in human behavior, written communications skills, military history, national security policy, and management.

George Mason University students may participate in the Army ROTC program offered on campus by enrolling in Military Science (MLSC) courses. Scholarships available through the Department of the Army cover tuition, fees, texts, in-class materials, and travel pay. Advanced Phase cadets and all scholarship cadets receive a 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 U. S. Army.

For more information, contact the Army ROTC instructor at George Mason University.

Air Force ROTC

Air Force ROTC (AFROTC) is available to George Mason students at through an agreement with the University of Maryland at College Park. AFROTC courses are scheduled so students from the University may complete the AFROTC requirements during one morning per week at the College Park campus. In addition, students are eligible to compete for all AFROTC scholarships and for pilot and navigator training programs. The 7, 6, 5, and 4-semester scholarships pay for tuition at the University of Maryland and George Mason University, pay for required books, and provide a $100 per month subsidy.

Upon graduation from the 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 AFROTC can contact AFROTC, Cole Fieldhouse, Second Floor; University of Maryland; College Park, MD 20742. Telephone: 301-454-3242.

ROTC Courses

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

Registering in Courses

Academic Load

Although many students work in order to meet living expenses, employment must not take priority over academic responsibilities. Students employed more than 20 hours a week are strongly urged not to attempt a full-time academic load. Students employed more than 40 hours a week should attempt no more than 6 semester hours. Students failing to observe these guidelines may expect no special consideration for academic problems arising from the pressures of employment. Although 12 semester hours per semester represents a minimum full-time load, students wishing to graduate in a four-year period will need to carry an average of at least 15 semester hours per semester. A load in excess of 17 hours must be approved by the student’s academic dean.

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

Catalogs of Other Institutions

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

Schedule of Classes

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

Academic Advising Policy

Each undergraduate student is urged to see an academic adviser periodically to discuss academic programs, education-
al 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, are advised in the Center.

Academic Advising - Regulations

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.

Academic Advising - 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.

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.

Early Registration

Early registration is conducted near the end of each semester for newly admitted or readmitted students and those currently enrolled who intend to return for the next semester.

Registration Procedure

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

Students are responsible for registering properly. They 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 (lecture and laboratory) to claim their registration. Failure to do so 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 used in preparing a student education record and numerous statistical reports. Such information is collected and disseminated in compliance with the Family Educational Rights and Privacy Act of 1974, as amended, which provides that the University maintain the confidentiality of student education records and establishes the right of students to inspect and challenge the data maintained in those records. Personally identifiable data from a student's education record may be released only to persons described in the Act, including "school officials with a legitimate educational interest."

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

Category I of directory information includes:

- student's date of attendance, major(s); full-or part-time status; awards received

Category II of directory information includes:

- student's address; telephone number(s); date and place of birth; participation in recognized activities and sports; weight and height (normally given only for athletes); most recent previous institution attended; other similar information

Students desiring to withhold directory information from the public should request such withholding in writing to the Registrar at the time of registration for a semester or summer session. Since such withholding may prohibit the Registrar from providing confirmation of enrollment to prospective employers or even residence address to the student's own family, students who are considering such a request 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.

Student Identity Card

As part of registration, each student is issued an identity card for 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. It 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 registration by written notice to the Office of the Registrar. 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 made 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 prevent 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 registered, students 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

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Academic Calendar. Students should complete the form carefully, double-checking all section numbers. Closed-section announcements should be observed carefully. Sections 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 2 weeks.

Drop

The last day for dropping a course is 3 calendar weeks after and including the first day of classes.

Withdrawal from a Semester

Upon approval by the appropriate dean, a student may withdraw from a semester after the drop period without academic penalty, but only for nonacademic reasons preventing completion of the courses. A student who withdraws from a semester after the drop period without the dean’s approval receives 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 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 tuition and fees apply to audit status.

Repeating a Course

Courses passed with a grade of C or better are not repeatable. When a course is repeated, the following conditions apply:

1. All hours attempted count toward probation, suspension, or dismissal.
2. The transcript shows both the original and repeat grades.
3. Only one grade per course may be presented on the degree application.

Special Types of Enrollment

Extended Studies Enrollment

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

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

Guest Matriculant Enrollment

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

Graduate Course Enrollment by Undergraduates

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

Students may seek to take graduate courses for reserve graduate credit (earned credit held in reserve to apply later toward a graduate degree). Approval to register is normally given only to George Mason seniors who are within 15 hours of completion of undergraduate study. Approval for reserve graduate credit does not imply approval for admission into a graduate program at the University or that credit so earned will be accepted at another graduate school. (See the Graduate School section 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, students are not relieved of the obligation to fulfill course assignments, 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, students who fail to participate (by virtue of extensive absences) in a course in which participation is a factor in evaluation may have the grade lowered.

Final Examinations Policies

Final examinations are normally given at the end of all undergraduate courses. In predominantly laboratory courses, examinations may be given in the last regularly scheduled laboratory period. Scheduled final examinations should not exceed 3 hours. Except for take-home examinations, changes in location or time of in-class final examinations must be approved by the appropriate department chairperson and appropriate dean. Professors considering the assignment of a take-home examination should tell students at the beginning of the semester. Such examinations should be distributed before the beginning of the last week of classes so that students can coordinate them with preparation for other examinations. In no case should students be required to submit examinations prior to the date of the regularly scheduled examination for a class. Final reexaminations are not permitted.

Absence from Final Examinations and Special Examinations

Absence from final examination will not be excused except for sickness on the day of the examination or for other cause approved by the student's academic dean. If such absence is unexcused or the examination not taken within 10 days, the course grade is F. A student whose absence from an examination is excused may take a special examination within the 10-day period on a date to be arranged between 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 do they fulfill degree requirements.

S-NC

Undergraduates may take up to 6 credit hours to be graded S, NC. This option applies only to electives outside the major field. Students 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 reflects satisfactory (C or better) work. The S grade, but not the NC grade, appears on the transcript.

IN (Incomplete)

For a cause beyond reasonable control, a student otherwise passing a course may be unable to complete scheduled coursework. In such a case, the instructor assigns a temporary grade of Incomplete (IN). If a student fails to complete all requirements in time for the instructor to assign a regular grade by the last day of classes of the next semester, the mark of IN is changed by the Registrar to F.

It is the student’s responsibility to submit work to the instructor with sufficient time for evaluation.

The mark of IN remains on the transcript, 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. In BIS 490, it is not subject to 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 10 days after the date of regular examination if testing has not been completed. The grade of SP is given by the appropriate dean to a student faced with delinquency because of very special circumstances such as major illness.

Grade Point Average

A grade point average (GPA) appears only on transcripts of undergraduates who have filed degree applications. The GPA is computed on the basis of those courses the student will have completed at the University at that time and which are included in the application for graduation. The average is so identified and the courses annotated.

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

Classification of Students

Undergraduates are classified as: sophomore, 24 semester hours; junior, 54 semester hours; senior, 84 semester hours.

Grade Reports

Grade reports 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 a class, there may be instances in which a student feels a grade has been assigned unfairly. In such cases the student should ask the instructor to reconsider the grade. If the student remains dissatisfied, the matter may be appealed to the de-
partmental 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 the student may have a legitimate complaint, the chairperson forms a committee of three faculty members who are peers of the instructor who assigned the grade. The instructor or the student may each challenge and have replaced one of the three members of the committee without giving a reason for the challenge. The committee meets separately with the instructor and with the student to explore the full particulars of the case. Every effort is made to avoid an adversary relationship. After the committee has reviewed the case thoroughly, it issues to the chairperson (with or without giving a reason for the action) one of the three members of the committee. Upon receiving an appeal, the chairperson forms a committee of three faculty members who are peers of the instructor who assigned the grade. The instructor or the student may each challenge and have replaced one of the three members of the committee without giving a reason for the challenge. The committee meets separately with the instructor and with the student to explore the full particulars of the case. Every effort is made to avoid an adversary relationship. After the committee has reviewed the case thoroughly, it issues to the chairperson (with a copy to the faculty member) a written recommendation including the reasons for its findings. At this time, the faculty member has an opportunity to take the recommended action, if any. If the matter is not resolved at this point, the chairperson considers the committee recommendation and forwards a recommendation to the dean. If the dean decides that a change of grade is appropriate and the faculty member refuses to make the change, the dean may order the registrar to do so. Chairpersons normally do not accept grade appeals after the end of the semester following that in which the grade is recorded.

Pending Grade Appeal

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

Satisfactory Performance

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

<table>
<thead>
<tr>
<th>total hours</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 2/3</td>
<td>1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 13 14</td>
</tr>
</tbody>
</table>

Academic Warning

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

Academic Probation

An undergraduate who receives 2 warnings during any 4 consecutive academic periods of enrollment is on probation during the academic period of enrollment following the second warning. (Consecutive academic periods of enrollment are successive periods during which the student enrolled, regardless of whether there were intervening periods during which the student did not enroll.)

Suspension

A student receiving academic warnings in 2 immediately consecutive periods of enrollment is suspended. The 2 consecutive periods are extended to 3 if the student attempts less than 12 credit hours during either of those periods.

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

A student 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 2 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 Fall 1979 are included in the accumulated hours for dismissal.

Good Academic Standing

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

Effect of Academic Standing on Student Activities

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

The Undergraduate Major

Academic Advising

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

Individual departments establish their own advising processes; each student should check with the appropriate department. Students who have not yet decided on a major or who are considering a change of major are advised in the Academic Advising Center.
Selection of a Major
To plan a sound academic program, the undergraduate should select a major as soon as practical, but no later than 4 weeks before the end of the sophomore year. For declaration of a major, a 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 see a faculty adviser or the Academic Advising Center. Departmental sections of this Catalog contain requirements for acceptance into the major programs. The student not meeting the requirements may appeal to the department chairperson for an exception. Forms for changing major are available in the Office of the Registrar.

Credit for More than One Undergraduate Major
A student who desires to graduate with a BA degree or a BS degree in 2 or more subjects having established degree programs must meet departmental requirements for the major in each field.

The applicant should present to department chairpersons involved a detailed program showing curriculum to be pursued. This program must be approved by department chairpersons involved and by the appropriate dean(s). Department chairpersons and dean(s) also must approve all changes. A student may begin the program at any time that permits its completion prior to the contemplated graduation date.

The Baccalaureate Degree

Literacy
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, The University requires students to complete 2 semesters of English composition as soon as possible after admission. Students must enroll in ENGL 101 in the semester following 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
Each undergraduate degree program requires a substantial core from the arts and sciences (24 semester hours). Six semester hours must be in English composition (see English Composition Requirement). Of the remaining 18 hours, 6 must be in each of the following three areas:

<table>
<thead>
<tr>
<th>Area A</th>
<th>Area B</th>
<th>Area C</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Astronomy</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Fine and Performing</td>
<td>Biology</td>
<td>Economics</td>
</tr>
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<td>Arts and Communication</td>
<td>Chemistry</td>
<td>Geography</td>
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<td>Computer Science</td>
<td>History</td>
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<tr>
<td>Literature</td>
<td>Geology</td>
<td>Linguistics</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Political Science</td>
</tr>
</tbody>
</table>

Graduation

Catalog Requirements
Bachelor's degree candidates may elect to graduate under the provisions of the catalog in effect at the time of admission or under the provisions of a catalog subsequent to admission if the student has been enrolled in a continuous progression from date of admission to the receipt of a degree. (Summer sessions and one-semester absences are excluded.) A student who fails to register for 2 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 has a copy of all previous catalogs for use by staff and students. Copies may not be checked out but may be photocopied.

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

Effective Fall 1981, students seeking a bachelor's degree must apply at least 45 hours of upper-division coursework towards 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 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 the University. However, a student of junior standing who has completed 24 semester hours of advanced level courses, including 12 upper-level semester hours in the major, may apply to the appropriate dean for permission to complete the remaining degree requirements elsewhere. Such applications must follow the procedures outlined in the section "Credit to be Earned at Other Colleges" and permission is granted only in special circumstances, such as moving from the area or enrolling in an accredited professional school.

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

Academic Requirements
To qualify for a degree, a student must have been admitted and must have fulfilled all stated requirements for the specific
An undergraduate may present all courses in which satisfactory grades have been received and up to 12 hours of courses in which D grades have been received. However, a student may not use a grade of D in BIS 490 and may not use more than 6 hours of D grades in the major or in the BIS core of study.

The 12 hours of D grades may be exceeded by an undergraduate provided that:

1. all hours of D were earned prior to Fall 1979; and that
2. the student achieves a cumulative GPA of 2.000 at or after the beginning of Fall 1979.

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

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

**Application for Degree**

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

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

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

**Second Bachelor’s Degree**

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

**Graduation with Distinction**

A student graduates with distinction from the University when

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.

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

**Graduation with Distinction and with Recognition**

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

A BIS student attempting this recognition is evaluated by the department of the permanent adviser.

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

**Comprehensive Examinations**

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

**Commencement**

Commencement exercises provide an opportunity for students and their families to share in the experience of the conferral of academic degrees. This ceremony represents the culmination of a phase in the formal education of the individual. Degree candidates who do not desire to participate in the formal graduation ceremonies 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 in 1970 with the introduction of master's programs in biology, mathematics, and elementary education; later 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. Between 1972 and 1979, eleven additional master's programs were added to the Graduate School offerings. 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. The Graduate School now offers graduate work in 28 master's fields and five fields leading to the doctoral degree.

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, and the Graduate School Dean. It meets approximately once a month to conduct business for the Graduate Faculty.

The Graduate Council has four standing committees: the Academic Policies and Procedures Committee, the Curricula Committee, the Graduate Student Affairs Committee, and the Interdepartmental Graduate Degree Committee.

Graduate Council Members 1982-83

Alice C. Andrews (Ex Officio) Robert Pasnak
Thomasina S. Borkman Samuel H. Phillips
Jack R. Censer Iris Prager-Decker
Catherine A. Connolly John B. Radner
San A. Conaventura James F. Sanford
Albert W. Edgemon Moira S. Shine
Esther N. Elstun Anita M. G. Taylor
John C. Evans (Ex Officio) Averett S. Tombes, Chair
Klaus G. Fischer Zita E. Tyer (Ex Officio)
James J. Fletcher Peter C. Wang
James W. Fonseca Nicholas W. Ward
Thomas H. Hill
John L. Hysom
David W. Johnston
Edward J. Machuga

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 the 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. 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 the 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. With the Graduate Faculty determining standards for learning, graduate students are asked to join the Graduate Faculty in seeking excellence in advanced study.

Administration

Averett S. Tombes, Dean
John C. Evans, Associate Dean

Fields of Study

The Graduate School 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 and the master's level are offered in the following fields.

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

Master of Science
- Applied Physics
- Biology
- Computer and Electronics Engineering
- Computer Science
- Conflict Management
- Geographic and Cartographic Sciences
- Information Systems
- Mathematics
- Operations Research and Management Science
- Physical Education
- Master of Arts in Teaching
- History

Doctor of Philosophy
- Economics
- Environmental Biology and Public Policy

Doctor of Arts
- 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.

In Fall 1981, approximately 1,800 admitted graduate students were enrolled at George Mason, and more than 1,400 postbaccalaureate students were taking courses through Extended Studies Enrollment.

Graduate Degree Programs
A detailed discussion of 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 School requirements applicable to all degrees are given later in this section, while program-specific requirements can be found in the departmental sections.

Graduate Courses
See the Course Dictionary in this catalog for descriptions of all graduate courses. Graduate courses are numbered 500 and above. Courses numbered 500 to 799 are primarily master's level courses and those numbered 800 to 999 are primarily doctoral level coursework. The graduate course numbering system is discussed in detail at the beginning of the Course Dictionary. Note: graduate courses have been renumbered in all departments in either 1980-81 or 1981-82.

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 program-specific requirements as established by the program faculty. The general admission requirements to the Graduate School for degree status are:

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

Program admission requirements for a degree student are listed in this catalog under the relevant department or unit of program faculty through which the program is offered. Some program-specific requirements are letters of recommendation, scores on a standardized national examination, or teacher certification. These requirements are detailed in appropriate sections of this catalog.

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 12 hours of graduate work with a B average or higher and meeting any other academic requirements, the student will be advanced to degree status. The provisional student's admission is terminated if, upon completion of 12 hours, a B average has not been achieved or all admissions credentials have not been received, or all deficiencies have not been removed. Graduate credits earned as a provisional student may be applied toward the requirements for a graduate degree. Credit toward satisfying degree requirements 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.

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 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 must submit an application for admission and supply all admission credentials to the Graduate School Admissions Office. 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 Degree Requirements applicable to all Master’s or Doctoral Degrees.

Application Policies and Procedures

Submission of Application

Correspondence concerning application for admission to the Graduate School should be addressed to the Graduate School Admissions Office. Applicants seeking admission as degree students to the Graduate School must submit the following:

1. Application form.
2. Transcripts two official copies mailed directly from each institution attended to the Graduate Admissions Office, including George Mason University (undergraduate or Extended Studies Enrollment).
3. $15 application fee (non-refundable).
4. Virginia Domicile Classification Form.
5. Official scores on examinations (GRE, GMAT, etc.) as required by the relevant department (see Departmental Entrance Requirements under the appropriate program).
6. Letters of recommendation as required by the relevant department (see Departmental 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 the individual department (see application instructions).

It is the responsibility of applicants to ensure 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 the University, and will not be returned or duplicated for any purpose.

Applications 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 for Master’s Programs

Applications and all supporting documents must be received by the Graduate School Admissions Office by no later than May 1 for Fall semester 1982; November 1 for Spring semester 1983; March 1 for Summer Session 1983; and May 1 for Fall semester 1983.

Application Deadlines for Doctoral Programs

Applications and all supporting documents must be received by the Graduate School Admissions Office by the following dates:

- Biology: November 1 for Spring semester 1983
- April 1 for Fall semester 1983
- Economics: October 1 for Spring semester 1983
- April 1 for Fall semester 1983
- Education: February 1 for Fall semester 1983
- Psychology: February 15 for Fall semester 1983
- Public Administration: April 15 for Fall semester 1983

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, George Mason students and graduates (including Extended Studies Enrolees) 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 the University who apply may be given permission to take courses elsewhere for possible transfer credit. Students 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 official scores for both the Aptitude and the Advanced Test. During 1982-83, The GRE will be administered locally and nationally on the following dates:

- October 16, 1982
- December 11, 1982
- February 5, 1983
- April 23, 1983
- June 11, 1983
- (For registered candidates only.
- No standby tests.)

The Graduate Management Admission Test (GMAT) is required of all applicants seeking a degree in business administration. During 1982-83, the GMAT will be administered locally and nationally on the following dates:

- October 23, 1982
- January 29, 1983
- March 19, 1983
- June 18, 1983

Academic Testing in the Office of Academic Assistance

Administrators administer all academic examinations for the University, including the GRE and the GMAT. Information concerning examinations and test applications may be obtained from Academic Testing. Applicants also may write directly to GRE, Box 955; or GMAT, Box 966; Princeton, NJ 08540. A local telephone number in the Washington, DC area for ETS is (202) 659-0616.

Graduate School Foreign Language Tests

Certain graduate programs require 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 appropriate courses or demonstrating the equivalent proficiency by passing an examination. Information concerning the Graduate School Foreign Language Tests (GSFLT) may be obtained from Academic Testing.

Financial Assistance and Graduate Assistantships

The University offers financial assistance to graduate students through a variety of programs, including fellowships, assistantships, workstudy plans, and loans. For further information, see the "Financial Assistance" section of this catalog.

Admission of International Students

International students who wish to apply to the University should apply directly to the Graduate School Admissions Office 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 all documents certifying their previous educational training and attainments. Graduate student applicants' documents should 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 a score of 550, or higher if required by the academic department in which the graduate program is offered. Graduate student applicants may obtain from the Graduate School Admissions Office the minimum scores required on the TOEFL.

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test by different academic departments. Foreign student applicants with undergraduate degrees from accredited universities in which the language of instruction for the program was English are exempted from this requirement. Information concerning the time and place of the TOEFL can be obtained from the 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 a student has received an offer of admission and made written notice of its acceptance, the I-20 will be available upon request to those who need 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 the University. Students sponsored by the U. S. government or their home government will be required to enter the U. S. on an Exchange Visitor's Visa (J-1).

6. The United States Department of Justice, Immigration and Naturalization Service regulations governing nonimmigrant F-1 students require international students in this category to pursue a full course of study (nine credits for graduate students) while maintaining nonimmigrant student status. Students on J-1 or F-1 visas are required to secure an affidavit of support proving that they have a sufficient amount of money to support themselves for the duration of their stay. All students holding a J-1 visa or an F-1 visa are required to carry medical insurance either on their own or through the Office of International Programs insurance program. International students must meet and conform to all current regulations of the U.S. Immigration and Naturalization Service.

Admission of Graduate Degree Holders

An applicant holding one of more graduate degrees may earn an additional graduate degree in another discipline. For admission to a second graduate degree program, the applicant should submit an application, transcripts, and other documents as required by the second degree program.

Course credits used to satisfy the degree requirements for the first graduate degree may not be used to satisfy the degree requirements for the second graduate degree at the 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 has been admitted. 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 applicant does not take courses elsewhere. A written acceptance or rejection of the offer of admission should be sent to the Graduate School Admissions Office as soon as the applicant has made his or her decision on graduate study. 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

Applicants are notified when action on an application has been deferred pending completion of prerequisite courses before graduate study in a chosen field can begin. Such an applicant is encouraged to notify the Graduate School Admissions Office, 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 even if at the University. 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 cannot be released or 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 official transcripts or test results.

Readmission to the Graduate School

A graduate student whose study at the University is interrupted for any reason for 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 $15 nonrefundable fee must accompany the readmission form. If such readmission is approved, the student is subject to the academic regulations and requirements in effect at the time of registration after readmission.

Change in Field of Graduate Study

Admission to graduate study is contingent upon recommendation 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 graduate 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 the 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 who have no immediate degree objectives to request enrollment in courses for which they are qualified without seeking admission to the University. Credits earned by students as Extended Studies Enrollees are recorded on regular University 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 to have transcripts of credits earned through Extended Studies enrollment sent to the Graduate School Admissions Office. After admission to the Graduate School and upon initial registration as a degree student, it is the student’s responsibility to initiate such a request on a Transfer of Credit/Application of Extended Studies Credit Form to apply Extended Studies

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credit toward degree requirements. 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 $15 nonrefundable charge for application and a $10 nonrefundable charge for enrollment.

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 and degree requirements 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 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 in advance of each registration period by the Registrar's office. It provides information about the times and 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 registra-

tion the student, in consultation with the adviser, prepares a schedule of courses appropriate to satisfying degree 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 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 part of registration, 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. It 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 a student’s education record and numerous statistical reports. Such information is collected and disseminated in compliance with the Family Educational Rights and Privacy Act of 1974, as amended, which provides that the University maintain the confidentiality of student education records and establish the right of students to inspect and challenge the data maintained in those records. Personally identifiable data from a student’s education record may only be released to persons described in the Act, including “school officials with a legitimate educational interest.”

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

Category I of directory information includes:

- student’s 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 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 such a request should consult the Registrar.

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 an official fee. Those desiring to do so should schedule an appointment with the Registrar.

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 9 hours per semester during the regular academic year. A normal full-time academic load is 12 semester hours. During the summer, a normal full-time academic load is 9 semester hours for the entire session. Permission of the department chairperson is required to exceed the normal load.

Graduate students are expected to attend all of the class periods of courses for which they are registered and to meet all

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course requirements set by graduate faculty as 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 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 the 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 offering the courses. Permission must be obtained in writing prior to registration. Forms are available in the Graduate School Admissions 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 the 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

Graduate School policy permits undergraduates to enroll in graduate courses numbered 500 to 599 and apply the credit earned toward an undergraduate degree. For details of requirements and procedures see Graduate Course Enrollment by Undergraduates in the section of this catalog Undergraduate Policies and Procedures.

Adding and Dropping Courses

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 3 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 submit an official withdrawal form.

Upon approval by the Graduate Dean, a graduate student may withdraw from a semester after the drop period without academic penalty, but only for nonacademic reasons which prevent 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: "Withdraw voluntarily for nonacademic reasons on ______ (date) in the ______ 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 shows 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 department chairperson 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 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 department chairperson offering the course.

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 10-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 Change of Grade below.

Grade points for each semester hour are assigned on a scale of 4 for A, 3 for B, 2 for C, and 0 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 GPA.
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.

Grade reports 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. For cause beyond reasonable control, a student may be unable to complete the coursework 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 is 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.

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. A mark of In Progress (IP)* is used for courses numbered 999, 998, 799, 798; internship classes; and some other courses until such time as all coursework is completed. 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 “Challenge 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 ask the professor to reconsider the grade. If the student is not satisfied, an appeal may be made to the chairperson, who initiates 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.

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Change from Provisional to Degree Status

In order for a change from provisional status to be considered, a graduate student must have completed 12 semester hours of graduate work, supplied all admission credentials, and removed all deficiencies established at the time of admission. Appropriate admission credentials, such as transcripts, letters of recommendation, or test scores needed for consideration for a change of status, must be submitted to the Graduate School Admissions Office. Written confirmation from the Graduate School Dean indicating the change of status will be sent to the student.

Credits earned in the provisional status may be used subsequently in meeting minimum hour and program degree requirements. However, a maximum of 12 graduate credits earned in 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 graduate degree unless they are specifically approved for that purpose.

Transfer of Credit for Work Taken Prior to Admission

With the recommendation of the appropriate program faculty and approval of the Graduate Dean, a graduate student may transfer up to 6 semester hours of graduate credit earned at other accredited institutions prior to acceptance and enrollment in the University Graduate School to be applied toward the requirements for a master's degree and up to 30 semester hours for a doctoral degree. Undergraduate courses taken at other institutions are not transferable for credit to graduate programs within the University. All graduate work offered as transfer credit must be applicable to the degree program the student is pursuing at the University.

Credit is normally considered for transfer, upon the request of the student, at the time of initial registration as a degree student. Written confirmation from the Graduate Dean of all credits approved for transfer will be sent to the student.

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 in-service courses which are not intended by the institution offering the course 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 the University is the responsibility of the Graduate Dean.

Permission to Take a Course Elsewhere After Enrollment

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 6 additional hours of transfer credit applied to the master's degree or 12 hours applied to the doctoral degree for graduate courses to be taken at another accredited institution. Permission to take a course elsewhere must be secured from the Graduate Dean prior to registering at the other institution. Forms are available in the Graduate School Admissions Office. 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 for evaluation of possi-
ble transfer of credit. Permission is not ordinarily given for a student to take a course elsewhere for transfer credit during the semester in which a student is advanced to candidacy or the semester in which the degree is to be awarded. Also permission does not exempt a graduate student from satisfying the 18-hour minimum for a master's degree or the 36-hour minimum for a doctoral degree of coursework taken at the University. (see Requirements Applicable to All Graduate Degrees).

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 Graduate Dean. Such a request should be initiated by a graduate student and must be restricted to those matters directly affecting academic progress. Graduate departments provide a mechanism for grade appeal. Thus all grade appeals should be submitted to the department responsible for the course. The petition to the Graduate School must include the signature and recommendation of the graduate adviser and the department chairperson. Student Appeals Forms for such purposes are available from department offices or the Graduate School Admissions Office. It is the responsibility of the graduate student to present relevant information or documents in support of an appeal. If the request or appeal is to be decided by the Student Appeals Sub-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 Sub-committee meeting to present written or verbal information.

While such meetings are academic and collegial and not legal hearings, a student is welcome to present relevant supporting documents. No appeal can be made of the decision of the Sub-committee.

Requirements Applicable to All Master's Degrees

Degree Requirements

Candidates must satisfy all Graduate School degree requirements and all requirements set by the program faculty of the department in which the master's 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 master's degrees, a candidate must:

1. have acquired a minimum of 30 semester hours of graduate credit;
2. present only graduate-level courses in which satisfactory grades have been received, except that for the master's degree a graduate student may apply up to 6 hours of C grades in graduate-level courses.
3. have completed at least 18 semester hours of graduate level work at the University after having been admitted to degree or provisional status;
4. have completed at least 24 semester hours at the University of which;

   a. a maximum of 6 semester hours may be in master's thesis research (799) or in master's project research (798);
   b. a maximum of 2 courses or 6 semester hours taken prior to academic year 1982-83 may be upper-level undergraduate courses approved for graduate credit;
   c. 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;
   d. no more than 6 semester hours may be transfer credit for coursework taken prior to admission with the amount of applicable credit earned in non-degree status or through

Extended Studies Enrollment reduced accordingly (exceptions are noted under individual degree programs); e. a maximum of 6 semester hours may be transfer credit taken after admission to the Graduate School;

5. have completed all courses submitted for the degree within a period of 6 years.

The maximum hours (6) of C or D (unsatisfactory) grades may be exceeded by a master's degree graduate student provided that

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

For the purpose of computing the cumulative GPA all work attempted at the University for graduate credit must be included.

Master's 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 the University. A completed master's degree program must include a minimum of 18 semester hours of coursework taken at the University as a degree-seeking student.

Time Limit

A student must complete all degree requirements for the desired master's degree within 6 years from the date of initial registration as an admitted graduate student. A graduate student who terminates enrollment and subsequently is readmitted to the Graduate School in the same master's program may not count the 6-year time limit as beginning on the date of readmission.

Foreign Language Requirement

Several master's degree programs require, as part of the degree requirements established by the program faculty, that a master's student demonstrate a proficiency in one or more foreign languages. Such a requirement is listed under the degree requirements for a specific master's degree in the academic program section of this catalog. Certification of the successful completion of the foreign language requirement should be sent by the academic adviser to the Graduate School office. Forms for certification of the language requirement are available in the Graduate School Admissions Office.

Thesis and Non-Thesis Options

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 nonthesis 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 department chairperson sends to the Graduate Dean a copy of the thesis proposal, including the names of the master's thesis committee members. The student may enroll in the thesis research course (799) at the beginning of the next semester. The master's thesis committee is named by the candidate's department chairperson, who also designates the major pro-
fessor as chair of the master's thesis committee. The committee is appointed after consultation with the candidate and the adviser, and consists of at least three persons, one of whom may be chosen initially, or at a later date, from outside the department.

The major professor 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 committee members informed of the scope, plan, and progress of both the research and the thesis.

Any student wishing to elect the thesis option should obtain from the Graduate School office a copy of "Guide for Preparing the Master's Thesis and the Doctoral Dissertation". The student is permitted to register in the thesis course (799) only after a thesis proposal has been submitted and approved as prescribed in the Guide.

**Thesis Submission and Fee**

The original and one copy of the thesis must be deposited with the Graduate Dean on or before the date specified in the Academic Calendar. 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 take an examination, pays a $15 special registration fee for that semester and is exempt from all other fees.

**Degree Application for a Master's Candidate**

Master's students who expect to complete all degree requirements in the semester 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 master's candidates 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.

**Requirements Applicable to All Doctoral Degrees**

**Degree Requirements**

A candidate for a doctoral degree at George Mason University must satisfy all Graduate School degree requirements and all requirements established by the doctoral program faculty. Specific program degree requirements are listed under the appropriate academic programs in this catalog.

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

1. have acquired beyond the baccalaureate degree a minimum of 72 semester hours of graduate credit for a Doctor of Philosophy degree or 90 semester hours for a professional doctorate;
2. present only graduate-level courses in which satisfactory grades have been received;
3. have completed at least 36 semester hours of graduate level work at George Mason University after having been admitted to degree or provisional status;
4. have completed at least two semesters, not including the Summer Session, in continuous registration;
5. have filed in the Graduate School office a program of study approved by the doctoral supervisory committee within two years after admission to degree or provisional status of which;
6. have passed a written doctoral candidacy examination as certified by the doctoral supervisory committee;
7. have passed an oral final doctoral examination as certified by the doctoral supervisory committee and Graduate School representative;
8. have submitted to the Graduate School office and have defended at the time of the final doctoral examination a doctoral dissertation for the Doctor of Philosophy degree or those professional doctoral degree programs requiring it that has been approved by the doctoral supervisory committee, Graduate School representative, and the Graduate Dean;
9. have completed all degree requirements within five years following the semester of advancement to candidacy.

Doctoral students are subject to those degree requirements in force at the time of their initial registration in degree or provisional status following admission to the Graduate School. Doctoral students 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 doctoral candidates have the option of graduating under the degree requirements in force at the time the doctoral degree is to be awarded.

**Residency**

All doctoral students are required to spend two consecutive semesters, not including the Summer Session, in continuous registration. The doctoral program of study must include a minimum of 36 semester hours of graduate work taken at George Mason University after admission to a degree-seeking status.

**Time Limit**

A doctoral student must complete all degree requirements within five years following the semester of advancement to candidacy. A doctoral student who voluntarily terminates enrollment and is subsequently readmitted to the Graduate School in the same doctoral program after advancement to candidacy is still subject to the five-year time limit commencing with advancement to candidacy.

**Doctoral Supervisory Committee**

At the time a doctoral student is to be considered for advancement to candidacy, normally by the end of the second year of full-time graduate study, the Dean of the Graduate School will appoint a doctoral supervisory committee upon recommendation by the department chair. The committee shall consist of a major professor and at least two other members of the Graduate Faculty. Additional members may be appointed who are not members of the Graduate Faculty or who are from outside the University. The major professor shall be the chair of the committee. It is the responsibility of the doctoral supervisory committee to approve the program of study, certify the successful completion of the candidacy examination (which may include an oral part in addition to the written part), approve the doctoral dissertation where required, and certify the successful completion of the final doctoral examination (which may include a written part in addition to the

**GRADUATE POLICIES AND PROCEDURES**

http://catalog.gmu.edu
oral part). The Graduate Dean will appoint to the doctoral supervisory committee a Graduate School representative from the Graduate Faculty who will conduct the final doctoral examination.

Doctoral Research Skill Requirements

Some doctoral degree programs require, as part of the degree requirements, demonstration of proficiency in a research skill area. These may take the form of a reading knowledge of the research literature in a foreign language, knowledge of a computer language, knowledge of statistical methods, or knowledge of a research tool specific to the discipline. Research skill requirements are included with the degree requirements for the specific doctoral degree. Where required, the certification of successful completion of research skill requirements must be completed for advancement to candidacy. Forms for certification purposes are available in the Graduate School office.

Program of Study

Normally, before the end of the second year of graduate study, but no later than consideration for advancement to candidacy, a doctoral student must submit a program of study for approval by the Dean of the Graduate School. The program of study must include major courses to be completed, any supporting courses, research skills required, subject areas to be covered by the candidacy examination, and proposed date for candidacy examination. The program of study must be signed by the major professor and all members of the doctoral supervisory committee. Program of Study forms are available in the Graduate School office.

Advancement to Candidacy

Advancement to candidacy implies that a doctoral student has demonstrated both a breadth and depth of knowledge in their field of study and are capable of exploring problems on the boundaries of knowledge. A doctoral student should normally be considered for advancement to candidacy by the end of the second year of full-time graduate study. The candidacy examination includes a written part and may include, depending upon the particular doctoral program, an oral part. Where an oral portion is required, some programs consider the written and oral portions as one in determining the passing or failing of the candidacy examination, while in other programs the two parts may be passed or failed independent of each other. Doctoral students should consult the degree requirements for each doctoral program as to the requirements for the oral, if required, the number of times a failed candidacy examination may be repeated, any time limits for repeating, and any time limits by which the candidacy examination must be attempted.

Before a doctoral student may be advanced to candidacy by the Dean of the Graduate School, a doctoral student should have completed all doctoral program examinations required by the program faculty, have been certified in all doctoral research skills required, passed the candidacy examination, and be recommended by the doctoral supervisory committee. Report on Candidacy Examination and Recommendation for Advancement to Candidacy forms are available in the Graduate School office.

Doctoral Dissertation and Non-Dissertation Options

A dissertation is required for the Doctor of Philosophy degree and some of the professional doctoral degrees. The dissertation is a written piece of original thinking that demonstrates the doctoral candidates mastery of the subject matter, methodologies, and conceptual foundations in his or her chosen field of study. This is achieved generally through consideration of a problem on the boundaries of knowledge in the discipline.

Although by no means less demanding, some of the professional doctoral degree programs do not require the preparation of a dissertation. These professional doctorates provide for other means by which the candidate may demonstrate his or her intellectual competency and personal ability.

Doctoral Dissertation

After the appointment of the doctoral supervisory committee by the Dean of the Graduate School, a doctoral student should begin discussions with his or her major professor to define a suitable problem for the dissertation. However, before a doctoral student may enroll for doctoral dissertation research (999), a dissertation proposal must be approved by the doctoral supervisory committee and sent to the Dean of the Graduate School for approval. The content and format of the doctoral dissertation proposal may be found in the Guide for Preparing the Master’s Thesis and the Doctoral Dissertation, which is available in the Graduate School office.

The major professor of the doctoral supervisory committee is primarily responsible for directing a doctoral candidate research and guiding the preparation of the written dissertation. Format and style for the dissertation are discussed in the Guide for Preparing the Master’s Thesis and the Doctoral Dissertation. The Guide also includes information on the number of copies required, binding, and submission of the dissertation for approval by the doctoral supervisory committee, Graduate School representative, and Graduate Dean. All copies of the dissertation must be submitted and fees paid before the doctoral degree will be awarded.

Final Doctoral Examination

As soon as all degree requirements have been satisfied, including the completion of the doctoral dissertation where required, a doctoral candidate may arrange with his or her doctoral supervisory committee to petition the Dean of the Graduate School to schedule the final doctoral examination. Forms for petitioning the Graduate Dean are available in the Graduate School office. From the recommended date for the final doctoral examination by the doctoral supervisory committee, the Dean of the Graduate School will schedule the final examination and will appoint a Graduate School representative from the Graduate Faculty to conduct the oral examination. The final doctoral examination shall include an oral defense of the dissertation, where a dissertation is required by the doctoral program. It should also demonstrate the candidates intellectual command and maturity of judgement of those branches of the field of study chosen by the candidate in conjunction with the doctoral supervisory committee. Some doctoral programs may require, in addition to the oral portion of the examination, a written part as listed under the degree requirements for each doctoral program. Depending on the particular program, a passing or failing mark may be assigned to the oral and written portion independently or taken as a single examination.

At the close of the final doctoral examination, the doctoral supervisory committee and Graduate School representative will make final judgements for approving the doctoral dissertation which may require some minor changes resulting from the oral defense. It is the responsibility of the doctoral candidate to make all required changes promptly, secure the signatures of the major professor, other members of the supervisory committee, Graduate School representative, and submit the original and required copies to the Graduate School office for the Graduate Dean’s approval.
Doctoral Degree Application

At the beginning of the semester in which a doctoral candidate expects to finish all degree requirements, including the final doctoral examination, he or she should submit to the Graduate School office a doctoral degree application and pay the $15.00 graduation fee. Copies of the doctoral degree application form can be obtained in the Graduate School office. The degree application should be submitted by the date designated in the Academic Calendar. If for any reason a doctoral candidate fails to complete all degree requirements in that semester for which the degree application was filed, then a new degree application must be submitted by the next appropriate deadline.

Commencement Exercises for Doctoral Degree Recipients

Commencement exercises provide an opportunity for doctoral candidates to be recognized publicly for their achievements. For those who have completed a doctoral dissertation, the title will be read along with the hooding ceremony for all doctoral candidates. However, if a doctoral candidate cannot participate in the ceremony, then he or she should 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 16 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.

Administration
F. Donald Eckelmann, Dean
William P. Snively, Associate Dean
Elaine C. Joyce, Assistant Dean
Randolph H. Lytton, Assistant Dean

Bachelor of Arts Degree Requirements

The general education portion of the Bachelor of Arts degree offers insights into a broad range of human thought and activity. 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:

Programs of Study

<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. Students must attain a minimum grade of C in order to have ENGL 100, 101, 102 fulfill degree requirements in these courses.</td>
<td></td>
</tr>
<tr>
<td>B. Oral</td>
<td>3</td>
</tr>
<tr>
<td>OMM 100, 110, 120, or 130</td>
<td></td>
</tr>
<tr>
<td>C. Foreign Language</td>
<td>12</td>
</tr>
<tr>
<td>The student must demonstrate proficiency in one foreign language through the intermediate level, either by examination or by completion of coursework.</td>
<td></td>
</tr>
<tr>
<td>II. Analytical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Logic (PHIL 173 or 273) or mathematics</td>
<td></td>
</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 English or foreign languages and literatures.</td>
<td></td>
</tr>
<tr>
<td>B. Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Art, dance, film, music, or theatre (lecture or studio)</td>
<td></td>
</tr>
<tr>
<td>C. Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>A logic course does not satisfy this requirement.</td>
<td></td>
</tr>
<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>A2-semester laboratory science sequence in astronomy, biology, chemistry, geology, or physics.</td>
<td></td>
</tr>
<tr>
<td>VI. Non-Western Culture</td>
<td>6</td>
</tr>
<tr>
<td>6 credits must be earned in courses devoted to non-Western culture. This requirement is waived for a student who has attended for more than 4 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, 201, 204, 206, 207, 208, 211, 313, 332</td>
<td></td>
</tr>
<tr>
<td>B. ART 114, 220, 319, 320</td>
<td></td>
</tr>
<tr>
<td>C. ENGL 393, 394, 395</td>
<td></td>
</tr>
<tr>
<td>D. GOVT 332, 333</td>
<td></td>
</tr>
<tr>
<td>F. KORE 450, 451</td>
<td></td>
</tr>
<tr>
<td>G. LAC 152, 153, 154</td>
<td></td>
</tr>
<tr>
<td>H. MUSI 103</td>
<td></td>
</tr>
<tr>
<td>I. RELI 211, 212, 213, 336</td>
<td></td>
</tr>
<tr>
<td>J. RUSS 353, 354</td>
<td></td>
</tr>
<tr>
<td>K. THR 251, 252, 327</td>
<td></td>
</tr>
<tr>
<td>L. VIET 301, 302</td>
<td></td>
</tr>
<tr>
<td>VII. Major</td>
<td>30-42</td>
</tr>
<tr>
<td>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 the University.</td>
<td></td>
</tr>
<tr>
<td>VIII. Total minimum semester hours</td>
<td>120</td>
</tr>
</tbody>
</table>

Bachelor of Science Degree Requirements

I. Fulfillment of requirements for the major as listed under the respective departments: biology, chemistry, economics, mathematical sciences, physics, psychology, public administration, and sociology.

II. At least 12 semester hours of coursework outside the area of specialization

A. 12 hours outside the fields of economics, geography, government, or history if the degree is in one of these fields; 6 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; 6 of these hours must be chosen from these fields: anthropology, economics, geography, government, history, linguistics, psychology, and sociology.

C. 12 hours outside the fields of anthropology, psychology, or social work if the degree is in one of these fields; 6 of these hours must be chosen from these fields: astronomy, biology, chemistry, computer science, geology, mathematics, and physics.

III. At least 12 semester hours of English and literature

A. English Composition
ENGL 101, 102. Nonnative speakers of English with limited proficiency in the language may substitute ENGL 100 for 101. Students must attain a minimum grade of C in order to have ENGL 100, 101, 102 fulfill requirements for these courses.

B. Literature
The requirement is met by taking 2 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

Any 2 courses in literature at the 200 level or above in English or in foreign languages and literatures

C. Natural Sciences/mathematics/computer science

Astronomy, biology, chemistry, computer science, geology, mathematics, physics.

D. Social Sciences 6

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

E. Additional Non-Music Courses 8

II. Basic Musicianship 58

III. Music Concentration 18

IV. Free Electives 22

V. Total minimum semester hours 130

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

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


American Studies Coursework

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

AMST 502 and 690

Requirements for the Major

American Studies

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

1. (12 hours in interdisciplinary seminars)
AMST 301, 302, 401 and 402. It is strongly recommended that students take AMST 301 and 302 in their junior year and AMST 401 and 402 in their senior year.

2. (A 6 hour survey of American history)
HIST 121-122. HIST 121-122 should be taken in the freshman or sophomore years; if not, this requirement must be fulfilled in the junior year.

3. (18 hours. Two 9 hour concentrations selected from 2 of the following sets of courses approved for AMST credit:)

A. Economics
ECON 150, 310, 320, 365

B. Art and Performing Arts
ARTH 170, 370, 470; MUSI 105, 107; THR 352, 353.

C. Geography
GEOG 215, 301, 304, 306.

D. Government

E. History
American Studies in a Double Major

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

<table>
<thead>
<tr>
<th>Sample Schedule for a BA in Area Studies</th>
<th>European Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>American Studies and History</strong></td>
<td><strong>Concentration:</strong> Fine Arts and History</td>
</tr>
<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>HIST 121</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 101</td>
<td>3</td>
</tr>
<tr>
<td>COMM 100</td>
<td>4</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td><strong>Fourth Semester</strong></td>
</tr>
<tr>
<td>ENGL 205</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 173</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>4</td>
</tr>
<tr>
<td>AMST 201</td>
<td>3</td>
</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
<td><strong>Sixth Semester</strong></td>
</tr>
<tr>
<td>ENGL 382</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 390</td>
<td>3</td>
</tr>
<tr>
<td>HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>HIST 328</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 385</td>
<td>3</td>
</tr>
<tr>
<td><strong>Seventh Semester</strong></td>
<td><strong>Eighth Semester</strong></td>
</tr>
<tr>
<td>AMST 401</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 386</td>
<td>3</td>
</tr>
<tr>
<td>HIST 272</td>
<td>3</td>
</tr>
<tr>
<td>HIST 435</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 105</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sample Schedule for a BA in Area Studies</strong></td>
<td><strong>Concentration:</strong> French and Government</td>
</tr>
<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>CHEM 103</td>
<td>4</td>
</tr>
<tr>
<td>GERM 101</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 101</td>
<td>3</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td><strong>Fourth Semester</strong></td>
</tr>
<tr>
<td>ENGL 203</td>
<td>3</td>
</tr>
<tr>
<td>GERM 201</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 181</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 200</td>
<td>3</td>
</tr>
<tr>
<td>THR 160</td>
<td>3</td>
</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
<td><strong>Sixth Semester</strong></td>
</tr>
<tr>
<td>EUST 300</td>
<td>3</td>
</tr>
<tr>
<td>Non Western Culture</td>
<td>3</td>
</tr>
<tr>
<td>COMM 120 or 130</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 342 (355)</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 220</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 181</td>
<td>1</td>
</tr>
<tr>
<td><strong>Seventh Semester</strong></td>
<td><strong>Eighth Semester</strong></td>
</tr>
<tr>
<td>EUST 400</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 360</td>
<td>3</td>
</tr>
<tr>
<td>HIST 306</td>
<td>3</td>
</tr>
<tr>
<td>HIST 309</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 381</td>
<td>1</td>
</tr>
</tbody>
</table>

COLLEGE OF ARTS AND SCIENCES 39

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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 chaired by Dr. Danusia Meson-Sosnowski of the Department of Foreign Languages and Literatures; and Russian Studies by a faculty chaired by Dr. Leo Hecht of the Department of Foreign Languages and Literatures.

European Studies

Faculty


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 BA degree and completion of 45 semester hours of coursework in European studies as follows:

1. 12 hours in interdisciplinary seminars:
   EUST 300, 350, 400, 450
2. 3 hours of European geography: GEGG 220
3. 30 hours in an area of concentration consisting of two related disciplines, selected from the following list. At least 9 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

Department of Economics

ECON 380, 390, 481

Department of English

ENGL 203, 204, 251, 252, 300 (by permission), 301 (by permission), 313, 320, 341, 342, 345, 346, 351, 352, 353, 354, 355, 356, 357, 361, 362, 365, 370, 371, 372, 373, 374, 375, 376, 377, 378, 392, 421, 431, 551

Department of Art

Department of Art ARTH 200, 201 (ART 221, 222), 210 (ART 227), 320 (ART 321), 325 (ART 322), 360 (ART 331), 362 (ART 332), 315 (ART 335), 332 (ART 350), 340 (ART 353), 341 (ART 354), 342 (ART 355), 344 (ART 356), 345 (ART 357), 420 (ART 497); DANC 101;


Private Music Instruction (applicable to the European Studies program upon presentation to the chairperson of the European Studies Committee of evidence that the repertoire studied was predominantly European; consult Course Dictionary under MUSI for areas of private instruction available; see also * below). THR 101, 351, 352, 457

* A maximum of 6 hours earned in musical ensemble and/or private music instruction may be applied to the European Studies program.

Department of Foreign Languages and Literatures

CLAS 250, 300

FREN 151, 152, 153, 251, 252, 255, 325 (offered in English), 329 (offered in English), 353, 354, 361, 376, 378, 405, 413, 414, 421, 422, 431, 432, 441, 442, 480, 481 (by permission)

FRNL 311 (offered in English)

GERM 151, 152, 153, 251, 252, 254, 301 (offered in English), 302 (offered in English) 305, 315, 325 (offered in English), 340, 350, 360, 370, 380, 440, 441, 450, 451

GREE 101, 102, 201, 202

LATN 101, 102, 201, 202, 321, 322

PORT 151, 152, 251

RUSS 151, 152, 251, 252, 254, 311, 353 (offered in English), 354 (offered in English)

SPAN 151, 152, 153, 251, 252, 303, 304, 325 (in English translation), 331, 333, 361, 431, 432, 433

Department of History


Department of Philosophy and Religion

PHIL 301, 302, 303, 313, 315, 322, 336, 337, 351, 352, 356, 375, 421, 422, 423, 424

REL 251, 252 *by permission

Department of Public Affairs

GEOG 220, 230

GOVT 132, 321, 334, 340, 430, 447

Department of Sociology

SOCI 311, 340 (by permission)

Latin American Studies

Faculty

Danusia Meson-Sosnowski, Chairperson, Rita Ailinger, Ted Bradl, Robert Clark, Martha Paley Francescato, James Fonseca, Lydia Hazara, Evelyn Jacobs, Donald Kelso, Yereth Knowles, Stephen Ruth, William Shear, John Soder, Frank MacD Spindler, John Veenstra.
Requirements for the BA with a Major in Area Studies

Latin American Studies

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

- 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;
- 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 1. 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 6 hours of language study: SPAN 252 and 366.

Latin American Studies Course

LAS 491 Contemporary Latin America (3)

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

Latin American-Oriented Courses

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

Department of Economics
ECON 360, 361

Department of Performing Arts
MUSI 106

Department of Foreign Languages and Literatures
PORT 251;

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

Department of Philosophy and Religion
PHIL 301, 302, 303, 334

Department of Public Affairs
GOVT 132, 331, 336, 340, 430 (3)

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

Sample Schedule for a BA in Area Studies

<table>
<thead>
<tr>
<th>Latin American Studies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>PORT or SPAN 151</td>
<td>PORT or SPAN 152</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Logic or math</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td><strong>Fourth Semester</strong></td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>PORT or SPAN 251</td>
<td>HIST 272*</td>
</tr>
<tr>
<td>MUSI 106*</td>
<td>Spanish elective*</td>
</tr>
<tr>
<td>Core discipline prereq.</td>
<td>GEG 201*</td>
</tr>
<tr>
<td>HIST 271*</td>
<td>Core discipline prereq.</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td><strong>Fifth Semester</strong></td>
<td><strong>Sixth Semester</strong></td>
</tr>
<tr>
<td>Core discipline (300)</td>
<td>Core discipline (300)</td>
</tr>
<tr>
<td>Core discipline (300)</td>
<td>Core discipline (300)</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>Anthro., psych., or soc.</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Electives (300+)</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
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<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Seventh Semester</strong></td>
<td><strong>Eighth Semester</strong></td>
</tr>
<tr>
<td>Core discipline (400)</td>
<td>LAS 491</td>
</tr>
<tr>
<td>Anth., psych., or soc.</td>
<td>Core discipline (400)</td>
</tr>
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<td>Electives (300+)</td>
<td>Electives (300+)</td>
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<tr>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

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

Russian Studies

Faculty
Leo Hecht, Chairman, Alice C. Andrews, James S. Levine, Ronald J. Jensen

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 students must fulfill all requirements of the Area (Russian) studies program as noted below. In addition, students must fulfill requirements of the second major. Obvious combinations with Area (Russian) studies may be geography, history, international studies, and economics. This program may be accomplished within a 4-year period and is recommended for most students who intend to seek employment in government, industry, or journalism.

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 who are interested in careers as translators or who are studying for self-enrichment. For this degree students must present a minimum of 120 semester hours of coursework for graduation, to include satisfaction of the general requirements for the BA degree, and the following:
   a. Russian language through the intermediate level through coursework or testing.
   b. RUSS 380, 381.
   c. 2 additional upper-division courses taught in the Russian language, e.g., RUSS 303, 311, 401, 402, 410, and either 498 or 499.
d. RUSS 353, 354.

f. GEOG 230;

g. 2 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 6 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.

Courses

Department of Foreign Languages and Literatures

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

Department of History

HIST 328, 329

Department of Public Affairs

GEOG 230

Cognate Courses

ANTH 114; ARTH 360, 362; BUAD 307; ECON 380; EDUC 435; ENGL 300, 377, 378, 391; EUST 300, 390, 400, 450; GEOG 103; GOVT 132; HIST 545; THR 351, 352

Sample Schedule for a BA in Area Studies

Russian Studies

(Single major with a Concentration in Language and Literature)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
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<td>RUSS 101</td>
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</tr>
<tr>
<td>COMM 100</td>
<td>PHIL 111</td>
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<tr>
<td>ARTH 120</td>
<td>PSYC 100</td>
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<tr>
<td></td>
<td>15</td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>RUSS 201</td>
<td>BIOL 104</td>
</tr>
<tr>
<td>3</td>
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<td>GEOG 230</td>
<td>MUSI 103</td>
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<td>GOVT 132</td>
<td>ECON 104</td>
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<td>RUSS 326</td>
<td>THR 160</td>
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<tr>
<td></td>
<td>15</td>
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<td></td>
<td>15</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>RUSS 252</td>
<td>RUSS 327</td>
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<td>3</td>
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<td>RUSS 353</td>
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</tr>
<tr>
<td>ENGL 309</td>
<td>RUSS 381</td>
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<td>3</td>
<td>3</td>
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<td>HIST 328</td>
<td>HIST 329</td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 380</td>
<td>RUSS 311</td>
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<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
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<tr>
<td>THR 270</td>
<td>RUSS 410</td>
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<td>3</td>
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<td>RUSS 303</td>
<td>RUSS 415</td>
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<tr>
<td>elective</td>
<td>RUSS 499</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 407</td>
<td>RUSS 300</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RUSS 498</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Art

Faculty

Associate Professors: Kravitz, Ward
Assistant Professors: Clapsaddle, ffolliott, Hammond, Mattusch, North
Lecturers: Kendall, Mahoney, McCarty

Department of Art Coursework

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

Requirements for the Degree

Undergraduate

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. Students may choose to concentrate in Art History or Art Studio.

Art History. In addition to the general degree requirements for a BA degree, students concentrating in art history must complete a minimum of 3 hours of design or drawing, 3 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 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 Concentration in Art History

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbols &amp; Stories in Western Art</td>
<td>Survey of Western Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Survey of Western Art</td>
<td>Greek Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Mathematics of logic</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Foreign Language</td>
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<td>3</td>
<td>3</td>
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<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Roman Art</td>
<td>19th-Century Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>Art history elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Foreign Language</td>
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<td>4</td>
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</tr>
<tr>
<td>Foreign language</td>
<td>HIST 102</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>Natural science</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Medieval Art</td>
<td>High Ren. Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Early Ren. Art</td>
<td>Baroque Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>Non-western culture</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Drawing or design</td>
<td>Social science</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>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>20th-Century Art</td>
<td>400-level art history</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>400-level art history</td>
<td>PHIL 356</td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>Literature</td>
<td>Electives</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>
Art Studio. In addition to general requirements for a BA degree, students concentrating in art studio must complete a minimum of 42 hours in art.

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

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

Studio electives can be chosen as follows:
- **Design Emphasis**
  - ARTS 210, 211; 310, 311; 312 or 313; 351, 352 or 353
- **Drawing Emphasis**
  - ARTS 220, 221;
  - ARTS 230 or 231;
  - ARTS 320, 321;
- **Painting Emphasis**
  - ARTS 220 or 221;
  - ARTS 230 or 231;
  - ARTS 330, 331; Intermediate Painting
  - ARTS 430 or 431; Printmaking Emphasis
  - ARTS 220 or 221;
  - ARTS 240, 241;
  - ARTS 340, 341;
  - ARTS 312 or 313; Sculpture Emphasis
  - ARTS 220 or 221;
  - ARTS 260 or 261;
  - ARTS 360, 361;
  - ARTS 460 or 461; General Studio Emphasis
  - ARTS 220 or 221;
  - ARTS 230 or 231;
  - ARTS 240 or 241;
  - ARTS 260 or 261;
  - ARTS 330 or 331;
  - ARTS 351;
  - ARTS 360 or 361;

**Courses in Support of Graduate Programs**
Although a graduate degree program in art is not available through the Art Department, there are courses in support of graduate programs: ARTS 601, 602, 605 and 606. Course descriptions appear in the Course Dictionary of this catalog.

**Biology**

**Faculty**

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

*Associate Professors:* Andykovich, Bradley, Hart, Joyce, Kaplan, Kelso, Rockwood (Acting Chairman), Sherald, J. Skog, Wilson

*Assistant Professors:* Adamkewicz, Brown, deFur, Egghart, Jones, Klemcke, Kowalski, Lawrey, O'Melia, Royt, Torzilli

*Adjunct Professors:* Cook, Drophan, Kleiman, Laybourne, Phipps, Redfield, L. Skog

*Lecturers:* Ascione, Bright, Chambers, Dunkle, Everly, Hupp, Killos, Puckett, Smith, Stewart, Yanosky

*Retired, October 1981. (Italics indicate graduate faculty.)*

**Department of Biology Coursework**

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

**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, 301, 307, and 311: in addition, candidates must complete CHEM 211-212 and one of the following combinations: MATH 113-114; 113-110; 110-113; or 110-111. Students expecting to enter graduate or professional school are strongly urged to complete MATH 113 and 114. Organic chemistry and 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 318 or 320 plus at least 8 hours from Group I and 9 hours from Group II. The 9 hours in Group II must include two math courses, and either BIOL 312 or a course in computer science.

**Group I.**
- GEOL 206
- PHYS 341-342
- ASTR 103
- PHIL 337
- GEOL 101
- GEOL 102
- CHEM 222
- CHEM 321
- CHEM 331, 332
- CHEM 335

**Group II.**
- MATH 110, 111
- MATH 113, 114
- CS 111
- CS 261
- CS 262
- BIOL 312
- BIOL 312
- BIOL 312
- BIOL 312
- BIOL 312
- BIOL 312
- BIOL 312

1BIOL 312 may also be used in partial fulfillment of the requirement for 44 hours in biology.
2Courses 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 biology including BIOL 113, 114, 301, 307 and 311. In addition, each student must present at least one course from category A and one course from category B below.

**Category A**
- BIOL 320, 331, 332, 333, 341, 342, 343, 344, 361

**Category B**
- BIOL 322, 324, 326, 452, 461, 464

---

**Sample Schedule for BS with Major in Biology**

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Written communication</td>
<td>Written communication</td>
</tr>
<tr>
<td></td>
<td>MATH 110 or 113</td>
<td>MATH 111 or 114</td>
</tr>
<tr>
<td></td>
<td>CHEM 211</td>
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<td>BIOL 113</td>
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<td>14-15</td>
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<tr>
<td>Third Semester</td>
<td>Literature</td>
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<td></td>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td></td>
<td>Biology elective</td>
<td>Oral communication</td>
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<td></td>
<td>Biology elective</td>
<td>Biol. elec. or BIOL 301</td>
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<td>3-4</td>
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<td></td>
<td>14</td>
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</tr>
<tr>
<td>Fifth Semester</td>
<td>BIOL 307 or 311</td>
<td>BIOL 307 or 311</td>
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<td>Foreign language</td>
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<td>Soc. sci. or non-West elect.</td>
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<td></td>
<td>Elective</td>
<td>Elective</td>
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<td></td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Soc. sci. or non-West elect.</td>
<td>Soc. sci. or non-West elect.</td>
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<tr>
<td></td>
<td>15-16</td>
<td>15-17</td>
</tr>
</tbody>
</table>

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**Courses Approved for Undergraduate Biology Major Credit**
- GEOL 202, 205
- CHEM 461, 462, 463, 464

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**Transfer Students Residence Requirement**

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

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**Premedical, Predental, and Preveterinary Students**

Students planning to enter medical, dental, or veterinary schools may choose to major in biology. The specific requirements for admission to these schools vary considerably and 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 applying 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.

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http://catalog.gmu.edu
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 Non-majors

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 3 years of full-time preprofessional study at the college level preceding a senior year of professional education in an affiliated School of Medical Technology. All affiliated schools are accredited by the Committee on Allied Health and Education Accreditation of the American Medical Association (CAHEA). Responsibility for applying to schools of medical technology and gaining admission 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 enroll in MTCH 200 as early as possible. This course provides information on the profession and on the educational demands placed on candidates.

Students should be aware that the senior year off campus necessitates special interpretation of the following University policies: Transfer students must present at least 16 hours of 300 or 400-level biology or chemistry taken at George Mason University. Students may present no more than 6 hours of D in the biology and chemistry courses required in the three years of preprofessional study. No unsatisfactory grades may be presented for courses in the senior year of professional study. Transfer students entering with more than 45 hours of transfer credit are often unable to complete the preprofessional phase of their program in the usual three years of full-time study.

Senior students are registered at the University through special procedures. For details consult the Program Director. In addition to the college requirements for bachelor of science degrees and MTCH 200, candidates for the 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.

Sample Schedule for a BS with a Major in Medical Technology

<table>
<thead>
<tr>
<th>Preprofessional Phase</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>4</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>BIOL 113</td>
<td>4</td>
<td>BIOL 114</td>
</tr>
<tr>
<td>MATH 110 or 113</td>
<td>4</td>
<td>MATH 252 and 254</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>MTCH 200</td>
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<table>
<thead>
<tr>
<th>Preprofessional Phase</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 313 and 315</td>
<td>5</td>
<td>CHEM 314 and 318 or 320</td>
</tr>
<tr>
<td>BIOL 301</td>
<td>4</td>
<td>BIOL 361</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>Literature</td>
</tr>
<tr>
<td>Nonsci elective*</td>
<td>3</td>
<td>Nonsci elective*</td>
</tr>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Preprofessional Phase</th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
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<td>CHEM 321</td>
<td>4</td>
<td>CHEM 452</td>
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<tr>
<td>Nonsci elective*</td>
<td>3-6</td>
<td>Nonsci elective*</td>
</tr>
<tr>
<td>Science elective**</td>
<td>6-8</td>
<td>Science elective**</td>
</tr>
<tr>
<td></td>
<td>13-19</td>
<td>3-9</td>
</tr>
</tbody>
</table>

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

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.

University Catalog 1982-1983
George Mason University
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.

Criteria for Admission
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;
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.

MS Degree Requirements
In addition to fulfilling the degree requirements of the Graduate School, candidates for the Master of Science in biology 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 meet 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 must pass an oral and a written examination to demonstrate competency. The examination may be repeated only once.
   b. Students who enroll in BIOL 799 are required to defend their research satisfactorily before their committee and present their findings at a department seminar.

Specializations
In each of the 4 specializations described below students may substitute electives after consultation with a student's graduate committee and with approval of the graduate coordinator in the Department. Students pursuing the General Biology Program need not select courses from any one specialization.

Specialization in Environmental Biology. Students electing this specialization must take BIOL 640 and 641 as well as the minimum of two semester hours of credit in seminar including at least one hour of BIOL 691 and one hour of BIOL 692. The balance of the program will then be chosen from one of the following areas:

Pollution Assessment and Management
BIOL Required: 643, 645, 665, 680
BIOL Electives: 646, 647, 648, 649
Natural Ecosystem Management
BIOL Required: 645, 647, 648, 649
BIOL Electives: 513, 644, 646, 665, 680
Environmental Planning
BIOL Required: none

BIOL 646 may be substituted for BIOL 645 in the first two areas. Up to six semester hours of credit in BIOL 793 and/or BIOL 799 may be submitted in any of the three areas. No more than two courses may be taken from courses allowed outside the department.

Supporting Courses in Other Departments
Graduate courses which are applicable to the Environmental Biology specialization are available in other departments (e.g. Economics, Business Administration, Law). Students are encouraged to take up to two of these courses are part of the Environmental Biology specialization. Prior approval of the student's graduate committee is required.

Specialization in Systematic, Evolutionary, and Population Biology. Students electing this specialization must have previously passed a course in basic evolutionary theory equivalent to BIOL 471. Students are required to take BIOL 680, 648, and 727, and two hours of seminar, at least one of which must be BIOL 691. Students in this specialization are also encouraged to complete 3 hours in BIOL 793 or 3 to 6 hours of BIOL 799. The balance of the 30 hours required are selected—with approval of the student's graduate committee—from the following:

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

Graduate Courses

Other Courses Available for Graduate Credit*
CHEM 331, 332, 413, 422, 431, 432, 461, 462

Only two may be presented.

Specialization in Interpretive Biology. This specialization is intended for individuals currently or recently employed in interpretive biology who wish to broaden their background and strengthen their knowledge of biology. While secondary science teachers may benefit most from this specialization, the program is flexible enough to be of value to science writers as well as to park naturalists.

Graduate Courses
1. At least 21 hours must be taken from graduate-level biology courses accepted by the student's committee, including at least 2 seminar hours, one of which must be BIOL 691.

2. As a characteristic of this specialization, students complete degree requirements by selecting, with the approval of their graduate committee, 3-9 hours from the following courses or from other nonbiology graduate courses approved for graduate credit. The 9-hour maximum may include no more than 2 biology courses.

Graduate Courses
BIOL 601, 602, 603 ASTR 505, CHEM 500, 501 CS 611, 612 EDSCI 573, 640, 650, 651, 652, 663, 673 EDUC 565 ENGL 503, 616 GEOG 520 GEOL 500, 501 HIST 500 PHED 610 PHYS 500, 501 (3)

Ph.D. in Environmental Biology-Public Policy

The objective of the Ph.D. program in Environmental Biology-Public Policy is to offer basic training in the traditional research-oriented disciplines of ecology and environmental biology, along with public policy, business administration, and economics. The graduate will possess research, technical, and administrative skills enabling him/her to deal effectively with basic and applied environmental research, policy issues, environmental legislation, and implementation of environmental law. In short, the degree is intended to prepare the ecologist and environmental biologist to deal with public issues relating to environmental concerns. Prospective students may be (1) those already employed in some aspect of environmental biology by government, industry, or consulting firms, thus providing for an opportunity to upgrade and broaden their skills, and (2) recent bachelor's or master's graduates who would also gain practical experiences and important contacts especially during the internship phase of their training.

Criteria for Admission

All applicants are expected to:
1. hold a baccalaureate degree in biology or the equivalent, with an overall grade point average of at least 2.75 (scale of 4.00) in the last two years of undergraduate work and a 3.0 average in all biology courses. Students who apply for admission to the program but lack a degree in biology will be required to complete a program of undergraduate course work as designated by the Doctoral Coordinator acting in consultation with the graduate committee in the Department of Biology. All applicants will be expected to have taken the following course or their equivalents: introductory biology, cell biology, genetics, ecology, animal physiology, plant physiology or morphology, evolution, general chemistry, organic chemistry, biochemistry, college mathematics (2 sem), statistics, and college physics.
2. provide a resume, official transcripts from each college or university attended, and three letters of recommendation.
3. submit scores on the Graduate Record Examination, including the Advanced Test in Biology. (Scores must be as described in the Criteria for Admission to the MS Program.)

The number of applicants admitted to the Ph.D. program each year will be limited. Applications for admission will be screened by the Doctoral Coordinator, a committee of environmental biologists, and the departmental graduate committee. Applicants may be interviewed.

For further information, contact the Doctoral Coordinator, Department of Biology.

Ph.D. Degree Requirements

The Ph.D. in Environmental Biology - Public Policy requires 90 semester hours of study beyond the bachelor's degree, 30 of which may be from master's level work or its equivalent. After admission to the program, the maximum hours taken at another institution is 12. At least 48 hours of work must be completed at the University. The following requirements must be satisfied:

1. A minimum of 18 hours of graduate course work in biology, computer science, and mathematics. These 18 hours will include at least one course in each of the following areas: Quantitative Ecology (BIOL 648, 747, 748), Aquatic or Terrestrial Ecology (BIOL 643, 644, 645, 646, 647), Applied Ecology (BIOL 649, 665, 765, CART 579), and Statistics or Mathematics (BIOL 680, CS 611, 612, MATH 620, STAT 654, 655, 657).
2. A minimum of 4 semester hours in BIOL 991.
3. A minimum of 18 semester hours, 2 courses each, from the areas of economics (ECON 501, 555, 556), business administration (BUAD 535, 641, 744), and public affairs (PUAD 622, 640, 641, 646), GEOG 674) in addition to three hours of coursework in law.
4. Internship. Up to 12 semester hours may be earned in BIOL 984.

Sequence of Study

An admitted graduate student will be evaluated by the departmental doctoral committee and a series of courses prescribed for the first 30 hours. This coursework is comparable to, but not necessarily identical with, coursework for the M.S. Specialization in Environmental Biology.

At the conclusion of approximately 30 hours of coursework the student will request the preliminary examination. This oral and written examination will function as both the comprehensive examination for the MS degree and the environmental biology preliminary examination. The three possible results of this examination are: 1) High Pass which formally admits the student to the doctoral program; 2) Low Pass which will not admit the student to the doctoral program, but will satisfy the comprehensive examination requirement for the MS degree; 3) Fail.

An individual entering the program with an MS in Biology or the equivalent, may request the preliminary examination whenever he/she is ready. A student may repeat the preliminary examination once.

A student admitted to the doctoral program will immediately establish his/her doctoral committee. The committee will consist of 5 individuals, including at least 3 environmental biology faculty. One of the participating disciplines is outside of the Biology Department. No more than two committee members may be from outside of the University. The committee will evaluate the student's program and recommend further coursework. When the student has completed most of the coursework, he/she must submit a dissertation proposal, and, in consultation with the Biological Department, negotiate the internship. Once the dissertation proposal is approved, the student must pass a written and oral qualifying examination administered by the committee. If this examination is successfully completed the student is advanced to doctoral candidacy status.

A doctoral candidate will complete the internship, participate in advanced seminars, and conduct research. At the conclusion of the internship the student should devote full-time effort to the completion of the dissertation. At the final examination, the student will present the results of his/her research in a public seminar and will be orally examined by his/her committee.

Residency, Candidacy, and Other Requirements

Because graduate courses in the Department of Biology are offered in the late afternoon or evening hours, course work for

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the PhD degree may be completed on a part-time basis. A student must advance to candidacy (complete the qualifying examination) within five years of initial registration or within four years after the MS is completed. Once a student advances to candidacy, however, he/she is expected to be in continuous residence on a full-time basis. The minimum period of full-time residency is one year. The dissertation and final examination must be completed within six years after advancing to candidacy.

Chemistry

Faculty
Professors: Walter (Chairman), Cozzens, Eckelmann, Mose, Mushrush  Associate Professors: Davies, Deanhardt, Roth, Stalick  Assistant Professors: Chen, Davis, Diecchio, Kimmel, Machuga, Nakadomari, Neece, Slayden, Talebian, Turner  Lecturers: Caulder, Greer, Kianpour, Neiheisel, O'Brien, Palmer, Rhodetamal, Russ, Trzaskoma, Zilczer

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, 321, 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
Other.............................................................. 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

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<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
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<td>MATH 114</td>
</tr>
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<td>CHEM 211</td>
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<td>CHEM 212</td>
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<tbody>
<tr>
<td>CHEM 313</td>
<td>3</td>
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<tr>
<td>CHEM 315</td>
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<td>CHEM 318</td>
</tr>
<tr>
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</tr>
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<th>Sixth Semester</th>
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<tr>
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<tr>
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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.

Sample Schedule for BS in Chemistry

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>MATH 113</td>
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<td>MATH 114</td>
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<tr>
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<td>PHYS 250</td>
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<tr>
<td>ENGL 101</td>
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<td>CHEM 212</td>
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<td>CS 111 or ENGL 110</td>
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<td>ENGL 102</td>
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<table>
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<tr>
<th>Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 213</td>
<td>3</td>
<td>MATH 304</td>
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<td>PHYS 350</td>
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<td>Total</td>
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<td>16</td>
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48  GEORGE MASON UNIVERSITY
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 503, 501, 513, 523, 563, 564, 565, 566, 567; and GEOL 500, 501. 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 6-8-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. However, total credit for biology and geography courses may not exceed 12 hours to be counted in the major.

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.

Students must receive better than a C average in GEOL 101 and 102 in order to enroll in 200-400 level geology courses.

<table>
<thead>
<tr>
<th>Minimum course requirements are as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology*</td>
</tr>
<tr>
<td>English and Literature</td>
</tr>
<tr>
<td>Chemistry 211-212</td>
</tr>
<tr>
<td>Other Sciences and Math</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Communication

Faculty

Professors: Taylor (Chairman)
Associate Professors: Decker, Manchester
Assistant Professors: Allen, Broome, Friedley, Rainey
Acting Assistant Professors: Nadler
Adjunct Associate Professor: Boileau
Lecturers: Joffe, Seltzer

(italics indicate graduate faculty.)

Department of Communication

Coursework

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

Requirements for the Degree

Undergraduate

Speech Communication

BA Degree with a Major in Speech Communication

The speech communication program prepares the major for graduate study and/or a career in four areas of communication:
1. Interpersonal Communication
2. Journalism
3. Mass Communication
4. Public Communication
In addition to the general requirements for a BA degree, speech communication majors must complete a minimum of 39 semester hours in communications and a cognate field. The required courses are: COMM 300, 301, 302, communication electives (12 hours must be at the 300 or 400 level), and cognate courses (9 hours).

Cognate courses are courses offered by other departments within the University that relate to the student's understanding of communication. Specific courses from such disciplines as English, economics, government and politics, history, psychology, sociology, and theatre are included. A complete list of all approved cognate courses for communication majors can be obtained in the office of the Department of Communication.

COMM 100 may not be counted toward the minimum 30 semester hours for the major; however, it may count as a general elective. Speech communication majors are strongly urged to take COMM 110, 120, or 130 to fulfill the College of Arts and Sciences' oral communication requirement.

### Sample Schedule for Speech Communication Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
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<tr>
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<td>Foreign language</td>
</tr>
<tr>
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<td>COMM core course</td>
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<td>Anth., or psyc., or soci.</td>
<td>Phil, rel.</td>
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<tr>
<td></td>
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<td>15</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>Art, Music, or Theatre</td>
</tr>
<tr>
<td>Anth., psyc., or soci.</td>
<td>Non-Western Culture</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>COMM core course</td>
<td>COMM core course</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Econ., geog., govt., or hist.</td>
<td>Econ., geog., govt., or hist.</td>
</tr>
<tr>
<td>Analytical Reasoning</td>
<td>Cognate</td>
</tr>
<tr>
<td>Cognate</td>
<td>Communication elective</td>
</tr>
<tr>
<td>Communication elective</td>
<td>General elective</td>
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<td></td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Cognate</td>
<td>Communication electives</td>
</tr>
<tr>
<td>Communication electives</td>
<td>General electives</td>
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<td>15</td>
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<td>16</td>
</tr>
</tbody>
</table>

### Economics

**Faculty**

**Professors:** Bennett, Bloch, Coelho (Chairman), Phillips, Snively, W. Williams

**Associate Professors:** Bhandari, Chung, Holden, M. Johnson*, Vaughan, West

**Assistant Professors:** DiLorenzo, High, Lareau, Lavoie, Orzechowski, Pupp, Pennington, Shear

**Acting Assistant Professors:** Carpenter, Fink, McReynolds, Shear, G. Williams

**Lecturers:** Back, Bailey, Bender, Bowen, Dolan, Duffy, Ellsworth, Entin, Fisher, Hanweck, Hoffman, Hooke, T. Johnson, Kilpatrick, Lamm, Malkerson, Mayberry, Moran, Park, Prato, Preston, Ramsett, Rossiter, Roth, Scandizzo, Thorpe, Tsao, Uri

*On leave of absence (italics indicate graduate faculty.)

### Department of Economics Coursework

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

### Requirements for the Degrees

#### Undergraduate

**BA Degree with a Major in Economics**

Students majoring in economics must satisfy general requirements set for the BA degree at the University. In addition 33 hours must be in economics, to include ECON 306, 311, and 345. In addition to 39 hours in economics, students must complete ACCT 201; MATH 109 and DESC 202; MATH 113, 114, and CS 261 or 111; and a 2-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.

### BS Degree with a Major in Economics

In addition to general requirements for a BS degree listed in the catalog, the BS with a major in economics requires 39 hours in economics, to include ECON 306, 311, and 345. In addition to 39 hours in economics, students must complete ACCT 201; MATH 109 and DESC 202; MATH 113, 114, and CS 261 or 111; and a 2-semester sequence in a laboratory science.

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

### Sample Schedule for BS with Major in Economics

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>ECON 103 or 104</td>
<td>ECON 104 or 103</td>
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<tr>
<td>English composition</td>
<td>English composition</td>
</tr>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>Science</td>
<td>Science</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>ECON 306</td>
<td>ECON 311</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>MATH 109</td>
<td>DESC 202</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Economics elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
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<td></td>
<td>16</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td></td>
</tr>
<tr>
<td>Economics elective</td>
<td>Economics electives</td>
</tr>
<tr>
<td>ECON 345</td>
<td>Electives</td>
</tr>
<tr>
<td>CS 261 or 111 (263)</td>
<td>3 Electives</td>
</tr>
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<td></td>
<td>7</td>
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<tr>
<td>Seventh Semester</td>
<td></td>
</tr>
<tr>
<td>Economics electives</td>
<td>Economics electives</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
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<td>16</td>
</tr>
</tbody>
</table>

### Graduate

**Master of Arts in Economics**

Designed to provide fundamentals of economic analysis and specialized knowledge of various fields offered and to serve:
1. Students with recent baccalaureate degrees who wish to become qualified for employment with public and private institutions that hire economists.
2. Individuals employed in business and government who desire to further their professional careers through graduate training in economics.
3. Students who intend to continue toward a PhD in economics.

**Departmental Entrance Requirements**

In addition to the entrance requirements of the Graduate School, the applicant is expected to hold a baccalaureate degree in economics. Students with an undergraduate major in a field other than economics may be admitted if their record demonstrates sufficient background in economics and allied fields. MATH 108 or its equivalent is required for admission to degree status. Undergraduate deficiencies must 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 GRE scores or hold a graduate degree in another field, or complete 6 to 12 hours of graduate coursework in non-degree status or Extended Studies enrollment with a GPA of at least 3.000.

**Departmental Degree Requirements**

Students must meet 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 6 semester hours of credit may be granted. All students are required to take ECON 511 (501) and 515 (513) or their equivalents. Those selecting the non-thesis option are required to take ECON 537 (544). In some cases, students are permitted up to 6 semester hours of graduate credit taken in closely related fields to apply to the Masters Degree. The required comprehensive examination in micro and macroeconomic analysis is offered twice a year.

**The Doctoral Program in Economics**

The Ph.D. program in economics is designed to provide a rigorous training to the discipline, and equip students to undertake substantive research programs. Recognizing that students have different interests and requirements, the program has two tracks. The traditional track prepares students for a career in economic research in government, business and universities. The applied track puts a heavier emphasis on public policy and is especially suited for upper level government and private sector workers who deal extensively with economic issues on the job. It also fits the requirements of those who envisage a career in government, business or academic in programs heavily oriented towards analysis and administration.

**Departmental Entrance Requirements**

Applications for admission to the program are due by April 1, (February 1, if financial aid is desired) for the fall semester, and October 1 (September 1, if financial aid is desired) for the spring semester.

Prerequisites for admission into the program in economics include an undergraduate degree from an accredited institution and training in economics at least through the intermediate level of micro and macroeconomics theory. Applicants are also required to have an adequate background in mathematics, through calculus and in statistics. Students without these prerequisites will be required to take ECON 306 and 311, MATH 113 and 114, 109 and DESC 202 or their equivalents. The mathematics and statistics may be completed in the initial stages of the graduate program.

Qualifications for admission may be demonstrated by presenting satisfactory scores on the GRE and meeting at least one of the following requirements:

1. A 2.75 or higher GPA in the last two years of a baccalaureate program, a 3.0 or higher GPA in undergraduate economics courses or a combined score of at least 1200 on the general portion of the GRE.
2. Evidence of satisfactory performance in another accredited economics graduate program within the past five years.
3. Satisfactory performance in the M.A. program in economics at the University.
4. Under special circumstances, exceptions may be granted by the economics department chairman and the admissions committee.

**Departmental Degree Requirements**

The Ph.D. degree in economics at the University is granted only when candidates have shown a thorough knowledge of economic theory and of their fields of concentration and have demonstrated the ability to conduct sound independent research. Doctoral students must meet all degree requirements of the Graduate School. In addition, they must complete a minimum of 48 credit hours of coursework and up to 24 hours of dissertation credit. Students will be required to take a set of core courses in theory, quantitative techniques, the development of economic thought and economic history.

Each doctoral student is required to take 6 credit hours in graduate microeconomic theory (ECON 511, 712) and 6 credit hours in macroeconomic theory (ECON 515, 716). Required to assure adequate training in quantitative methods are at least 3 credit hours in mathematical economics (ECON 530) and a minimum of 3 credit hours in econometrics. While the econometrics requirements can be satisfied by taking the survey course, ECON 535, all doctoral students are strongly encouraged to take the 2 course sequence in econometrics (ECON 537, 738). All doctoral students are also required to take 3 credit hours in the history of economic thought and 3 credit hours in economic history. In addition, students taking the public policy track are required to take at least one course in Public Policy and Political Economy.

Students will also be required to take a minimum of 6 credit hours of courses (or their equivalent) in each of the two fields for which the student will write comprehensive exams. Up to 6 hours may be taken in coursework in other disciplines approved by the department. Transfer credit from an accredited graduate program in economics will be evaluated on a case by case basis.

Preparing for and passing comprehensive exams are an integral part of the Ph.D. program. Doctoral students must pass a general theory exam and two field exams in specialized areas of economics. Comprehensive exams are given twice a year.

In addition to the minimum of 48 hours of coursework, students are required to write a dissertation on an approved research topic for which up to 24 credit hours will be granted. This dissertation must be completed within 5 years after passing the second part of the comprehensive exam (the field exams).

**English**

**Faculty**

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

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

**Assistant Professors:** Acharya, Adamson, Bausch, Grossberg, Hammond, Hodges, Holisky, Irving, Kaplan, Masse, Mohr, Nelson, Owens, Sypher, Walowit**, Yocom

**Senior Lecturers:** Jackson, Senior Lecturers

**Lecturers** Adkinson, Avila, Badaracco, Bartunek, Bausch, Bizzaro, Brent, Brown, Clements, Collier, Fawcett, Finch,
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 Literature Program. In addition to general requirements for a BA 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 3-semester hour course from the following: ENGL 391, 392 (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 fictive or nonfictive 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.

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.

Graduation with Distinction and Recognition and Honors

Candidates for graduation with Recognition in English must fulfill University requirements for graduation with Distinction and successfully complete the English Department’s Honors Program. The principal component of the program is a series of Special Studies seminars ordinarily to be taken in sequence during the junior and senior years. In addition to these seminars, or in place of one of them, honors candidates may elect to write, under the direction of a member of the English faculty, an honors thesis for which they would receive 3 units of independent study credit. Although the Special Studies seminars are open to all English majors, admission is by permission of the Department. (Inquire at the English Department for application procedures.)

Undergraduates in Graduate English Courses

The English department permits qualified undergraduates to enroll in its graduate courses numbered 500-599 either for undergraduate or for reserved graduate credit. The same quality of work is expected from undergraduates as from graduate students.

Related Courses

For Children’s Literature (EDUC 305) see the Course Dictionary of this catalog. This course does not count for credit in English.

For Classicism and Romanticism (EUST 350) and The Twentieth Century in Europe (EUST 450) see European Studies Courses in the Course Dictionary of this catalog. Three credits of EUST 350 or EUST 450 may be counted toward the English major.

Secondary Teacher Certification

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

Sample Schedule for Undergraduate English Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Econ., govt., geog.,</td>
<td>Econ., govt., geog.,</td>
</tr>
<tr>
<td>3</td>
<td>or hist.</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>or hist.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Third Semester</td>
</tr>
<tr>
<td></td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>ENGL 251 (or 203 or 205)</td>
<td>ENGL 252 (or 204)</td>
</tr>
<tr>
<td>Foreign language</td>
<td>or 206</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Logic or mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td>or e.g.</td>
<td>(300</td>
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<tr>
<td></td>
<td>+ level)</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Electives</td>
</tr>
<tr>
<td>or e.g.</td>
<td>3</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Electives</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Fifth Semester</td>
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<tr>
<td></td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Advanced English courses</td>
<td>Advanced English courses</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Psychology or sociology</td>
<td>Psychology or sociology</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective (300 + level)</td>
<td>Art, dance, film,</td>
</tr>
<tr>
<td>3</td>
<td>or theatre</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Seventh Semester</td>
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<tr>
<td></td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Advanced English courses</td>
<td>Advanced English courses</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>(300 + level)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(300 + level)</td>
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<td></td>
</tr>
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<td></td>
<td>16</td>
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<tr>
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<td>15</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
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 MA in English (30 semester hours) provides concentrations in literature, in professional writing and editing, in the writing of fiction and poetry, and in the teaching of writing and literature. The department also offers a MA in English: Linguistics (30 semester hours) and a MFA 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 Graduate School entrance requirements, applicants must submit 2 copies of 1000 word a writing sample and 2 letters of recommendation. The writing sample may be a paper written for an undergraduate class or any other material which gives evidence of writing skills. In addition to writing sample requirement, applicants for the Concentration in Professional Writing and Editing must submit 2 copies of a 10-15 page sample of their non-fiction work (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 must submit, in addition to the 1000-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 GRE 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 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 6 hours of graduate credit in courses in related disciplines may be substituted for 6 hours in English.

B. General Requirements for all Concentrations

1. ENGL 701 (normally in the first semester of study).
2. 9 hours in literature courses, including:
   a. 3 hours in English or American literature written before 1900.
   b. 3 hours in the major figures series (ENGL 765-780). 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 3 hours of the literature requirement.

3. Students who have not completed 12 hours of undergraduate credit in a foreign language (or its equivalent) must either do so or demonstrate equivalent proficiency by passing a translation test administered by the English department.

C. Concentration Requirement (one Concentration must be completed)

1. Concentration in Literature.
   a. 3 hours in critical theory at the 600-700 level.
   b. 9 hours in a core program organized by period, genre, theme, or some other principle approved by the student’s adviser and

Master of Fine Arts in Creative Writing

Departmental Entrance Requirements

In addition to fulfilling Graduate School entrance requirements, applicants must submit 2 letters of recommendation, 2 copies of a 1000-word non-fiction writing sample and 2 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 basic writing skills. The
additional portfolio should contain up to 20 pages of poetry or 50 pages of fiction.

Departmental Degree Requirements
A. Successfully complete 48 semester hours of graduate credit, including
   1. 3 hours in ENGL 701.
   2. 12 hours in literature.
   3. 12-18 hours of writing seminars in one genre.
   4. 3-9 hours in other genres.
   5. 12 hours in seminar or study project.
   6. 1-3 hours in internship (optional).
   7. 6 hours in thesis.
B. Pass an MFA exam based on writers chosen by the student.
C. Students who have not completed 12 hours of undergraduate credit in a foreign language (or its equivalent) must either do so or demonstrate equivalent proficiency by passing a translation test administered by the English department.

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 GRE.
   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. 15 hours of graduate or upper-division undergraduate work in English or American literature.
   2. 3 hours in graduate or upper-division undergraduate work in Linguistics or History of the Language.
   3. 3 hours of graduate work in Bibliography and Research, and 3 hours of graduate work 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.

Departmental Exit Requirements
1. A minimum of 6 hours of ENGL 800, studying material relevant to the student's individual goals.
2. 3 hours of independent research, directed by the student's DAEd adviser.
3. A substantial research paper (3 hours), to be written under the direction of the DAEd adviser and at some stage shared and discussed with other students in the DAEd program.

Certificate in the Teaching of English as a Second Language
Departmental Entrance Requirements
Applicants interested in a Certificate in the Teaching of English as a Second Language must be admitted to graduate study through the Graduate School or approved for graduate course enrollment through the Division of Continuing Education. Students who initially enroll in the certificate program through the Division of Continuing Education must apply for regular admission through the Graduate School no later than the second semester of study. At the time formal admission to graduate study is sought, applicants must submit 2 copies of a writing sample of approximately 1000 words and 2 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.

Students enrolled in another graduate degree program who wish to work for the certificate must apply to the English Department for admission into the certificate program.

Departmental Certificate Requirements
Certificate candidates must complete the following series of graduate English courses, achieving a grade of B or better in each.
1. ENGL 620, 522, 582, and 621
2. One of the following courses: ENGL 531, 581, 615, 623.
(Additional courses, including some from other departments, may be used to fulfill this requirement. Apply to the Department of English for a list of approved electives.)

Foreign Languages and Literatures
Faculty
Professors: Francesco (Chairman), Aguera, Elstun, Font, Willis
Associate Professors: Chu, Cordero, Goldin, Hazera, Hecht, Hobson, Meyer, Tedder
Assistant Professors: Butill, Evans, LePage, Levine, Meson-Sosnowski, Wekerle
Lecturers: Barilla, Berls, Brinkley, Kang, Layman, Neudling, Seidman, Werres
(Italics indicate graduate faculty.)

Department of Foreign Languages and Literatures Coursework
This department offers all coursework designated CLAS, FREN, FRIN, GERM, GREE, ITAL, JAPA, KORE, LATN, PORT, RUSS, SPAN, and VIET in the Course Dictionary of this catalog.

Changes in Sequence of Foreign Language Courses
The numbers and sequences of courses in French, German, Russian and Spanish (leading to the fulfillment of foreign language requirements, particularly for the B.A. degree) have been changed for Fall 1982. The new sequences are 4 courses of 3 semester-credit-hours each, or 2 courses of intensive study of 6 semester-credit-hours each.

The 4-credit courses numbered 151, 152, 251 have been changed to 4 courses of 3 credit hours each: 101, 102 (or 105 review) 201 and 202. In addition, there are “fast track” options: 109 and 209, each 6 credit hours. Students may switch from one track to another.

The 4-credit courses are being offered for the last time in academic year 1982-83 while the 3-credit courses are being introduced. Students who began the sequences of 4-credit courses should finish the sequences no later than the Spring of 1983. The 4-credit courses will not be offered beyond that date.

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) 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. The following courses are offered in English; the knowledge of a foreign language is not required:

- CLAS 250, 300
- FREN 325, 329
- FRLN 341, 450
- GERM 301, 302, 305, 325*
- JAPA 301, 302
- KORE 450, 451
- RUSS 300, 353, 354
- SPAN 321, 322, 325*
- VIET 301, 302
- VIET 302

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

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 stress the 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 Italian, Japanese, Korean, and Vietnamese.

Courses Which Fulfill General Requirements:

- a. Language courses through the intermediate level fulfill the foreign language requirement.
- b. All literature courses on the 200 level and above fulfill the general requirement in literature for baccalaureate degrees.
- c. The following courses fulfill the non-Western culture requirement: KORE 450, 451; RUSS 353, 354; VIET 302, 302.

Secondary Teacher Certification

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

Requirements for the Degrees

Undergraduate

French

BA Degree with a Major in French

In addition to meeting the general degree requirements for the BA degree as established by the College of Arts and Sciences, students must complete a minimum of 27 semester hours of work in French courses at the 300 level and above. Students are expected to complete a balanced program that includes courses in language, culture and civilization, and literature. The 27 hours required in the major must include the following:

1. one advanced language course (FREN 351, 353, 355, 356, or 461)
2. one course in French civilization (FREN 375 or 376)
3. one survey course in French literature (FREN 377 or 378)
4. four courses at the 400 level or above.

No more than one course (3 credit hours) conducted in English may be taken for major credit in French. Students are encouraged to take courses in other languages and literatures, and in related disciplines such as music, art, history, and philosophy. Those wishing to complete a double major in French and another subject are urged to work in consultation with advisers in both disciplines.

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 must complete 27 hours of work in German courses at the 300 level or above. No more than 6 hours of courses taught in English may be applied to the major; in addition to certain courses listed in the Course Dictionary under GERM, these may include EUST 350 and 450. Students are expected to complete a balanced program that includes courses in language, culture, and civilization, and literature. The literature component must include GERM 340. Students are 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.

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 BA 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 will also find it useful to complete some or all of these related courses: ENGL 313, 391, HIST 271, 272, 443.

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 Graduate School entrance requirements, 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
History

Faculty

Professors: Cassara*, Pugh, Spence
Associate Professors: Harsh (Chairman), Deshmukh, Gleissner, Henriques, Jensen, Lytton, Pacheco, Saeed, Soder, Spindler, Walker
Assistant Professors: Censer, Cohen, D’Amico, Hawkes, Holsinger, Rosenzweig, Siu
Lecturers: Angel, Butowsky, Censer, Jessup, Lykes, Simms, Stewart

*On study leave, Spring, 1982; (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 BA 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:

- 9 hours of language/linguistics courses, including history of the language
- 9 hours of methodology courses
- 12 additional hours in the field of concentration, 6 hours of which may be earned with a thesis

A minimum of 30 hours is required in this option.

Option 2: concentration in two languages
- 6 hours of language/linguistics courses in the major
- 6 hours of language/linguistics courses in the minor
- 9 hours of methodology courses
- 9 additional hours of coursework in the major
- 6 additional hours of coursework in the minor

A minimum of 36 hours is required in this option.

Option 3: major in Spanish language, minor in Bilingual Education
- 9 hours of Spanish language courses
- 9 hours of methodology courses
- 6 hours of multicultural/bilingual education courses
- 3 hours of sociolinguistics
- 9 additional hours in Spanish, 6 of which may be earned with a thesis on a bilingual topic

A minimum of 36 hours is required in this option.

Orientation B: Literature and Literary Criticism
Option 1: concentration in one language
- 6 hours of coursework in literary criticism and the history of the language
- 12 hours of literature courses, covering at least 3 major periods
- 12 additional hours, 6 of which may be earned in a related field approved in advance or with a thesis

A minimum of 30 hours is required in this option.

Option 2: concentration in two languages
- 6 hours of coursework in literary criticism (3) and the history of the language of major concentration (3)
- 12 hours of literature courses in the major
- 9 hours of literature courses in the minor
- 9 additional hours, 6 of which may be earned with a thesis

A minimum of 36 hours is required in this option.

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 in History

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>U. S. history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>European history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Latin American, African, Asian or Middle Eastern history at the 200, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>HIST 499</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>Electives in history at the 300 and/or 400 levels</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>36</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 either EUST 300 or EUST 400 with permission of the department, when the course curriculum includes a substantial amount of history.

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. This program is divided into three tracks and designed to serve:
- Individuals who, having earned a baccalaureate degree in history, wish to continue their education at the
master's level; students having a particular desire to do thesis work; and students intending to pursue doctoral studies in history. See below, Track I.

2. Persons wishing to develop expertise in applied history or persons professionally employed as historians in business or government who desire to further their professional careers by earning an advanced degree in history. See below, Track II.

3. Individuals who, having earned a baccalaureate degree in another discipline, wish to develop master's level skills in history, whether as a vocation or avocation, or for reasons of intellectual self-fulfillment. See below, Track III.

Departmental Entrance Requirements

Applicants for admission to the Master of Arts in history program must fulfill the entrance requirements of both the Graduate School and the Department of History, including the following:

1. Satisfactory scores in the GRE, including the area examination in history. This requirement, at the discretion of the department, may be waived in exceptional cases, e.g., when a baccalaureate degree is 10 years old or older or when the applicant possesses another master's degree.

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.

Department Degree Requirements

Track I. Candidates for the MA degree in history must complete a minimum of 30 semester hours of graduate level work with a GPA of not less than 3.000. Normally, students in this track will have a baccalaureate degree in history and should be prepared to undertake this course work immediately. Other students may be required to remedy deficiencies by undertaking course work to prepare for this program; determination of the need and extent of this supplemental work will be made in consultation with a departmental representative.

1. 0-21 semester hours, foundation courses (600-650) as needed primarily to remedy deficiencies.

2. 3 semester hours, HIST 700, to be taken within the first 9 hours of course work.

3. 12 semester hours in a major field of concentration, in either United States, Latin American, or Modern European history. These courses must include one research seminar and the Specialized Readings (HIST 790, 791, or 792) course appropriate to the student's major field.

4. 9 semester hours in a second field of history. Minor fields presently offered include United States, Latin American, and Modern European history.

5. 6 semester hours in HIST 799 (Thesis).

6. Reading proficiency in a modern European language, to be demonstrated before the completion of 15 semester hours of graduate study. This requirement may be met in one of the following ways:
   a. By successfully completing college courses through the intermediate level in a modern foreign language appropriate to the candidate's field of concentration.
   b. By passing a proficiency examination administered by the Department of Foreign Languages and Literatures.

7. Pass a written comprehensive examination, administered by the history faculty, covering the student's major field. See above, Track I, requirement 7.

Sample Program for the MA in History

Track II

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 700</td>
<td>3</td>
</tr>
</tbody>
</table>

Field of major concentration (U.S., Latin American, or Modern European history), including one research seminar and one specialized reading.

Track III. Candidates for the Master of Arts degree in history, oriented to professional and vocational needs, will normally possess a baccalaureate degree in history prior to entrance in this program. Others must remedy any deficiencies in their preparation. All candidates must successfully complete a minimum of 30 semester hours of approved graduate level course work, with a grade point average of not less than 3.000, as follows:

1. 0-21 semester hours, foundation courses (600-650) as needed to remedy deficiencies.

2. 3 semester hours, HIST 700, to be taken within the first 9 hours of course work.

3. 15 semester hours in a major field of concentration, in either United States, Latin American, or Modern European history. These courses must include one research seminar and the Specialized Readings (HIST 790, 791, or 792) course appropriate to the major field.

4. 6 semester hours, Internship.

5. 6 semester hours, Applied Areas courses, e.g., archives, museums, historical editing.

6. Demonstrate proficiency in the use of one relevant research tool, i.e., a modern foreign language, a computer language, or statistics.

7. Pass a written comprehensive examination, administered by the history faculty, covering the student's major field. See above, Track I, requirement 7.

Sample Program for the MA in History

Track II

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 700</td>
<td>3</td>
</tr>
</tbody>
</table>

Field of major concentration (United States, Latin American, or Modern European history), including one research seminar and one specialized reading.

Internship...

Applied Areas Courses...

Total...

30

Track III. Candidates for the MA degree in history, oriented towards avocational or intellectual self-fulfillment purposes, must first remedy any deficiencies in their preparation for such study after consultation with a departmental representative coordinator and then successfully complete a minimum of 30 semester hours of approved graduate course work, with a GPA of not less than 3.000, as follows:

1. 0-21 semester hours, foundation courses (600-650) as needed to remedy deficiencies. Foundation courses outside of the Student's major and not previously required to remedy deficiencies may serve as electives, with the approval of the department.

2. 3 semester hours in HIST 700, to be taken within the first 9 hours of course work.

3. 15 semester hours in a major field of concentration, in either United States, Latin American, or Modern European history. These courses must include one research seminar and the Specialized Readings (HIST 790, 791, or 792) course appropriate to the major field.

4. 12 hours of electives. Three hours of course work in a related program permitted with departmental approval.

5. No relevant research tool is required.

6. 6 semester hours, HIST 799, is optional. If a thesis is elected, then 3 hours in the major and 3 hours in electives will be assigned to it.

7. Pass a written comprehensive examination, administered by the history faculty. See above, Track I, requirement 7.
Sample Program for the MA in History

Track III

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>HIST 700 Field of major concentration (United States, Latin American, or Modern European history), including one research seminar and one specialized reading</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electives</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>HIST 799, Thesis, Optional. See No. 6 above</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Master of Arts in Teaching (History)

The program leading to the degree of MA degree 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 classroom. 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 should have majored in history. Applicants with undergraduate majors in other fields 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 GRE, 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 MA in Teaching must successfully complete the following:

1. 24 credits in history, including 3 credits in HIST 700 (500) (to be taken within the first 9 hours of coursework).
2. 12 credits in education, including EDCI 567 and 783.
3. A comprehensive written examination administered by the faculty.

Candidates intending to teach at the secondary level must also qualify for the Virginia Collegiate Professional Certificate (or equivalent) in history.

The MA in Teaching degree requires a minimum of 36 hours of graduate credit.

Mathematical Sciences

Faculty

Professors: Draper (Chairman), Smith (Mathematics Education)
Visiting Professor: Hersher
Associate Professors: R. Bolstein, Cabell, K. Fischer, Gabel, Gantz, Hamburger, (Computer Science) Kiley, Levy, Norris, (Computer Science) Rice, Saperstone, Seidman
Assistant Professors: Brandenburg, (Mathematics and Computer Science) Carrig, Damiano, Ephraim, Gerasch, (Mathematics and Computer Science) Greenland, Grotzinger, Jo, Kofner, Lim, Manare, Miller, Mohamed, Paik, Shapiro, Zolték
Instructor: Martens

Fall Semester 1982
**Spring Semester (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.

Requirements for the Degrees

Undergraduate

Because of the demand for programs within the department and the difficulty of the subject matter, permission to major in mathematics or computer science is granted only to a limited number of well-qualified candidates. Applicants are screened by an admissions committee of departmental faculty. To be considered for major in mathematics or computer science students should declare one of the two subjects as a major. This enables students to enroll in certain restricted lower level mathematics and computer science courses, namely MATH 115 and CS 111. The department then screens these students upon receipt of their files and informs them as to their status. Students denied admissions to the programs are not granted preferential access to the courses restricted for majors.

The admissions committee considers applications periodically throughout the year, and does so at least once during the Fall term and the Spring term. The admissions committee does not consider applications upon demand, but at its own discretion. This process applies to all students wishing to elect mathematics or computer science as their major.

The admissions committee finds the following information useful in evaluating applicants: scholastic aptitude test scores, scores on the Level I or Level II Mathematics Achievement tests given by the College Entrance Examination Board, high school grades and senior class rank, and evidence of a command of written and spoken English from students whose native language is not English. They also consider the academic record of students who have taken courses at the University or elsewhere prior to electing mathematics or computer science as their major.

Enrollment in the mathematics courses MATH 115, 116, 215, and computer science courses CS 111, 211, and 212 is reserved for majors in the department and open to non-majors only during late registration and on a space available basis. (Certain exceptions to this policy are made for majors in Information Sciences, Engineering, and Physics.)

BA Degree with a Major in Mathematics

In addition to general degree requirements for a BA 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, or 261.

BS Degree with a Major in Mathematics

In addition to general degree requirements for a BS degree, the following courses are required: MATH 115, 116, 200, 215, 303, 306, 315, 316, 321, 322, plus 12 additional hours numbered above 310 for a total of 46 semester hours in mathematics. CS 111 and 211 are also required.

The science requirements may be fulfilled by one of the following options:

(a) PHYS 250, 350, 351, 352, 353
(b) BIOL 113, 114 and CHEM 211-212
(c) BIOL 113, 114 and GEOL 101, 102

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(d) CHEM 211-212 and GEOL 101, 102
(e) 4 semesters of chemistry excluding CHEM 103-104, 106
(f) 4 semesters of biology including BIOL 113, 114 and 2 courses numbered above 300
(g) 4 semesters of geology excluding GEOL 103

The department recommends that a 2-year proficiency in either French, German, or Russian be demonstrated. MATH 113, 114, 213, 304 are not recommended for mathematics majors. MATH 106, 108, 109, 110, 111, 250, 256, 350, 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 MATH 261. Students in the natural sciences who plan to do graduate work are advised to add to their basic calculus sequence from MATH 313, 314, 351, 352, 382, 441, 442, 446, 447. Students pursuing certification for elementary school teaching are advised to take MATH 106, 110, 111, 113, 114, 201, 202; CS 261, 262. Students who have received credit for MATH 113 or 115 may not receive credit for MATH 108. Students who have received credit for MATH 250 or 256 may not receive credit for MATH 109.

### Sample Schedule for BA Mathematics Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
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<tr>
<td>FRLN 101</td>
<td>FRLN 102</td>
</tr>
<tr>
<td>MATH 115</td>
<td>MATH 116</td>
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<tr>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Literature</td>
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<tr>
<td>MATH 215</td>
<td>MATH 303</td>
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<td>Elective</td>
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<td>FRLN 201</td>
<td>FRLN 202</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>Fine arts</td>
<td>Philosophy or religion</td>
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<tr>
<td>MATH 321</td>
<td>MATH 322</td>
</tr>
<tr>
<td>MATH 315</td>
<td>MATH 316</td>
</tr>
<tr>
<td>Econ., geog., or hist.</td>
<td>Oral Communication</td>
</tr>
<tr>
<td>Soc., psyc., or anth.</td>
<td>Soc., psyc., or anth.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>Computer science</td>
<td>Computer science</td>
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<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>MATH 400 level</td>
<td>MATH 400 level</td>
</tr>
</tbody>
</table>

### BS Degree with a Major in Computer Science

In addition to the general degree requirements for a BS degree, the following courses are required: Computer Science: CS 111, 211, 212, 311, 365, 483 (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, 305, 351, 446, for a total of 23 hours in mathematics. Engineering: ENGR 301, 441.

Students are also required to complete an additional 12 hours of computer-science-related courses. These courses may be chosen from the following: INFS 311, 312, 411; ENGR 285, 442; PHIL 371; any math course numbered above 300 except MATH 350, 371, 372, 373; any computer science course numbered above 300.

CS 261, 262 do not count toward satisfying the requirements for a major in computer science.

### Sample Schedule for BS Computer Science Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 111</td>
<td>CS 211</td>
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<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>Electives (nonscience)</td>
<td>Electives</td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>CS 212</td>
<td>CS 311</td>
</tr>
<tr>
<td>MATH 213</td>
<td>MATH 303</td>
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<tr>
<td>Literature</td>
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<td>Related elective</td>
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<thead>
<tr>
<th>Sample Schedule for BS Mathematics Majors</th>
<th>Sample Schedule for BS Computer Science Majors</th>
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<tr>
<td>First Semester</td>
<td>Second Semester</td>
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<tr>
<td>----------------</td>
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<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>MATH 115</td>
<td>MATH 116</td>
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<td>ENGL 102</td>
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<td>FRLN 101</td>
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<td>Elective (nonscience)</td>
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<table>
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<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>Literature</td>
<td>Literature</td>
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<tr>
<td>Science elective</td>
<td>Science elective</td>
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<tr>
<td>ENGR 301</td>
<td>Related elective</td>
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<td>Second Semester</td>
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<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>MATH 115</td>
<td>MATH 116</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>FRLN 101</td>
<td>FRLN 102</td>
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<tr>
<td>Elective (nonscience)</td>
<td>Elective (nonscience)</td>
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<table>
<thead>
<tr>
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<th>Fourth Semester</th>
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<tbody>
<tr>
<td>Literature</td>
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<tr>
<td>Science elective</td>
<td>Science elective</td>
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<tr>
<td>ENGR 301</td>
<td>Related elective</td>
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</tbody>
</table>

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George Mason University
Graduate

The Department of Mathematical Sciences offers two advanced degrees. These are the Master of Science in Mathematics and the Master of Science in Computer Science. Within the former program a student may elect to specialize in either Operations Research or Statistics. In addition, this department and the Decision Science Faculty offer an interdisciplinary graduate program leading to the Master of Science in Operations Research and Management Science. This program is described separately, under Interdisciplinary Programs.

Master of Science in Mathematics

Designed to serve those who seek a Master of Science degree as well as those who wish to improve their professional skills. 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.

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.

Departmental Entrance Requirements (Mathematics)

In addition to fulfilling the Graduate School entrance requirements applicants must have:

1. 3 letters of recommendation.
2. An extensive undergraduate training in mathematics that includes courses similar to MATH 315, 316, 322. MATH 611 and 612 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 (Mathematics)

In addition to fulfilling the Graduate School degree requirements, the candidate 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 6 hours of these courses may be chosen from certain mathematically related courses in other departments, with approval from the Mathematics department.
2. Complete MATH 675 and 676 by the end of the second full year in the degree program.
3. Complete a research component of the degree: Thesis 799/Seminar 795, 796. This component must be at least 3 hours and may not exceed 9 hours. No more than 6 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 2 units, one Basic and one Advanced. The 2 units of the examination are chosen by the student in consultation with the Graduate Coordinator.

Specialization in Operations Research

This specialization allows students to concentrate their studies on mathematical models and methods that are used to analyze complex real world decision problems in both the private and public sectors. The requirements for this specialization in Operations Research are:

1. In addition to satisfying the general degree requirements of the department, students must complete a minimum of 4 courses prefixed by OR. Three of these must be at the 600 level or higher. Students must complete OR 541 and 542 unless they have received undergraduate credit for the equivalent courses. A course prefixed by STAT at the 600 level or above, or MATH 681 may be substituted for one of the Operations Research courses.
2. The Departmental Examination must consist of the basic unit in Operations Research and an advanced unit in any area.

Specialization in Statistics

This specialization allows students to concentrate their studies in the theory and practice of the methods and techniques of statistical analysis. The requirements for this specialization are:

1. In addition to satisfying the general degree requirements of the department, students must complete MATH 651 and 752.
2. Complete 3 of the following courses: STAT 653, 654, 655, 656, 657, and 659.
3. The Departmental Examination must consist of the basic unit in the area of Statistics and an advanced unit in any area.

Master of Science in Computer Science

The purpose of the program is to provide professional training to individuals who are or wish to become involved in the rapidly expanding field of computing technology. The experience gained in this program provides its graduates with the
necessary professional training to enable them to design, analyze, implement, operate or manage sophisticated computing systems and to interact professionally with systems engineers and information specialists. It includes the depth of knowledge needed to pursue more advanced work in computer science or allied areas. The major academic capability at the university is provided through the University Computing Center by a CDC Cyber 170/720. In addition, the University has available an HP 2000 for academic use. 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.

This department and the Department of Computer Science at Old Dominion University have agreed to cooperatively present a collection of courses which are considered core to the special programs of both departments. These courses hold identical numbers and similar course descriptions at both universities and are indicated as cooperative courses in the course dictionary.

Departmental Entrance Requirements (Computer Science)

In addition to fulfilling the entrance requirements of the Graduate School, applicants for the Masters Degree in Computer Science must:

1. Hold a baccalaureate degree including those courses or their equivalent in practical experience comprising the body of knowledge which is commonly held to be preparatory for continued study in computer science. These include courses in Data Structures and Algorithms (CS 211, 212), Assembly Language Programming (CS 311) and Computer Architecture (CS 365). In addition the student should have completed one year of mathematics beyond first-year calculus, including a substantial course in discrete mathematics (MATH 305). A student with deficiencies in preparation may be admitted provisionally pending completion of the foundation courses in mathematics or computer science deemed necessary to remove those deficiencies. Remediation is to be completed before the student is admitted to courses required for the Master's degree, and is in addition to the 33 credit-hour degree requirement.

2. Have an undergraduate cumulative grade point average over the last two years of 2.75, preferably with a major in a technical field, such as computer science, mathematics, physics, or engineering.

3. Submit three letters of recommendation. The GRE's (verbal and quantitative) are strongly recommended but not required.

Departmental Degree Requirements (Computer Science)

In addition to fulfilling the degree requirements of the Graduate School, the candidate for the Master of Science degree in Computer Science must:

1. Complete 33 hours of graduate course credit, including the following:
   a) 9 hours comprising the core* courses CS540, 571, and 583.
   b) 12 or more hours of computer science courses at the 600 level.
   c) 3 hours of project work and/or 3-6 hours of thesis for a total of no more than 6 hours. The thesis is recommended for students who anticipate entering a doctoral program.
   d) Additional graduate level courses in computer science or in closely related fields, chosen in consultation with an advisor.

2. Presentation of the student's project or thesis at an appropriate forum, approved by the departmental graduate committee.
   a) A comprehensive examination.

*These courses are offered cooperatively with the C.S. department at Old Dominion University.

Performing Arts

Faculty

Professors: di Bonaventura, (Acting Chairman), Swann
Associate Professors: Brawley, Burton, Hill, Kanyan, Murphey, G. Smith, J. Smith

Assistant Professors: Harrison, Houser, Jahneke, Powell


(italics indicate graduate faculty.)

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.

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

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

Flute

Guitar (Classic)

Harp
Jeanne 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
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.

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

Judith Harrison. BME, Florida State University; MA, University of North Carolina at Chapel Hill; EdD, University of North Carolina at Greensboro.

Yona Knorr, Diploma, Rubin Academy of Music (Israel); MM, University of Texas at Austin.

Malinee Peris. Associate, Licentiate, and Fellow, Trinity College, London; Associate, Royal College of Music, London; Licentiate, Royal Schools of Music and Royal Academy of Music, London; international concert tours.

Elvin Schmitt. Columbia University; Tobias Matthy Piano-forte School, London; Ecole Normale, Paris; Sorbonne, Paris; former soloist, US and European orchestras; former head of piano department, Drake and Syracuse Universities.

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

College of Arts and Sciences 61
Saxophone
Richard Kleinfeldt, BME, Millikin University; MM, Catholic University; saxophonist, US Army Band (Washington, DC). Richard Parrell, BA, BM, George Mason University; MME, North Texas State University; saxophonist, US Army Band (Washington, D.C.).

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

Trombone
Merrill Erler (see listing under Euphonium).

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


Tuba
Merrill Erler (see listing under Euphonium).

Viola

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

Voice
Inga-Britta Elgcrona. AB, Barnard College; soloist, Hermon Presbyterian Church.

Rilla Mervine. AA, North Dakota State University; Certificate, Peabody Conservatory; soloist, 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, 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, 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 in Washington, DC.

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

Composition
Stephen Burton. MM, Peabody Conservatory of Music; Sam di Bonaventura. BS, Juilliard School; BM, MM, Yale University; MA, Harvard University; DMA, Peabody Conservatory.

Glenn Smith. BA, MA, California State University, Hayward; D Mus, Indiana University.

Conducting
James G. Smith (see listing under Voice).

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

Secondary Teacher Certification
Students seeking certification to teach music on the elementary and secondary levels must earn the Bachelor of Music degree. For students who have earned a baccalaureate degree and who are seeking state certification to teach music, this recommendation is normally made contingent upon completion of the sequence of courses listed under "Bachelor of Music—Concentration in Music Education." It should be noted that the courses listed under "General Education" and "Additional Courses" in the Music Education Concentration are used to fulfill state certification requirements and the University's requirements.

Requirements for the Degrees

Undergraduate

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 Performing Arts before the scheduled audition date. Auditions are held in November, January, March, April, May, June, July, and August (normally on the first Friday of each month except for January and August when dates are scheduled during the University registration period). Competency placement tests are required of all transfer students who desire to present transfer credit in any of the following areas: Written Harmony, Keyboard Harmony, Sight Singing, Ear Training, and Class Piano (for dates, see the Academic Calendar in the front of this catalog).

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

Harmony I, II, III, IV ............................................. 11
Keyboard Harmony ........................................... 1
Sight Singing and Ear Training I, II ............................... 4
Historical, Theoretical, and Analytical Study of Music* .................. 9
Class Piano I, II ............................................ 2
Major Instrument or Voice (Private Music Instruction) .................. 8
Ensemble* .................................................. 7
Total ................................................................ 42

*Voice majors must earn 7 credits in University Chorale and/or University Chorus. Orchestral string 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).

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 Education* ............................................. 32
ENGL 101 and 102 .................................................. 6
Literature .......................................................... 6
Any two courses in literature at the 200 level or above in English or in foreign languages and literatures—Natural Sciences/Mathematics/Computer Science 6
astronomy, biology, chemistry, computer science, geology, mathematics, physics 6
Social Sciences anthropology, economics, geography, government, history, linguistics, psychology, sociology 6
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

Department of Performing Arts Coursework

This department offers all coursework designated DANC, MUSI, and THR in the Course Dictionary of the catalog.

Secondary Teacher Certification
Students seeking certification to teach music on the elementary and secondary levels must earn the Bachelor of Music degree. For students who have earned a baccalaureate degree and who are seeking state certification to teach music, this recommendation is normally made contingent upon completion of the sequence of courses listed under "Bachelor of Music—Concentration in Music Education." It should be noted that the courses listed under "General Education" and "Additional Courses" in the Music Education Concentration are used to fulfill state certification requirements and the University's requirements.

Requirements for the Degrees

Undergraduate

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 Performing Arts before the scheduled audition date. Auditions are held in November, January, March, April, May, June, July, and August (normally on the first Friday of each month except for January and August when dates are scheduled during the University registration period). Competency placement tests are required of all transfer students who desire to present transfer credit in any of the following areas: Written Harmony, Keyboard Harmony, Sight Singing, Ear Training, and Class Piano (for dates, see the Academic Calendar in the front of this catalog).

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Required

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Keyboard Harmony ........................................... 1
Sight Singing and Ear Training I, II ............................... 4
Historical, Theoretical, and Analytical Study of Music* .................. 9
Class Piano I, II ............................................ 2
Major Instrument or Voice (Private Music Instruction) .................. 8
Ensemble* .................................................. 7
Total ................................................................ 42

*Voice majors must earn 7 credits in University Chorale and/or University Chorus. Orchestral string 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).

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 Education* ............................................. 32
ENGL 101 and 102 .................................................. 6
Literature .......................................................... 6
Any two courses in literature at the 200 level or above in English or in foreign languages and literatures—Natural Sciences/Mathematics/Computer Science 6
astronomy, biology, chemistry, computer science, geology, mathematics, physics 6
Social Sciences anthropology, economics, geography, government, history, linguistics, psychology, sociology 6
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

GEORGE MASON UNIVERSITY

http://catalog.gmu.edu
### 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).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Music Instruction-Composition</td>
<td>8</td>
</tr>
<tr>
<td>Composition Recital</td>
<td>1</td>
</tr>
<tr>
<td>Techniques of 20th-Century Style Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Theory Elective</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Improvisation</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Instrument (Private Music Instruction)</td>
<td>8</td>
</tr>
<tr>
<td>Senior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Keyboard Literature</td>
<td>3</td>
</tr>
<tr>
<td>Keyboard Pedagogy</td>
<td>3</td>
</tr>
<tr>
<td>Improvisation</td>
<td>1</td>
</tr>
<tr>
<td>Music Elective</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

#### Concentration in Keyboard Performance
Nine semester hours must be earned in French or German.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Voice (Private Music Instruction)</td>
<td>8</td>
</tr>
<tr>
<td>Junior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Senior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

#### Concentration in Vocal Performance
Nine semester hours must be earned in French or German.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Voice (Private Music Instruction)</td>
<td>8</td>
</tr>
<tr>
<td>Junior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Senior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Choral Literature or Operatic Literature</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

#### Concentration in Winds/Strings/Percussion Performance

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Instrument (Private Music Instruction)</td>
<td>8</td>
</tr>
<tr>
<td>Junior Recital</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

#### Concentration in Music History and Literature
15 semester hours must be earned in HIST 101, 102, 201, 202, and 254.

For admittance into the Music History and Literature Concentration, a student must pass an oral music literature identification test, as well as demonstrate basic writing skills through an essay on an assigned topic.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Literature</td>
<td>12</td>
</tr>
<tr>
<td>Theory Elective</td>
<td>3</td>
</tr>
<tr>
<td>Independent Study</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

#### 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. For admittance into the Music Education Concentration, a student must satisfy the following requirements:

1. Maintain an overall GPA of 2.8;
2. Earn no grade lower than "C" in music courses needed for graduation;
3. Maintain a satisfactory level of musical performance and interpersonal relationships as determined by a yearly screening procedure conducted by the music education faculty;
4. Maintain a satisfactory level of oral communication in coursework and/or as determined by a formal evaluation by the end of the sophomore year. Transfer students must meet the requirement before applying for admittance to the teacher education program. Students who need strengthening may be required to take COMM 120 or 210;
5. Obtain a satisfactory recommendation from the full-time faculty for the Teacher Education Screening Committee;
6. Meet all requirements set by the Teacher Education Screening Committee.

The requirements by area are:

<table>
<thead>
<tr>
<th>General Education</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 and 102</td>
<td>6</td>
</tr>
<tr>
<td>Literature</td>
<td>6</td>
</tr>
</tbody>
</table>

Any two courses in literature at the 200 level or above in English or in foreign languages and literatures.

| HIST 121 or 122             | 3       |
| Social and/or behavioral science | 9   |
| Laboratory science          | 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      |
| Ensemble                   | 7       |
| Laboratory Ensemble         | 1       |
| Music Education Concentration | 18     |
| Laboratory Ensemble         | 1       |
| Class Instruments/Voice     | 8       |
| Advanced Conducting         | 2       |
| Improvisation               | 1       |
| Music Methods               | 6       |

**COLLEGE OF ARTS AND SCIENCES 63**

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### Additional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics or science</td>
<td>3</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 110</td>
<td>3</td>
</tr>
<tr>
<td>Modern Dance</td>
<td>2</td>
</tr>
<tr>
<td>Free elective</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 22

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### Additional Requirements

- **Student teaching** 9

**Total** ........................................................................... 139

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1. The Music Education degree program is certified by the Virginia State Department of Education and the National Council for the Accreditation of Teacher Education. General Education courses and Additional Courses are derived from state certification and NCATE requirements as noted under the Department of Education. The National Teachers Examination and the related music examination must be taken before state certification can be granted.
2. Courses from the College of Arts and Sciences only.
3. Voice majors must earn 7 credits in University Chorale and/or University Chorus. Orchestral string majors must earn 7 credits in Chamber Orchestra. Wind and percussion majors must earn 7 credits in Chamber Orchestra and/or Symphonic Winds. Piano, organ, and guitar majors must earn at least 4 credits in large ensembles (University Chorale, University Chorus, Chamber Orchestra, Symphonic Winds).
4. Instrumental 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 7 required ensemble credits must be earned in Symphonic Winds and/or Chamber Orchestra for those students whose major instrument is not a band or orchestral instrument. Students whose major performance medium is something other than a band or orchestral instrument must earn a minimum of six additional credits of Private Music Instruction (or the equivalent) on such an instrument, the actual number to be determined by an audition committee.
5. Vocal Emphasis—The following courses are required: Class Voice I, Class Guitar, 2 credits of Private Music Instruction (Piano), and 4 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. Two credits of Private Music Instruction on a secondary instrument can be substituted for 2 of the class instrument classes. Students whose major performance medium is not voice must earn a minimum of 6 additional credits of Private Music Instruction in voice (or the equivalent), the actual number to be determined by an audition committee. Five of the 7 required ensemble credits must be earned in University Chorale, University Chorus and/or Gloriae Singers.
6. MUSI 461 and 462, 463, or 464, or MUSI 461 and 462 and 463 or 464.
7. May not be used to satisfy the 130 credit hours required for the Bachelor of Music degree.

---

### Sample Schedule for Bachelor of Music

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 101</td>
<td>3</td>
</tr>
<tr>
<td>Harmony II</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>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 14

---

### Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 201</td>
<td>3</td>
</tr>
<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>Harmony 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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</table>

**Total** ........................................................................... 16

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### Fifth Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Social science</td>
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</tr>
<tr>
<td>Mathematics or logic</td>
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<tr>
<td>Philosophy or religion</td>
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<tr>
<td>Historical, Theoretical, and Analytical Study of Music I</td>
<td>3</td>
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<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
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</tr>
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</table>

**Total** ........................................................................... 14

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### Seventh Semester

<table>
<thead>
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<tr>
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**Total** ........................................................................... 17

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### Ninth Semester

<table>
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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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</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>
</tr>
<tr>
<td>Ensemble</td>
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**Total** ........................................................................... 17

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### Sample Schedule for Bachelor of Music

#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 102</td>
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<tr>
<td>Foreign language or non-music elective</td>
<td>3</td>
</tr>
<tr>
<td>Harmony I</td>
<td>3</td>
</tr>
<tr>
<td>Sight Singing and Ear Training II</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano II</td>
<td>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 15

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### Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>3</td>
</tr>
<tr>
<td>Harmony IV</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard Harmony</td>
<td>1</td>
</tr>
<tr>
<td>Survey of World Music</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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</table>

**Total** ........................................................................... 17

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### Sixth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
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</tr>
<tr>
<td>Ensemble</td>
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**Total** ........................................................................... 17

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### Sample Schedule for Bachelor of Music

#### Sample Schedule for BA with Major in Music

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 152</td>
<td>4</td>
</tr>
<tr>
<td>Sight Singing and Ear Training II</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano II</td>
<td>1</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 14

---

### Sample Schedule for Bachelor of Music

#### Sample Schedule for Bachelor of Music

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 201</td>
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<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>Harmony III</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>
</tbody>
</table>

**Total** ........................................................................... 16

---

### Sample Schedule for Bachelor of Music

#### Sample Schedule for Bachelor of Music

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 152</td>
<td>4</td>
</tr>
<tr>
<td>Sight Singing and Ear Training II</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano II</td>
<td>1</td>
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<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
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</table>

**Total** ........................................................................... 14

---

### Sample Schedule for Bachelor of Music

#### Sample Schedule for Bachelor of Music

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<tr>
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</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 16

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### Sample Schedule for Bachelor of Music

#### Sample Schedule for Bachelor of Music

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or Foreign Languages and Literatures)</td>
<td>3</td>
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<tr>
<td>FRLN 201</td>
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<td>4</td>
</tr>
<tr>
<td>Harmony II</td>
<td>2</td>
</tr>
<tr>
<td>Major instrument or voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** ........................................................................... 15
Graduate

Master of Arts with a Major in Music

Concentration in Music Education

Concentration in Music Performance

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, the applicant is expected to hold a baccalaureate degree in music and, in the Music Education Concentration, be certified to teach music in the public schools. Before admission to degree status, students must submit acceptable scores on the Graduate Record Examination and the GRE Advanced Test in Music. Students in the Performance Concentration must also pass an audition.

Departmental Degree Requirements

A student must successfully complete 30 hours of credit in graduate music courses. With the approval of the department, three hours of non-music graduate credit may be taken.

General Requirements (11 credits)

1. Introduction to Research in Music Education (3) or Bibliography and Research Techniques in Music (3)
2. Analytical Techniques (3), History and Literature of Music (3), and Ensemble (2)

Additional Requirements for Concentration in Music Education (19 credits)

1. Psychology of Music Teaching and Learning (3), Philosophy and Aesthetics of Music Education (3), and Thesis or Project (6)
3. Pass a comprehensive examination in music education before beginning the thesis or project
4. Complete the equivalent of one year of full-time public/private school-music teaching before receiving the degree

Additional Requirements for Concentration in Music Performance (19 credits)

- Graduate Private Music Instruction—Instrumental/Vocal (9), History and Literature of Music (3), and Graduate Recital (1)
- Suggested electives (6 credits): Lecture-Recital, Graduate Private Music Instruction, Advanced Topics in Conducting, Ensemble, Non-Music Elective

Bachelor of Fine Arts Degree

Requirements

I. General Education .......................... 2

A. English 101, 102 (3,3) Non-native speakers of English with limited proficiency in the language may substitute ENGL 100 for ENGL 101. A student must attain a minimum grade of C in order to have ENGL 101, 102 fulfill degree requirements. This rule also applies to ENGL 100.

B. Literature (6) Any course in literature at the 200 level or above in English or 200 level or above in foreign languages and literatures.

C. Natural Science/Mathematics/Computer Science (6-8) Six to eight credits chosen from the areas of astronomy, biology, chemistry, computer science, geology, mathematics, physics or logic (PHIL 173, 273).

D. Social Sciences (6) Six credits chosen from the areas of anthropology, economics, geography, government, history, linguistics, psychology, or sociology.

E. Additional Non-Major Courses (6-8) See Major Department for recommended list.

II. Major Program ............................... 86-88

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

III. Free Electives .............................. 10-12

IV. Total Minimum Semester Hours ......... 130

Theatre

The two degree programs in theatre prepare students for graduate study in acting, directing, scene design, costume design, lighting design, technical theatre, history/theory/criticism and dance, as well as for professional activities and research.

BA Degree with a Major in Theatre

In addition to the general requirements for the Bachelor of Arts degree, theatre majors must complete a minimum of 42
hours in the major: 23 hours of required core courses and 19 hours in an elected area of concentration. Areas of concentration are: 1) Acting/Directing, 2) Technical Theatre, 3) History/Theory/Criticism, 4) Dance. All majors are expected to participate in theatre or dance productions.

Required courses for the B.A. degree with a major in theatre are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the Theatre Experience</td>
<td>3</td>
</tr>
<tr>
<td>Beginning Modern Dance</td>
<td>2</td>
</tr>
<tr>
<td>Dance Improvisation</td>
<td>3</td>
</tr>
<tr>
<td>Acting I and II</td>
<td>6</td>
</tr>
<tr>
<td>Introduction to Theatre Technology</td>
<td>3</td>
</tr>
<tr>
<td>Theatre History</td>
<td>6</td>
</tr>
<tr>
<td>Area of concentration requirements</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

**Area of Concentration Requirements:**

1. Acting/Directing
   - Acting III.                                                        | 3     |
   - Directing I and II                                                 | 6     |
   - Practicum**                                                        | 4     |
   - Theatre electives                                                  | 6     |
   - Total                                                              | 19    |

2. Technical Theatre
   - Scene Design                                                        | 3     |
   - Stage Lighting Design                                               | 3     |
   - Costume                                                            | 3     |
   - Practicum**                                                        | 4     |
   - Color                                                              | 6     |
   - Total                                                              | 19    |

3. History/Theory/Criticism
   - Theatre of India & Southeast Asia or Theatre of East Asia .......... | 3     |
   - Black Theatre                                                       | 3     |
   - Theories of Theatre                                                 | 3     |
   - Theatre Criticism                                                   | 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    |

BFA Degree with a Major in Theatre

In addition to the general education requirements for the Bachelor of Fine Arts degree, Theatre majors must complete a minimum of 88 hours in the major: 25 hours of required core courses and 63 hours in an area of emphasis. Areas of emphasis are: 1) Acting, 2) Design/Theatre Technology.

Entry into the BFA degree program with a major in Theatre is by audition or portfolio presentation only. See the Theatre Division Coordinator for details and a schedule of audition and presentation dates. Theatre majors are expected to participate in GMU Theatre productions and will be required to demonstrate before a faculty jury proficiency in their area of emphasis prior to the confirmation of the BFA degree.

Required courses for the BFA degree with a major in theatre are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the Theatre Experience</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Acting I</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Theatre Technology</td>
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<td>3</td>
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<tr>
<td>Introduction to Costume Technology</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Survey of Theatre History I &amp; II</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Directing I</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Practicum*</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Area of Emphasis requirements</td>
<td></td>
<td>88</td>
</tr>
</tbody>
</table>

**Area of Emphasis Requirements**

1. Acting
   - Voice for the Theatre I & II                                       |          | 6     |
   - Movement for the Theatre I & II                                     |          | 6     |
   - Acting Styles I & II                                                |          | 6     |
   - Acting Problems I & II                                              |          | 6     |
   - Theatre Electives                                                   |          | 13    |
   - Total                                                              |          | 63    |

2. Design/Theatre Technology
   - ARTS 103, 104, Introductory Drawing                                 |          | 6     |
   - Approved Art Courses***                                             |          | 6     |
   - Scene Design                                                        |          | 3     |
   - Stage Lighting Design                                               |          | 3     |
   - Costume Design                                                      |          | 3     |
   - Design Studios**                                                    |          | 6     |
   - History of Scene Design I & II or History of Costume                |          | 6     |
   - Design I & II                                                       |          | 6     |
   - Design Problems I & II                                              |          | 6     |
   - Theatre Electives                                                   |          | 15    |
   - ARTS Electives**                                                    |          | 9     |
   - Total                                                              |          | 63    |

* Practicum courses such as Play Production Practicum, Play Performance Practicum or Field Experience
** Performing Arts Electives—courses chosen from dance technique and/or music voice classes
*** Approved ARTS Courses—see advisor for list of approved courses
**** Design Studios—Chosen from Scene Design Studio, Lighting Design Studio or Costume Design Studio
***** Arts Electives—courses chosen from the Department of Art or the Department of Performing Arts

66 GEORGE MASON UNIVERSITY
Sample Schedule for B.A. with a major in Theatre
Concentration: Acting/Directing

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Theatre</td>
<td>Intro to Theatre Technology</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>ARTS 103</td>
<td>ARTS 104</td>
</tr>
<tr>
<td>Intro to Theatre Exp.</td>
<td>Acting I</td>
</tr>
<tr>
<td>Intro to Theatre Tech</td>
<td>Intro to Costume Tech</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting I</td>
<td>Acting II</td>
</tr>
<tr>
<td>Social science</td>
<td>Social science</td>
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<tr>
<td>Oral communication</td>
<td>Natural science</td>
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<td>Natural science</td>
<td>Foreign Language</td>
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<tr>
<td>Practicum</td>
<td>Electives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting I</td>
<td>Directing II</td>
</tr>
<tr>
<td>Directing I</td>
<td>Survey of Theatre History</td>
</tr>
<tr>
<td>Survey of Theatre History I</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>Literature</td>
<td>Electives</td>
</tr>
<tr>
<td>Social science</td>
<td>Practicum</td>
</tr>
<tr>
<td>Practicum</td>
<td>Electives</td>
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<table>
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<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Non-Western culture</td>
<td>Independent study or field experience</td>
</tr>
<tr>
<td>Literature</td>
<td>Practicum</td>
</tr>
<tr>
<td>Practicum</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Dance
The two dance degree programs prepare students for graduate work in performance, choreography, teaching, history and criticism as well as prepare students for professional and creative opportunities in the dance field. The degrees in dance are:

1. Bachelor of Fine Arts - Dance
2. Bachelor of Arts - Theatre, with a concentration in Dance

The Bachelor of Fine Arts degree in Dance is specifically designed for students with a firm idea of their professional goals who wish to devote a significantly larger portion of their college career to a more intensive and comprehensive level of dance study. The BFA degree offers a general modern dance major that allows for concentrated study in either performance, choreography, or teaching. Technical training includes the areas of ballet, jazz, and a strong emphasis on modern dance. Entrance into the BFA program is by audition. Auditions occur twice a year in July and January and interested students must make arrangements in advance by contacting the Department of Performing Arts. Transfer students are also required to audition. While a student may be approved for the dance program, this does not mean the student has been admitted to the University. For admission to the University each student must contact and submit application to the Office of Admissions.

The Bachelor of Arts degree with a major in Theatre/concentration in dance does not require an audition. The BA degree is a more general program of study allowing the student insights into a broad range of creative and educational experiences while pursuing a liberal arts degree.

Bachelor of Fine Arts—Dance
Because of the professional nature of this degree, the program requires completion of 130 hours of course work. The BFA is specifically a performance oriented program. It is designed to prepare students professionally as performers, choreographers and teachers as well as to prepare them successfully for graduate study.

I. General Education Courses (32 hours) comprised of the following:
   English 101 and 102 .................................................. 6
   Literature ................................................................. 6
   Natural Science ......................................................... 8
   *specifically Biology 124 & 125 to fulfill this requirement
   Social Science ........................................................... 6
   Additional non-major courses ....................................... 6

II. Major Program Dance Core: Dance and related courses
required of all dance majors:
   Dance Appreciation .................................................. 3
   Modern Dance Technique (21 hours, must be
   intermediate and above) ........................................... 25
   Dance Improvisation ................................................. 3
   Dance Composition I .................................................. 3
   Dance Composition II ................................................ 3
   Dance History I - Primitive thru 18th Century .............. 3
   Dance History II - 19th & 20th Century ..................... 3
   Rhythmic Analysis .................................................... 3
   Dynamic Alignment .................................................... 3
   Teaching Principles of Modern Dance ......................... 3
   Dance Performance ................................................... 6
   Costumes ................................................................. 3
   Lighting ................................................................. 3
   Acting I ................................................................. 3
   Music Appreciation .................................................. 3
   Choreography ......................................................... 3

III. Dance Electives: Concentrations in choreography,
teaching and performance
   73

IV. Free Electives .......................................................... 10

   Summary: BFA Dance
   General Education .................................................. 32
   Dance Core ............................................................. 73
   Dance Electives ........................................................ 15
   Free Electives ........................................................... 10

Total ................................................................. 130

COLLEGE OF ARTS AND SCIENCES 67
BA in Theatre—Concentration in Dance

The Bachelor of Arts Degree in Theatre with a concentration in Dance requires that majors must complete, in addition to the general degree requirements, a minimum of 42 hours in the major: 23 hours of required theatre core courses and 19 hours in the area of dance concentration.

Required Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Introduction to Theatre Experience</em></td>
<td>3</td>
</tr>
<tr>
<td>Beginning Modern Dance</td>
<td>2</td>
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<tr>
<td>Dance Improvisation</td>
<td>3</td>
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<tr>
<td>Acting I and II</td>
<td>3</td>
</tr>
<tr>
<td>Dynamic Alignment</td>
<td>6</td>
</tr>
<tr>
<td>Theatre History</td>
<td>6</td>
</tr>
<tr>
<td>Area of Concentration Requirements</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

*Dance appreciation may be substituted for those selecting the concentration in dance.

Concentration Courses*

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dance Composition I and II</td>
<td>6</td>
</tr>
<tr>
<td>Dance History</td>
<td>3</td>
</tr>
<tr>
<td>Dynamic Alignment</td>
<td>3</td>
</tr>
<tr>
<td>Teaching Principles</td>
<td>3</td>
</tr>
<tr>
<td>Dance Performance</td>
<td>3</td>
</tr>
<tr>
<td>Dance Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
</tr>
</tbody>
</table>

*All students involved in the dance concentration should also enroll in technique courses (ballet, jazz or modern dance) each semester.

Acceptance into this program of study is in accordance with those guidelines identified in the University’s catalog. Auditions are not required for the BA Degree in Theatre-Concentration in Dance.

Philosophy and Religion

Faculty

Professor: McFarlane
Associate Professors: Bergoffen (Chair), Fletcher, Holman, McDermott, Pielke, Yance
Assistant Professors: DeNys, Jordan, Ro, Rothbart, Lecturers: Halbrook, Jackson, Miles

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 6 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; TwentiethCentury 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 6 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.

Sample Schedule for Philosophy Majors

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural science</td>
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<td>4</td>
</tr>
<tr>
<td>English composition</td>
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<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
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<td>3</td>
</tr>
<tr>
<td>PHIL 100, 111, or 173</td>
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<td>PHIL 151 or 212 or 273</td>
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<tr>
<td>Social Sciences Group A or B</td>
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<td>COMM 100, 110, 120, or 130</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
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<tr>
<td>Social sciences</td>
<td>3</td>
</tr>
<tr>
<td>(Group A or B)</td>
<td>(Group A or B)</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 301 (231)</td>
<td>PHIL 303 (232)</td>
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<td>Philosophy elective</td>
<td>Philosophy elective</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social sciences</td>
<td>Social sciences</td>
</tr>
<tr>
<td>(Group A or B)</td>
<td>(Group A or B)</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>PHIL 336 or 337</td>
</tr>
<tr>
<td>PHIL 332</td>
<td>Philosophy electives</td>
</tr>
<tr>
<td>Philosophy electives</td>
<td>Non-philosophy elective</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 421</td>
<td>PHIL 422 or 425</td>
</tr>
<tr>
<td>Fine arts</td>
<td>Electives</td>
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<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Courses in Support of Graduate Programs

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

Associate Professors: Black (Coordinator, Engineering), Ellsworth, Evans, Flinn, Kafatos, Kruppa, Lieb, Mouchahoir, Schaefer, Wang

Assistant Professors: Ceperley, Peterson

Instructors: Hannigan, Kowalski

Lecturers: Anderson, Halle, Morgan, Papaconstantopoulos, Smith, Triplett

(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 or fall, and in 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 requirements, a Bachelor of Science in physics requires the completion of 44 semester hours in the major and 20 semester hours in mathematics. The following physics courses constitute a required 33 hour core for the BS degree: PHYS 111, 250, 351, 352, 353 (2 cr.), 361, 303, 305, 306, 402, 407 and 416. The remaining 11 credits are to be elected from PHYS 301, 302, 307, 328, 408, 412, 414, 417, 428, 510, 511, 512, 514, ENGR 341, 342, 430, 432, 441, 460, MATH 446 and 447 with at least 5 semester hours in physics courses. The following mathematics courses are required: the two year calculus sequence (MATH 113, 114, 213 and 304); PHYS 311 or MATH 313; PHYS 312 or MATH 314.

The requirements for the B. S. in Physics allow the student the flexibility of preparing for graduate school or for one of the many careers in business or industry where physics graduates are employed. In meeting the requirement for 11 credit hours outside the core, a student has the option of electing an area of concentration. The courses comprising each concentration are listed below. Students who wish to complete a concentration should plan a program of study in consultation with their advisor.

Graduate School Preparatory Concentration. Although any of the options listed here provide the successful student with a fully adequate background to enter graduate school, this concentration is for the student whose career goals definitely include graduate school in physics. In order to complete this concentration the student should take at least 9 hours from the following courses: PHYS 414, 510, 511, 512 and 514. In addition, the students should complete a senior project (PHYS 408) on a problem that involves the use of the computer for the solution of a physical problem.

Computational Physics Concentration This concentration is for the student who wishes to pursue a career that applies computers to the solution of physical problems. In order to complete this concentration, the student should take at least 9 hours from the following courses: PHYS 412, ENGR 441, MATH 446, and 447. In addition, the student should complete a senior project (PHYS 408) in the specialty which they intend to enter in graduate school.

Astrophysics Concentration This concentration is for the student who is planning to attend graduate school in astrophysics or pursue a career in industry. In order to complete this concentration, the student should take at least 9 hours from the following courses: PHYS 414, 510, 511, 512 and 514. In addition, the student should complete a senior project (PHYS 408) in an astrophysics problem.

Electronics Concentration This concentration is for the student who wishes to pursue a career in industry applying a strong background in electronics to physical problems. In order to complete this concentration, the student should take at least 9 credit hours from the following courses: PHYS 301, 302, ENGR 341, 342, 430, 432, and 460. In addition, the student should complete a senior project (PHYS 408) on an electronics problem.

Applied Solid State Physics Concentration This concentration is for the student who wishes to pursue a career in the...
semiconductor industry. In order to complete this concentration, the student should take the following courses PHYS 512, ENGR 430 and 431, and complete a senior project (PHYS 408) in applied solid state physics.

BA Degree with a Major in Physics

In addition to general degree requirements, a BA 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, geology, 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 non-science majors. PHYS 250, 350, 351, 352, and 353 consist of a calculus-based sequence in general physics to be taken by physics and engineering majors and those chemistry, computer science, and mathematics students who pursue a Bachelor of Science degree. Students may receive credit for only one of the following sequences: 341-342 or 103, 104; or 250, 350, 351, 352, 353.

Students who intend to major in Physics should take the University Physics introductory sequence (PHYS 35C, 351, 352, 353). However, students who decide to major in physics after completing PHYS 341, 342 may do so, but only with written permission of the Physics Department. Such students will be required to take at least 5 additional credits in approved physics courses.

Graduate

Master of Science in Applied Physics

The masters in applied physics program is designed to serve persons employed at area technically oriented organizations, recent graduates, and others. The program is "applied" in that (1) it emphasizes those areas of physics of greatest importance in industry, (2) it allows electives in computer science, engineering and mathematics, and (3) it includes elective courses in cross-disciplinary areas such as biophysics, geophysics, physics of air pollution, and the physics of energy.

All courses are offered during evening or late afternoon hours to allow full time employed persons to easily attend. For those recent graduates who are not full time employed, it is hoped that financial aid will be available in the form of a number of teaching assistantships.

For those who are full time employed, the program allows up to six credits (out of a total of 33) be performed "on the job" through an optional three credit Research Project or an optional six credit Masters Thesis, both of which are done under the guidance of a faculty member.

Admission Requirements

If the applicants baccalaureate degree is in a field other than physics, the applicant should have taken several courses beyond the introductory physics courses, such as junior level classical mechanics, electricity and magnetism, or electronics. Applicants may be required to make up one or two deficiencies, based on a graduate physics advisor's assessment, and still be permitted to enroll in the program. The graduate record aptitude exam and the GRE Advanced test in physics are recommended for applicants who received their baccalaureate degree within the last five years. Less recent Bachelor's recipients may wish to present a statement of their work experience in lieu of the GRE. Acceptance to the program is based on an assessment of the candidates qualifications by a graduate
committee which evaluates the above factors. Degree Requirements
Candidates for the degree must successfully complete the following three requirements:
1. A 12 credit core consisting of PHYS 510, plus three of the four courses: PHYS 511, 512, 513, 514.
Specific core courses may be waived if candidates have taken them as undergraduates or in another graduate program, but in that case electives must be taken to fulfill the 33 credit hour total required for the degree.
2. Twenty one credits of electives, of which all but six credits must be in physics. The remaining six may be in physics, engineering, mathematics, or computer science. The elective courses are offered under the "umbrella" of PHYS 590 "Selected Topics in Physics". The availability of specific will depend on the demand for them and the availability of faculty resources and expertise. Students interested in other engineering electives may be encouraged to bring this to the attention of the Office of the Faculty.
3. A comprehensive exam administered once a year. The comprehensive exam will include a core (based on the core courses required), and a number of other sections in which a choice of areas will be permitted.

Sample PHYS 590 "Selected Topics in Physics" offerings:
Advanced Applied Mechanics
Physics and Computers
Biophysics
Physics of Air Pollution
Electro-optics
Physics of Energy
Electronic Devices and Materials
Physics of Surfaces
Geophysics
Plasma Physics
Materials Science
Physics Teaching in High School
Medical Physics
Quantum Optics
Nuclear Physics
Space Physics

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 social science electives must be in economics, psychology, anthropology, history, linguistics, geography or government. The remaining 6 may be in any of these areas plus religion, philosophy, fine arts, religion, modern languages beyond the introductory skills courses. English (beyond the required courses) or regional cultures.

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.
Inquiries concerning any of the engineering courses of study should be directed to Dr. W. M. Black, Department of Physics.

Sample Schedule for Engineering Majors

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>MATH 113</td>
<td>4 PHYS 250</td>
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<tr>
<td>CHEM 211</td>
<td>4 MATH 114</td>
</tr>
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<td>ENGR 110</td>
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<td>ENGL 101</td>
<td>3 ENGL 102</td>
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<tr>
<td>Humanities or Social Science Elective</td>
<td>3 ENGL 107</td>
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<tbody>
<tr>
<td>PHYS 350</td>
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<tr>
<td>PHYS 351</td>
<td>1 PHYS 353</td>
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<td>MATH 213</td>
<td>3 MATH 304</td>
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<tr>
<td>ENGR 285</td>
<td>3 ENGR 286</td>
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<td>ENGR sci elective*</td>
<td>3 ENGR Sci elective*</td>
</tr>
<tr>
<td>Literature Course</td>
<td>3 Literature Course</td>
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<th>Fifth Semester</th>
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</thead>
<tbody>
<tr>
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<td>3 ENGR 333</td>
</tr>
<tr>
<td>ENGR 332</td>
<td>2 ENGR 334</td>
</tr>
<tr>
<td>CS 211</td>
<td>3 ENGR 341</td>
</tr>
<tr>
<td>ENGR 305</td>
<td>3 MATH 3xx or 4xx</td>
</tr>
<tr>
<td>MATH 313</td>
<td>3 Humanities or Social science elective</td>
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<td>Humanities or Social science elective</td>
<td>3</td>
</tr>
<tr>
<td>Literature Course</td>
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<table>
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<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>ENGR 342</td>
<td>3 ENGR 491</td>
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<td>Technical Electives**</td>
<td>7 Technical Electives**</td>
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<tr>
<td>ENGL 319</td>
<td>3 ENGR 490</td>
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<tr>
<td>ENGR sci elective</td>
<td>3 Humanity or Social science elective</td>
</tr>
<tr>
<td>Elective</td>
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</tbody>
</table>

*Engineering Science Electives:
ENGR 205, 206, 207, 208, 307
**Technical Electives:
ENGR 421, 429, 430, 432, 441, 442, 451, 452, 460, 511, 512, 513, 520, 530, 540
NOTES: 1. ENGR 301 taken prior to Fall 1982 may substitute for ENGR 351, 381. ENGR 302 taken prior to Fall 1982 may substitute for ENGR 332, 382.
Students interested in a discipline of engineering other than computer and electronics or electrical engineering may for the 3rd semester replace ENGR 285 with ENGR 207, and the literature course with ENGR 481. In the 4th semester, they may replace ENGR 286 with ENGR 206, the literature course with an elective or ENGR 392, and choose one hour for PHYS 353.

Graduate

MS Degree in Computer and Electronics Engineering
The Master of Science in Computer and Electronics Engineering is designed to provide those with a baccalaureate in a science related to electrical engineering specialized training at the graduate level in computer and electronics engineering. Students studying for the masters degree may specialize in such areas as microelectronics, communications, or in the computer areas of system analysis and design. For example, one major of expertise includes the analysis and design of microprocessor systems and spatially parallel systems, image processing and integration of computer systems.
Courses are being offered during the evening or late afternoon hours to permit full-time employed persons to enroll in the program. For those who wish to enter the program on a full-time basis, some financial aid may be available in various forms such as assistantships, research grants with a project conducted at the University, or work-study agreements with local industry.

Admission Requirements
In addition to fulfilling the entrance requirements of the Graduate School, applicants for the master's degree in Com-
computer and Electronics Engineering must have earned a baccalaureate degree in a field related to electrical engineering. Students are expected to have some prior training in the areas of digital and linear electronics, mathematics through differential equations, and computer science.

Acceptance to the degree program is based on an assessment of the capacity of applicants to pursue the graduate program based on factors such as the undergraduate record and professional work experience. Although the Graduate Record Examination (GRE) is not required, past test results will be used as an additional measurement of applicant qualifications.

Degree Requirements
Candidates for the degree must successfully complete the following three requirements:

1. Two required courses (6 hours) ENGR 520 and 540
2. Option A* ENGR 798, Masters Research Project (3 hrs.) plus five graduate level computer and electronics engineering courses (15 hrs.) such as those listed below. Option B* ENGR 799, Masters Thesis Research (6 hrs.) plus four graduate level computer and electronics engineering courses (12 hrs.) such as those listed below.

   ENGR 51 1, 512, 513, 515, 530, 541, 590, 631, 635, 640, 644, 646, 648

3. Two additional graduate level courses in engineering (may be selected from the list shown above in Section 2), applied physics, applied mathematics, or computer science (6 hrs.)

*The Masters's Research Project is designed to permit students to conduct research under the guidance of a faculty advisor. In some cases, permission may be granted to complete the work itself at the place of employment. The final product of the work is to be a technical research report which is approved by the advisor. The Masters’s Research Project (ENGR 798) is expected to be finished in one semester. In extenuating circumstances, the course may be repeated only once to complete the project; however, only 3 credits may be applied toward the degree.

**The option B requires a Masters thesis which involves a more significant research effort. The work is to be conducted under the guidance of a faculty advisor, and the final written thesis and oral defense of it are to be approved by a three-member faculty committee. The thesis work is expected to be completed while taking ENGR 799, Masters Thesis Research, only twice. In no cases may the course ENGR 799 be taken more than four times; however, only 6 credits of it may be applied toward the degree.

Psychology

Faculty
Professors: Barcas, Boneau (Chairman), Jordan, Mandes, Pelham, Tyler
Associate Professors: Allen, Blaha, Buffardi, Erdwins, Flinn, Gessner, Mellingor, Moretz, Rugel, Sanford, Smith, Savage*, Wahl
Assistant Professors: Hollenbeck, Holt, Lehman, Reed, Small, Walters**, Williams, Zlotogorski
Adjunct Professor: Kurke


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 BA degree, students 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 BS 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, 323, and 372/373.
- BIOL 113, 114
- CS 161 and 262 (recommended); or 261.
- 9 hours of ANTH 114, 332, BIOL 225, or any sociology courses.
- English Composition: 6 semester hours.
- Literature: 6 semester hours.
- Cognate Courses: 24 semester hours.
- Electives: 19-21 semester hours.

There are 5 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 advisor. 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.

In addition to coursework, undergraduate research experience and letters of recommendation are major factors for admission to graduate school. It is therefore recommended that students interested in graduate school distribute courses across a number of areas in psychology and work closely with one or more professors on an individual research project during the junior and senior years.

Students interested in developing technical skills in the application of psychology at the paraprofessional level may wish to earn a psychology technician certificate. This program provides students with technical expertise for use in human service employment settings at the paraprofessional level. No more than 6 semester hours of PSYC 326, 421, 422, 548, and 549 may be used to satisfy either the 36-hour psychology requirement for the BA degree, the 36-hour psychology requirement for the BS degree, or the 24-hour requirement in psychology at the 300-level or above. Further information on

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http://catalog.gmu.edu
this certificate program may be found under Certificate Programs in this catalog.

Please refer to the catalog section under the Department of Education, Secondary School Education.

**Graduate**

**Master of Arts in Psychology**

The Department of Psychology offers a MA degree in general psychology and a specialization in school psychology. The general masters program is designed to provide students with a knowledge of the basic content areas in psychology. It emphasizes flexibility so that students may enroll in courses fitting their specific needs. Although laboratory courses in psychological assessment and therapy are not open to students in the general M.A. program, practicum opportunities may be available in industry and government settings for students with appropriate prerequisites.

The school psychology specialization is designed to prepare students for endorsement as fully certified school psychologists in Virginia and in the majority of states. It is approved by the Virginia Department of Education and meets the standards of the National Association of School Psychologists and the Division of School Psychology of the American Psychological Association.

**Entrance Requirements**

In addition to fulfilling the entrance requirements of the Graduate School, applicants to the general M.A. 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 school psychology specialization should have courses in the following areas of psychology: introductory, statistics, developmental, personality, and either learning or experimental psychology. School psychology candidates will be evaluated on interpersonal skills as well as on academic performance through a personal interview. Students 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 applicants’ 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 applicants wish to give further evidence of ability. In addition, applicants are asked to submit a biographical statement, outlining their background and experience and describing their future goals in psychology. Generally, an overall GPA of 3.00 for the last 60 undergraduate hours and a minimum of 3.25 in undergraduate psychology courses are required.

Because space is limited, fulfillment of the minimum requirements stated above does not guarantee admission to the M.A. 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.

**Degree Requirements for the MA in General Psychology**

In addition to fulfilling the degree requirements of the Graduate School, candidates must fulfill the following departmental requirements:

1. All candidates must complete 30 hours of graduate credit.
2. All candidates are required to complete 12 credit hours of general psychology, including PSYC 653 and 9 hours from among PSYC 641, 642, 643, and 644.
3. Students may choose to take up to 6 hours of practicum or thesis research.
4. Up to 9 hours may be completed in graduate courses offered by other departments, with the advisor’s approval.

**Program of Study**

General requirements: 9 hours from PSYC 641, 642, 643, 644;...

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**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.
Methodology requirements: PSYC 653 .............................................. 3
Electives (may include thesis/practicum) ........................................ 18
Total semester hours ........................................................................ 30

Degree Requirements for the School Psychology Specialization

The school psychology specialization is coordinated jointly by the Departments of Psychology and Education. Candidates must fulfill the following departmental requirements:

1. All candidates must complete 60 hours of graduate credit.
2. There are 50 hours of required coursework in the program.
3. 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.
4. The doctoral program requires 2 practica are required during the second year of training. The first practicum involves in-depth case studies, which students conduct at the Psychological Clinic of the University. Students are placed in a school system for their second practicum.
5. At the conclusion of their coursework, students may choose to complete a thesis or a practical research project concurrent with the internship.

Total 51

Coursework

Child study: PSYC 711, 715, 722, 750 EDSE 641 ................. 18
Personality and developmental: PSYC 508, 617, 642 ............. 9
Learning and remediation: PSYC 641, EDRD 611, and EDCI 650, 651, or 652
School organizations: EDAS 621 EDUC 571 and 579 or PSYC 671 .............................................................. 9
Methodology: PSYC 653, EDUC 531 ..................................... 6

Total .............................................................................. 51

Thesis Option:
Thesis: PSYC 799 .................................................................... 6
Internship: PSYC 765 and/or EDUC 665 .............................. 6
Total .............................................................................. 12

Non-Thesis Option:
Practical Project: PSYC 798 or EDUC 610 ...................... 4
Internship: PSYC 765 and/or EDUC 665 .............................. 6
Total .............................................................................. 10

Total for Certification ................................................................ 61
or 63

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 3.25 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 students request a change to degree status are: PSYC 641, 642, 643, and 653.

Non-Degree Status

Applicants who qualify for degree status, but who are not applicants for a degree at the University, may be admitted to non-degree status. Nondegree 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 nondegree 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.

Doctor of Psychology (Psy.D.) Program

The doctoral program at the University has as its goal the training of professional psychologists. To accomplish this goal, the program has been developed to provide students with both a knowledge of the basic content areas in psychology and the practical experience required to apply these principles to problems arising in non-academic work settings. The program contents are Applied Experimental/Industrial and Clinical/School Psychology. The Applied Experimental/Industrial program is focused on educating psychologists in the use of psychological knowledge and methods employed in settings such as industry, government, consulting organizations, research and development organizations and trade organizations, and in understanding the opportunities and constraints within such organizations. The Clinical/School program is focused on educating clinical and school psychologists to deal with the unique demands of mental health or educational systems. Graduates of both programs will have fulfilled state course requirements for professional licensure.

Admission Documents

All applicants must provide the Graduate School with the following materials by February 15 in order to be considered for admission:

1. A completed Graduate School Admission application.
2. A completed Virginia Domicile Classification form, if applicable.
3. A completed Department of Psychology application form.
4. All undergraduate and graduate transcripts.
5. Three letters of recommendation. These letters should be requested from individuals who have a first-hand knowledge of the applicants' work experience and/or academic capabilities.
6. A 2-3 page typewritten personal statement, describing professional goals, past training history, and reasons for seeking the Psy.D.
7. GRE scores taken within the past five years.
8. A writing sample (optional). This may be selected from either academic papers, publications, or professional reports.
9. Applicants in the final pool may be required to participate in an interview as part of the admissions process.

Admission Criteria

Space in the program is limited to a maximum of 20 new students per year, of which no more than 10 will be in the Clinical/School specialization, and no more than 10 in the Experimental/Industrial specialization. Thus, there are no "cut-off" scores for admission, and no particular set of qualifications can guarantee admission. Applicants are expected to meet minimum criteria of a 3.0 undergraduate GPA and a 3.25 in psychology work.

Program Structure

The program of doctoral training in Psychology can be perceived as having four educational components: 1) core courses, 2) upper level specialty courses, 3) supervised practicum placements, and 4) a dissertation. The program requires a minimum of 96 credit hours.

Core Course Requirements

The core requirement consists of four prosemesters, two quantitative courses, and a course in History and Systems. The twelve semester-hour prosemester sequence covers the basic subject matters identified by the American Psychological Association as the sine qua non of doctoral training: biological bases of behavior, social bases of behavior, cognitive-affective bases of behavior, and individual behavior. As a prerequisite to the prosemester, students are expected to have assimilated the content of undergraduate courses in learning, perception, motivation, social, developmental, personality and physiological psychology; personal reading may satisfy this prerequisite and formal coursework is not required. After successful completion of 30 hours (including core courses), students are awarded an M.A. in Psychology.

Comprehensive Exams and Admission to Candidacy

Students in the doctoral program must successfully complete a series of comprehensive examinations immediately after they have fulfilled the 51 credits and completed the prosemester. Each comprehensive examination is taken individually and is designed to determine if the student has mastered the material in each of the four core areas: 1) learning and perception, 2) motivation, emotion and personality, 3) developmental and social foundations, and 4) systems and organizations. A student is required to pass two comprehensive examinations immediately after the completion of the prosemester. The third and fourth examinations are taken in the third and fourth years of the program. The program average for each comprehensive examination is 3.0.
after they have completed the core requirements. The exams are administered twice a year (January and June). Students who fail the exams the first time must pass the exams at the next scheduled administration or be dropped from the program. Students who successfully complete the comprehensive examinations are admitted to doctoral candidacy and are then permitted to enroll in specialty courses at the 700 and 800 level.

Specialty Courses

The 700 and 800 level courses have been designed to provide the doctoral candidates with greater depth of study in specific content areas. These advanced courses focus on the comprehensive, integrative, applied, and methodological issues within the different specialty areas. These advanced courses are selected by the student with the assistance and approval of faculty advisors. Most of the advanced courses chosen by the student will be in the student's area of specialization. At least one advanced course must be taken from an area outside the student's area of concentration, and the student is also encouraged to take courses outside the Department of Psychology.

While in the program, students are required to register for one credit per semester in the Professional Seminar. This ongoing activity features speakers from the field, discussion of student work activities, and discussion of professional and ethical issues.

Practica

Both Applied Experimental/Industrial and Clinical/School students will be expected to perform at a satisfactory level in at least four separate practicum placements. The purpose of these practica is to provide a broad range of experiences in settings related to the students' fields of specialization. For example, individuals in the clinical specialization might take practica in adult assessment, child assessment, individual psychotherapy and group psychotherapy in settings dealing with these areas. Individuals in the experimental specialization might take practica in survey research, human factors, applied perception, and training program development in organizations in which those specialty areas are a focus. One practicum for applied experimental students will be an in-house practicum culminating in a formal paper.

Communication Skills

Graduates of the program must be able to function effectively in real-world work situations. Therefore, written and oral communication skills will be assessed continuously throughout the program in the form of papers and reports, and communication skills will be evaluated periodically by program faculty each semester. Students judged deficient in either communication area will be informed of the deficiency; they may be required to leave the program if the deficiency cannot be remedied.

Grades

A and B are the only acceptable grades for graduate students. A signifies outstanding performance; B signifies acceptable performance at the graduate level. A student who receives 2 or more C's during any calendar year is terminated from the doctoral program. When this occurs, the student may elect to complete the requirements for a terminal M.A. degree.

Continuous Registration

Students must be registered each semester throughout their entire program. The minimum load per semester is 6 credits; the minimum course load per calendar year is 15 credits. Students failing to make satisfactory progress will be dropped from the program. Students in the first year of training in the clinical or school specializations are required to complete a minimum of 30 credits during the calendar year, and 45 credits during the first 2 calendar years. In all of the specialization areas, the entire program must be completed within 7 calendar years of the initial registration for students.

Dissertation

The dissertation requirement is designed to demonstrate student ability to apply psychological principles to practical problems. The dissertation may involve an experimental approach to a basic or an applied problem, or may organize and summarize in a scholarly fashion a project done in a practicum or internship placement.

The student will select a dissertation director who helps in the formation of the dissertation committee. This committee will consist of five persons, including the dissertation director. One member may be from outside the Department of Psychology, e.g., an internship supervisor.

After consultation with the dissertation committee, the student must prepare a written proposal prior to the initiation of the project. The proposal must be approved by the committee and should summarize the background of the problem and detail the work to be done.

The final report of the dissertation project must be submitted for approval by the committee. An oral examination will be scheduled in which the student is expected to present the work and demonstrate his/her knowledge of psychology to the dissertation committee and at least two other qualified people. At least one of the members of the examining committee must be from outside the Department of Psychology.

Course Structure for the Applied Experimental/Industrial Program

Students in this program may attend on either a full-time or a part-time basis, but there is a requirement that students complete thirty credit hours (including all core courses) during the first two calendar years after admission. The course structure for this program is as follows:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-Seminars (Core Requirement)</td>
<td>12</td>
</tr>
<tr>
<td>History and Systems (Core Requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Methods (Core Requirement)</td>
<td>6</td>
</tr>
<tr>
<td>Theoretical Seminars in Areas of Specialization</td>
<td>9-15</td>
</tr>
<tr>
<td>Applied Seminars in Areas of Specialization</td>
<td>9-15</td>
</tr>
<tr>
<td>Advanced Quantitative Methods</td>
<td>6</td>
</tr>
<tr>
<td>Specialized Methodology Courses (e.g. survey research, scaling)</td>
<td>3-6</td>
</tr>
<tr>
<td>Practica and Independent Research</td>
<td>12-15</td>
</tr>
</tbody>
</table>

Course Structure for the Clinical/School Program

In this program students must take a full-time course load for the first year. The course structure for this program is as follows:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-Seminars (Core Requirement)</td>
<td>12</td>
</tr>
<tr>
<td>History and Systems (Core Requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Methods (Core Requirement)</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Assessment</td>
<td>12</td>
</tr>
<tr>
<td>Diagnostic and Treatment Techniques</td>
<td>12</td>
</tr>
<tr>
<td>Specialty Electives</td>
<td>21-25</td>
</tr>
</tbody>
</table>

| Practice                                     | 12      |
| Professional Seminars                        | 6       |
| Independent Reading and Dissertation         | 12      |
| Internship (1 year — no credit)             | 0       |

Transfer Credit

Up to 30 hours of graduate work may be transferred into the program, but this does not mean that the requirement of specified courses will be necessarily reduced. After admission, transcripts will be evaluated to determine whether transfer courses are direct equivalents of required, specified courses.

http://catalog.gmu.edu
Students may be asked to provide additional information, such as syllabi or texts, on courses to assist in this determination. By the beginning of the first semester, each student will be informed as to which transfer credits satisfy specific GMU department requirements, and which may only be counted as electives. In any case, transfer credits will not be applied to satisfy the requirement of the four proseminars. The advisor will help to plan the student’s schedule after transfer equivalencies have been established. Because of the volume of applications, the department cannot provide formal or informal transcript assessment for anyone other than admitted students.

Public Affairs

Faculty

Professors: Clark (Chairman), Early (Director, Law Enforcement and Fire Administration Programs), Stillman

Research Professor: Cole, (Director, Public Management Institute)

Adjunct Professor: Pustay

Visiting Professors: Gibbons, Hager, Knowles

Visiting Fellows: Fisher, Komer

Associate Professors: Andrews, Boswell-Thomas, Brown, Fonseca, Gortner (Director, Public Administration Programs), Hung (Director, Indochina Institute), Khoury, Knight, Nicholson, Sacco, Sandole (Joint appointment with Center for Conflict Resolution)

Assistant Professors: Abrams, Cox, Davis, Hayden (Director, Geography and Cartography Programs), Mahler, Ostrowski, Plant, Stopp, White

Adjunct Assistant Professor: Walochik

Lecturers: Anderson, Angelino, Barbee, Brintall, Cones, Davis, Guzman, Hopkins, Jentsch, Joyner, Keller, King, Knight, Kocher, Leber, Lombardo, Marcus, Morgan, McCorry, Neal, Paige, Persil, Reiber, Reynolds, Russell, Schroer, Strommen, Witmer

(italics 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 101, 102, 103, 215, and 520; must present a minimum of 131 hours for graduation in order to include nine hours of credit for practical 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>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>ECON, GOVT, HIST</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>4</td>
</tr>
<tr>
<td>Geography</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
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<td>3</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 obtain a BA in government and politics, a student must complete at least 120 semester hours of coursework, satisfy all requirements for the Bachelor of Arts degree prescribed by the University, and complete 39 hours of coursework in government and politics. Twelve of these hours must be in the 4 introductory courses: GOVT 103, 132, 241, 250. Twenty-four hours must be drawn from courses in the 6 fields in the Curriculum: American Government Institutions and Processes (GOVT 301-309; 401-409); Political Behavior (GOVT 310-319, 410-419); Political Theory (GOVT 320-329, 420-429); Comparative and Regional Politics (GOVT 330-339, 430-439); International Relations (GOVT 340-349, 440-449); or Public Administration/Policy Analysis (GOVT 350-359, 450-459). With approval of the department, a student may substitute 3 hours of Internship or Seminar for an equivalent amount of credit in the field requirement of 24 hours. No more than 6 hours from any single field may be used to complete major requirements. Three hours must be in courses involving politically relevant skills or techniques. Courses from the GOVT 360-369 and 460-469 series will satisfy this requirement. The requirement may also be met by the following courses: MATH 252 and 255; DESC 202; CS 261; or INF 201. Majors in government and politics who have completed at least one 5-credit seminar under the requirements of an earlier catalog will probably find it in their interests to graduate under
the terms of that catalog, rather than the 1979-80 or later catalogs. Since there are no longer any 5-credit seminars offered in government, these students may fulfill their degree requirements by completing enough 3-credit upper level (300 and 400) government courses to reach a minimum of 34 semester hours. Students seeking to graduate under a 1978-79 or earlier catalog are responsible for consulting their faculty advisers about the appropriate ways to fulfill their degree requirements in the new curriculum.

Sample Schedule for Government and Politics Majors

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 103</td>
<td>3</td>
<td>GOVT 132</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>4</td>
<td>Laboratory science</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
<td>Foreign language</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Phil or Reli</td>
<td>3</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 241</td>
<td>3</td>
<td>GOVT 250</td>
</tr>
<tr>
<td>Foreign language</td>
<td>3</td>
<td>Oral communication</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>Literature</td>
</tr>
<tr>
<td>Anth. soci. psych.</td>
<td>3</td>
<td>Econ, geog. hist.</td>
</tr>
<tr>
<td>Art or music</td>
<td>3</td>
<td>Foreign language</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government field courses</td>
<td>6</td>
<td>Government field courses</td>
</tr>
<tr>
<td>Econ., geog., hist.</td>
<td>3</td>
<td>Anth., soci., psych.</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government field courses</td>
<td>6</td>
<td>Government field courses</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>3</td>
<td>Govt. skills/techniques</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Government and Politics Courses

Descriptions of government and politics courses offered by the Department of Public Affairs are listed in the Course Dictionary under GOVT.

BA Degree with a Major in International Studies

To earn a BA with a major in international studies a student must complete 120 semester hours of coursework and satisfy all requirements for the BA 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) .... 3
   - Oral (COMM 100, 110, 120, 130) .. 3
   - Foreign language (12 hours) ........................................ 3
     - Analytical reasoning ........................................ 3
     - Humanities .................................................. 12
     - Social sciences ........................................ 18
     - ECON 103, 104; GOVT 132; HIST 122 (12 hours) 18
     - ANTH 114, 332 (6 hours)* 3
     - Laboratory science ........................................ 8
   - One concentration to be selected according to the student's individual interests from those designated (42-45 hours) 8
     - International Politics Concentration 42
     - International Economics Concentration 42
     - Comparative and Regional Concentration** 45
     - Free Electives ........................................ 16
   - Lists of courses approved for inclusion in the concentrations and the regional groupings are available in the Department of Public Affairs.

   *Meet non-Western requirement.

   **Available regional concentrations: Asia, Europe, Latin America, and the Middle East and Africa.

Sample Schedule for International Studies Majors

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 122</td>
<td>3</td>
<td>ANTH 114</td>
</tr>
<tr>
<td>ECON 103</td>
<td>3</td>
<td>ECON 104</td>
</tr>
<tr>
<td>GOVT 132</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>4</td>
<td>Laboratory science</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>16</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 320</td>
<td>3</td>
<td>ART 320</td>
</tr>
<tr>
<td>RELI 211</td>
<td>3</td>
<td>GOVT 336</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>Literature</td>
</tr>
<tr>
<td>Oral communication</td>
<td>3</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language</td>
<td>3</td>
<td>Foreign language</td>
</tr>
<tr>
<td>GOVT 340</td>
<td>3</td>
<td>GOVT 342</td>
</tr>
<tr>
<td>HIST 410</td>
<td>3</td>
<td>GOVT 444</td>
</tr>
<tr>
<td>ECON 306</td>
<td>3</td>
<td>ECON 380</td>
</tr>
<tr>
<td>ANTH 332</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language</td>
<td>3</td>
<td>HIST 345</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>3</td>
<td>GOVT 447</td>
</tr>
<tr>
<td>GOVT 446</td>
<td>3</td>
<td>GOVT 449</td>
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<td>HIST 420</td>
<td>3</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td>ECON 390</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

BS Degree with a Major in Law Enforcement

This interinstitutional and interdisciplinary program 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. Not more than one-half of the 128 semester hours required by this program may be transferred to the University from one or more junior or community colleges.

The quantitative and distributional requirements which must be fulfilled by candidates for this degree are summarized below. English composition or an equivalent course must be completed prior to entry into the program at the University. Except for the specified professional courses and English composition, all requirements may be completed at this University.

Inquiries concerning this program should be directed to Dr. Stephen T. Early, Jr., Department of Public Affairs.

Requirements for the BS in Law Enforcement

Minimum Quantitative and Distributional Requirements by Subject

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>23</td>
</tr>
<tr>
<td>English composition</td>
<td>6</td>
</tr>
<tr>
<td>Literature and/or Humanities</td>
<td>6</td>
</tr>
<tr>
<td>A two-semester course in one recognized science with a laboratory</td>
<td>6</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
<td>3</td>
</tr>
</tbody>
</table>

Major Requirements

1. Law enforcement - NVCC

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

- ADJU 100, 110 or 187, 114, 115, 116, 126 or 176, 231, 232, 233, 246, 247, 248 or 237, and 228.

At GMU: GOVT 371, 372, 376, 377

2. Directly related

<table>
<thead>
<tr>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>45</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
BS Degree with a Major in Public Administration

This program of study comprises a core of work in government and politics and appropriate courses in other subjects. Students must earn 125 semester hours of credit and meet general degree requirements set for the BS degree by work falling within the following pattern:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
<td>50-51</td>
</tr>
<tr>
<td>Composition and Literature</td>
<td>12</td>
</tr>
<tr>
<td>Required GOVT courses: 103, 204, 241, 250, 320, 355, 356, 357, 358, 401, 451</td>
<td>33</td>
</tr>
<tr>
<td>GOVT Electives (any two of the following courses; an internship may be substituted for this requirement): 309, 402, 452, 461, 490</td>
<td>5-6</td>
</tr>
<tr>
<td>ECON courses (required): 103, 104, and six hours to be selected from 150, 306, 310, 311, 330, and 350</td>
<td>12</td>
</tr>
<tr>
<td>Supporting Requirements</td>
<td>34</td>
</tr>
<tr>
<td>Statistics and Computer Science</td>
<td>9</td>
</tr>
<tr>
<td>MATH 250 and 350, CS 261</td>
<td>3</td>
</tr>
<tr>
<td>Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>3</td>
</tr>
<tr>
<td>Communications</td>
<td>9</td>
</tr>
<tr>
<td>MGMT 341, COMM 130 and ENGL 309 or 310 PSYC 100, and one course from PSYC 220, 230, 231, 432, or 435</td>
<td>6</td>
</tr>
<tr>
<td>SOCI 101, and 203 or 332</td>
<td>6</td>
</tr>
<tr>
<td>Total open electives</td>
<td>28-29</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
</tr>
</tbody>
</table>

BS Degree with a Major in Fire Administration and Technology

This program is designed principally for students who have completed their professional courses at Northern Virginia Community College and who desire to earn a baccalaureate degree. However, under appropriate circumstances it may be open to other students as well. Credits earned in Northern Virginia Community College courses in fire science may not be transferred to other majors within the University. Not more than one-half of the total of 128 semester hours required by this program may be transferred to the University from one or more junior or community colleges. Furthermore, a minimum of 45 semester hours of upper division courses is required.

<table>
<thead>
<tr>
<th>Fire Administration and Technology Program Requirements</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>41</td>
</tr>
<tr>
<td>English composition</td>
<td>6</td>
</tr>
<tr>
<td>Literature, humanities and/or speech</td>
<td>6</td>
</tr>
<tr>
<td>Science with laboratory</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics (MATH 110 and 111)</td>
<td>6</td>
</tr>
<tr>
<td>Sociology (SOCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>Government (GOVT 103 and 204)</td>
<td>6</td>
</tr>
<tr>
<td>Psychology (PSYC 100)</td>
<td>3</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
<td>3</td>
</tr>
<tr>
<td>Major requirements</td>
<td>59-69</td>
</tr>
<tr>
<td>1. Fire science—at NVCC</td>
<td>20-30</td>
</tr>
<tr>
<td>Fire science—courses that satisfy one of the AAS degree programs but excluding FIRE 290 and 298. Not more than 30 semester hours of fire science credits may be included in the BS program at this University.</td>
<td></td>
</tr>
<tr>
<td>Fire science—at GMU</td>
<td>12</td>
</tr>
<tr>
<td>GOVT 241, 376, 377 and 378</td>
<td>30</td>
</tr>
<tr>
<td>2. Directly related</td>
<td>9</td>
</tr>
<tr>
<td>Management tools—three courses to be selected from the following options:</td>
<td></td>
</tr>
</tbody>
</table>

Sample Schedule for Public Administration Majors

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>GOVT 103</td>
<td>3</td>
<td>GOVT 204</td>
</tr>
<tr>
<td>ECON 103</td>
<td>3</td>
<td>SOCI 203 or 332</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>3</td>
<td>ECON 104</td>
</tr>
<tr>
<td>SOCI 101</td>
<td>3</td>
<td>CS 291</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

http://catalog.gmu.edu
Accounting: ACCT 201 and 202
Statistics: MATH 250
Computers: CS 111, 211, 212, or 261 and 262; INF 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. The maximum possible hours of credit, but not fewer than nine, should be earned by completing courses numbered at the 300 and 400 levels. Only courses of psychology and sociology may be mixed to form a concentration.

Acceptable courses by academic unit are:
- School of Business Administration
  - ACCT 201, 202, 311 and 471
  - INF 201; 211, 311, 312
  - MGMT 311, 381, and 411
- Departments of Psychology and Sociology
  - PSYC 211, 220, 230, 231, 310, 325 and 361
  - SOCI 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............................................. variable

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

Graduate

Master of Science in Geographic and Cartographic Sciences

This program is designed to serve the needs of: a) those currently employed in research, technical, or teaching fields related to geography or cartography and who wish to improve their occupational skills; b) those with baccalaureate degrees in geography or cartography who desire to improve their skills before entering a career; c) 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 must have a BA or BS in geography or cartography, or the equivalent. They must have earned a GPA of 2.75 during their last 2 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 geography track must have a completed course in statistics; applicants for the cartography track of the program must have completed courses in FORTRAN, Elementary Cartography, Photo Interpretation, Elementary Photographery, 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 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. Core courses in the geography track are the following: GEOG 680, 785, 795, and 799. Core courses in the cartography track are as follows: CART 650, 551, 652, 579, 799.

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 2 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 geography track emphasizes the applied aspects of human and physical geography, and includes the following courses: GEOG 503, 505, 520, 621, 670, 671, 674, 681, 583, 684 and 690.

In the cartography track, there are 2 specializations available. The cartographic specialization includes the following courses: CART 660, 661, 562, 663, and 664. The thematic specialization includes the following courses: CART 653, 554, 655, 656, and 660.

Courses from the 2 tracks may be mixed in consultation with the student's advisor. CART 686, 794, GEOG 686, 794, may be taken with permission of the Department of Public Affairs. GEOG 799 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 2 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 advisors, the student may also be required to remedy any deficiencies by completing GEOG 499. 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. An oral defense of the thesis may be required. Not more than 6 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.

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, 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 midcareer 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.

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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 GPA 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 2 years after their initial admission they have removed any deficiencies in the designated administrative tools and completed 6-12 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 potentials.)

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 useful 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 2 years.

Departmental Degree Requirements

The MPA program has 2 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. Listed below are the degree requirements for the 2 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, 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, *503, *611, 612, 615, 620, 650, 660, and 700 (PUAD 700 to be taken in the final semester of a student’s program.)

   b. Concentrations (9 hours). One concentration area required of all students.

      —Public Financial Management
      PUAD 661, 662, 769
      —Public Management
      PUAD 621, 622, 729
      —Public Personnel Administration
      PUAD 670, 671, 779
      —Public Policy Analysis (For students who want the MPA management track with a policy analysis concentration.)
      PUAD 641, 642

   One graduate course in analysis approved by the student’s adviser.

   —State or Local Government Administration
   PUAD 651 or 759
   PUAD 662, 671

   This concentration is designated either “state” or “local” depending on which of the first two courses is taken. The other courses in the concentration may have either focus; students should check with the instructors to determine the content of these courses.

   Additional concentrations may be developed to meet the specific needs of students. Such concentrations must be developed in cooperation with the student’s adviser, and the concentration program must be approved by the director of the Public Administration Program. Examples of such concentrations include Administrative Regulation, Environmental Administration, International Development Administration, Planning Administration, Public Health Administration, and Public Works Administration.

   c. Elective courses (6 hours). Two courses chosen from the MPA curriculum, from other courses throughout the University, or from other Universities. All elective courses must be approved by the student’s adviser. For preprofessional MPA students at least one of the elective courses must be PUAD 794.

   d. Policy concentration (12 hours). Required of all students in the policy analysis track. *PUAD 503, **PUAD 611, 620, 640, and 700. (PUAD 700 to be taken in the final semester of a student’s program.)

   e. Policy concentration (12 hours) PPUAD 641, 642

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.

   f. 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, they design a course of study to meet the
practical career needs of the 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 6 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 6 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 the University. In addition to all other requirements, the credits must have been earned within 6 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. As appropriate, and with the prior approval of the graduate faculty adviser and the Graduate Dean may, when such exists, earn up to 6 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 or comparable 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 6 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 present courses of comparable graduate level; or have been conducted by an accredited university. Credit, if granted, will be awarded at the rate of 3 semester hours for each 45 clock hours of instruction. In no case, however, may more than 3 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 may award 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 the 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 than 6 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 6 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 6 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 9 in categories b and c or more than 12 from any combination of the above options. The 12 hours allowed above is reduced by the number of hours taken through extended studies.

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 and 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; 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 may be requested to interview with the graduate public administration faculty. The potential admittees, 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 during the summer 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 fall semester. 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 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 capacity 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. Applicants must have an MPA, MS, MA, or equivalent postbaccalaureate work at the time of entry into the DPA class (August 1 of the year for which application is made).*

The 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.

*Those wishing to apply for the DPA but who do not have a master's degree or equivalent post-baccalaureate work must apply for the MPA program. Upon completing 30 hours toward the MPA their application for the DPA will be considered along with all other applications. No special consideration for the DPA program is to be construed from participation in the MPA program. If accepted into the DPA program, the participant will be awarded the MPA upon completion of the core requirements (DPA 511-522). If not accepted into the DPA program, the individual may complete the normal requirements for the MPA.

**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.* (Where regional accreditation associations do not exist, the graduate public administration faculty, with the advice of the appropriate GMU administrative officer, reserves the right to make the final judgment 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.

**DPA Degree Requirements**

The DPA program requires 90 semester hours of work beyond the baccalaureate degree. Participants must show proficiency in 2 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 2 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, 2 six-hour seminars taken consecutively during the first 2 semesters of the DPA program;

3. Passing the comprehensive examination, given after the completion of the core curriculum; and

4. Successful completion of at least 6 hours of intensive seminars (including the Introductory Doctoral Program Seminar).

**Analytical and/or Managerial Tools Proficiency.** In order to satisfy the analytic and managerial tools component of the DPA degree, participants must meet 2 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 seminar in the appropriate research method;

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 6 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 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 6 credits of intensive seminars (the pre-entry seminar plus seminars totaling 5 additional credits). 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 detailed in the education plan of each participant prepared during the required introductory 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, the 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 detail 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 5-cell configuration forms the basis of the special area of study comprehensive examination. In order to successfully complete the special area of study comprehensive examination 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 detailed in each participant's education plan.

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Activities</th>
<th>Perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analytical</strong></td>
<td>Statistics</td>
<td>Hypothesis testing</td>
</tr>
<tr>
<td><strong>Managerial</strong></td>
<td>Decision analysis</td>
<td>Systems theory</td>
</tr>
</tbody>
</table>

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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 Activities**

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Analysis and Evaluation</th>
<th>Leadership</th>
<th>Change and Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational and Inter-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizational Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Societal and Environmental Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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 of 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 6 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 3 doctoral examinations.**

1. Core comprehensive examination. Upon completion of the 2 core seminars participants must pass a written comprehensive examination covering the material included in the core of the program.
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.
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 research design for the dissertation that is acceptable to the dissertation committee, and after the candidate has completed research, but before the final dissertation manuscript has been prepared.

**Advancement to Candidacy.** Upon establishing proficiency in the 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 first two 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 apply no more than 24 hours of such credit toward their doctorate, the hours of credit depending on the number of courses required in the candidate's program and based on a requirement of 90 hours for conferral of the DPA. However, DPA candidates must register for at least 3 hours each semester until completion of the dissertation.

The dissertation, signed by the Dissertation Review Committee members, must be submitted to the Dean of the Graduate School for approval not later than 2 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 Microfilm.

All requirements for the degree must be completed and reported to the Graduate School not later than 2 weeks 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 5 years from the time of registration for the first of the core seminars. Those not advancing to candidacy within the 5 year period must apply to the graduate dean 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 4 years after advancing to candidacy. If the dissertation is not completed within the 4-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 dean.

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 dean may grant or deny such a withdrawal. If the withdrawal is granted, the individual may, with permission of the graduate dean, 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 dean. These requirements do not apply for candidates for the DPA.

Participants in the DPA program must maintain at least a 3.000 (B) GPA 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 6 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.

Dissertation Review Committee. The Dissertation Review Committee is composed of at least 4 individuals, 2 of whom must be taken from the graduate public administration faculty. A 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. The fourth member of the Committee will be appointed by the graduate dean. 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.

Social Work

Faculty
Associate Professors: Polivka (Chair), Hughes, Raskin
Assistant Professors: Bowler, Greene, Turner

Department of Social Work Coursework
This department offers all coursework designated SOCW 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. 3 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 application for social work major to the director of Social Work Admissions. Sophomores should file this application between January 1 and March 15; juniors between September 1 and November 1. The student’s application for admission to the social work major will be reviewed by social work faculty members for action.
A personal interview may be required.
The Social Work Program is designed to prepare the student for beginning generalist professional practice in social work, and has been granted full accreditation by the Council on Social Work Education. The faculty has the responsibility to evaluate the student's performance periodically and the right to require a student to withdraw from the program when in the 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>Semester</th>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>First Semester</td>
<td>PSYC 100</td>
<td>3</td>
</tr>
<tr>
<td>First Semester</td>
<td>History, economics, or government</td>
<td>3</td>
</tr>
<tr>
<td>First Semester</td>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>First Semester</td>
<td>SOCI 101</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>ENGL 102</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>MATH 106</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>GOVT 204</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Third Semester</td>
<td>English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Third Semester</td>
<td>BIOL 103</td>
<td>4</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>PSYC 231 or SOCI 203</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>Elective (or SOCI 100)</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>SOCW 357*</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>SOCW 323*</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>SOCW 311</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>SOCW 351*</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>SOCW 352</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>SOCW 358</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>SOCW 324</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>SOCW 453 or 455**</td>
<td>5</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Social work elective</td>
<td>3</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>SOCI 221</td>
<td>4</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>SOCW 454 or 455**</td>
<td>5</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>Social work elective</td>
<td>3</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>SOCI 471</td>
<td>3</td>
</tr>
<tr>
<td>Eighth Semester</td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* The Social Work Program can be completed in the final 4 semesters. Students who must do so are advised to take the asterisked courses in their fifth (Fall) semester. Otherwise, their graduation will be delayed.
** Students who wish to register for Block Placement must meet specific requirements and be advised by the director of field instruction.

Sociology and Anthropology

Faculty
Associate Professors: Scimecca, (Chairman), Gittler, Williams
Associate Professors: Borkman, Hickey, Kolker, Krech, MacConkey, Rader, Tavan
Assistant Professors: Anderson-Sherman, Avrukh, Black, Golomb, Horton, McAdam, Palkovich, Rosenblum, Schlueeter
Lecturers: Badr, Daddio, Harris, Lucas, Wyatt

Department of Sociology and Anthropology Coursework
This department offers all coursework designated ANTH and SOCI in the Course Dictionary of this catalog.
Requirements for the Degrees

Undergraduate

BA Degree with a Major in Anthropology

In addition to meeting the general requirements for a BA degree in the College of Arts and Sciences, students majoring in anthropology must complete 36 hours in anthropology, including ANTH 114, 120, 135, 332, and 490 and 12 additional hours at the 300-400 level. The following courses are also required: ENGL 391 and SOCI 311.

Within the Anthropology Program are three optional concentrations: Sociocultural Anthropology, Applied Anthropology, and Archaeology. Suggested courses in anthropology and electives in other departments for each of these concentrations are detailed in a description of the program, available at the Anthropology Office.

Sample Schedule for a BA in Anthropology

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 3</td>
<td>ENGL 120 3</td>
</tr>
<tr>
<td>Natural science 4</td>
<td>Natural science 4</td>
</tr>
<tr>
<td>ANTH 114, 120 6</td>
<td>ANTH 135 3</td>
</tr>
<tr>
<td>Psyc., soci.* 3</td>
<td>Analytic reasoning* 3</td>
</tr>
<tr>
<td></td>
<td>Econ., geog., govt., hist.* 3</td>
</tr>
<tr>
<td></td>
<td>Fourth Semester</td>
</tr>
<tr>
<td></td>
<td>Sixth Semester</td>
</tr>
<tr>
<td></td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Oral communication 3</td>
<td>Philosophy or religion 3</td>
</tr>
<tr>
<td>Foreign language 3</td>
<td>Foreign language 3</td>
</tr>
<tr>
<td>Eon., geog., govt., hist.* 3</td>
<td>Fine arts 3</td>
</tr>
<tr>
<td>Psyc., soci.* 3</td>
<td>ANTH 200-level 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Seventh Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature* 3</td>
<td>ANTH 300-level 9</td>
</tr>
<tr>
<td>Foreign language 3</td>
<td>ENGL 391 3</td>
</tr>
<tr>
<td>SOCI 311 3</td>
<td>ANTH 332 3</td>
</tr>
<tr>
<td>ANTH 332 3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 391 3</td>
<td>ANTH 400 3</td>
</tr>
<tr>
<td>ANTH 300-400 level 15</td>
<td>ANTH 300-400 level 12</td>
</tr>
<tr>
<td>Electives* 15</td>
<td>Electives 15</td>
</tr>
</tbody>
</table>

*Come to Anthropology Office for guidance to electives.

Courses in Support of Graduate Programs

Although a graduate degree program in anthropology is not now available, the department does offer graduate courses in support of graduate programs.

BA Degree With A Major In Sociology

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 3</td>
<td>Sociology (200 level) 3</td>
</tr>
<tr>
<td>ENGL 101 3</td>
<td>ENGL 102 3</td>
</tr>
<tr>
<td>Foreign language 3</td>
<td>Foreign language 3</td>
</tr>
<tr>
<td>ANTH 135 3</td>
<td>Natural science 4</td>
</tr>
<tr>
<td>Natural science c24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fourth Semester</td>
</tr>
<tr>
<td></td>
<td>Sixth Semester</td>
</tr>
<tr>
<td></td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Oral communication 3</td>
<td>Sociology (200 or 300 level) 3</td>
</tr>
<tr>
<td>Foreign language 3</td>
<td>ORAL 221 4</td>
</tr>
<tr>
<td>Analytical reasoning 3</td>
<td>Literature 3</td>
</tr>
<tr>
<td>Literature 3</td>
<td>ANTH 114 3</td>
</tr>
<tr>
<td>Foreign Language 3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Seventh Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced sociology courses 6</td>
<td>Sociology (200 or 300 level) 3</td>
</tr>
<tr>
<td>SOCI 303 4</td>
<td>Advanced sociology course 3</td>
</tr>
<tr>
<td>ANTH 332 3</td>
<td>Fine arts 3</td>
</tr>
<tr>
<td>Philosophy or religion 3</td>
<td>Econ., govt., geog., or hist. 3</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Elective 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced sociology courses 6</td>
<td>Sociology (400 level) 3</td>
</tr>
<tr>
<td>SOCI 412 3</td>
<td>Advanced sociology courses 6</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Electives 6</td>
</tr>
</tbody>
</table>

Graduate

Master of Art (M.A.) in Sociology

The Sociology Department offers a Master of Arts (M.A.) in Sociology. The program is designed to provide the student with the theoretical concepts and research skills necessary to both achieve an understanding of the social world and to function as a practicing sociologist. Since this is a research oriented program it is also useful for students who plan to become candidates for a PhD at another University.

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 GRE is required of all applicants.

Admission Requirements

Applicants for the MA degree must meet all of the admission requirements of the Graduate School. In addition, applicants must have achieved a 3.00 GPA 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 6 to 12 hours of graduate coursework with at least a B average. Those who cannot or who fail to do so are automatically dropped from the MA program.
Applicants must furnish the materials required by the Graduate School. In addition they must furnish:

1. Three letters of recommendation. (These letters should assess the applicant’s academic and career potentials.)
2. GRE aptitude scores. (The test must have been taken within 5 years of the date of application.)

Degree Requirements

Degree students are required to complete 33 hours consisting of 15 hours of core requirements. Students may choose either an applied or a general track. The faculty has expertise in the areas of Suburban-Urban Studies’ Criminal Justice; Medical Sociology and Health Delivery Systems, and Clinical Sociology and students are encouraged to elect courses in these concentrations.

Courses of Study

1. Core requirements: Applied:
   SOCI, 612, 620, (520), 630 (530), 632, 640 (540)
   An internship or applied project (credits) is also required.
   Core requirements: General:
   SOCI, 611, 612, 620 (520, 630 (530), 640 (540)
   A thesis (6 credits) is also required.

Electives:

Students in either track can take 12 hours of electives, 6 of which may be from other departments.

Transfer Credit:

Subject to University requirements, a student may transfer with prior approval of his/her graduate faculty advisor up to 6 graduate credits taken at another university.
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 diverse backgrounds and are encouraged to seek excellence 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 research and practice. Students integrate this wide scope of learning and define their personal contribution within the real world in which they will function.

Majors and degrees possible in the College of Professional Studies are: Bachelor of Science in Education (BS Ed) with majors in early childhood education, elementary education, health education, physical education, and vocational education; Bachelor of Science in Nursing (BSN); and Bachelor of Science in Parks, Recreation, and Leisure Studies (BS).

Programs

The College of Professional Studies enrolls students preparing for specific professions. The College is composed of 3 departments in which baccalaureate professional programs are offered as major fields of study:

Department of Education
- Early Childhood Education
- Elementary Education
- Vocational Education

Department of Health and Physical Education
- Health Education
- Physical Education

Department of Nursing
- Nursing

Administration
Larry S. Bowen, Dean
Betty J. Schuchman, Assistant Dean

Teacher Certification

The College of Professional Studies is responsible for professional courses, special standards, and certification recommendation for students desiring to complete requirements for the Virginia Collegiate Professional Teaching Certification in all state-approved and NCATE-accredited programs preparing teachers and administrative, supervisory, and related instructional personnel. Virginia requires persons seeking initial certification to submit score(s) obtained on National Teacher Examinations. Information on these tests can be obtained from the Teacher Certification 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

Sample schedules listed are illustrative only. Courses need not be taken in sequences or semesters indicated, except as prerequisites or other necessities prescribe.

Education

Faculty

Professors: Spikell (Chairman), Azarowicz, Beyer, Bindel, Bowen, Edgemon, Giles, Martín, Montevello

Associate Professors: Bonfadini, Carroll, Chu, Dobson, Duck, Dzama, Given, Gray, Jacobs, Schuchman, Seligman, Smith, Supley, C. Thomas

Assistant Professors: Behrmann, Chernay, Collier, Doebler, Fauth, Hart, Haynie, Hittner, Isenberg, Jacob, Jones, Masat, Sears, W. Thomas


(italics indicate graduate faculty.)

Department of Education Coursework

This department offers all coursework designated EDAS, EDCI, EDRD, EDSE, EDUC and DAED 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
*2. Upper Elementary Education—Grades 4 through 7
*3. Secondary Education—Grades 7 through 12 (Certification only)
*4. Special Certification (Music Education, K-12; Health Education, 7-12; Physical Education, K-12)
5. Library Science—Certification only
6. Vocational Education
   a. Industrial Arts
   b. Trade and Industrial Education

*Program approved by the Virginia State Department of Education and the National Council for Accreditation of Teacher Education.

Admission to Teacher Education Programs

Admission to teacher education programs is granted by the Teacher Education Screening Committee on a selective basis. Application forms are available in 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, January 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), 6 of which must have been taken at George Mason before applying. The application can be submitted, however, while taking the 6 hours. Only students in good academic standing in the College of Professional Studies, the College of Arts and Sciences, and the Graduate School 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

http://catalog.gmu.edu
programs, completion of EDUC 301 and 313. For majors in music education, health education, and physical education, EDUC 301, 302, 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 GPA 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 GPA options (2.500 or 2.800) must be maintained for admission to student teaching.

4. A GPA of 2.500 (or above) in all professional courses with a minimum 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 assigned major. Appropriate forms are in the application packet.

6. All students applying for admission to the Teacher Education Program at the University must complete a writing competency examination. In addition, early childhood and elementary education majors must complete a math competency exam.

7. Students must be recommended for the Teacher Education Program by their department. Recommendations are not given until all department requirements are completed. Students majoring in music, health, and/or physical education should check with departments for information concerning courses required.

8. Suitability for teaching as stipulated in part by Virginia Certification Regulations for Teachers: a. Applicant must be a citizen of the U.S., be at least 18 years of age, and must possess good moral character.

b. Applicant must have good health and no disqualifying physical or emotional handicaps. Evidence of fitness to teach from the standpoint of health may be required from a qualified physician.

Upon admission to the Teacher Education Program, there will be continued review of the student’s effective development as a teacher by the Coordinator of Field Experiences and Education Department faculty.

**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; PHE 201; and THR 254 or an approved oral communications course. Prior to student teaching, secondary students must have completed all prerequisite education courses, be within 3 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 444447). 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. A minimum grade of C in Student Teaching is required to secure the recommendation of the University for certification.

**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 Performing Arts.

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 2 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 may be applied as elective credit.

**Requirements for the Degrees**

**Undergraduate**

**Bachelor of Science in Education**

<table>
<thead>
<tr>
<th>Major in Early Childhood or Upper Elementary Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td><strong>I. Language Arts and Culture</strong></td>
</tr>
<tr>
<td>A. English</td>
</tr>
<tr>
<td>B. Oral Communication</td>
</tr>
<tr>
<td>elect one of the following:</td>
</tr>
<tr>
<td>1. Creative Dramatics for the Elementary School (THR 254)</td>
</tr>
<tr>
<td>2. Oral Communication (COMM 100)</td>
</tr>
<tr>
<td>3. Public Speaking (COMM 120)</td>
</tr>
<tr>
<td>**Option of C or D..............................................</td>
</tr>
<tr>
<td>C. Foreign Language</td>
</tr>
<tr>
<td>D. Regional Cultures</td>
</tr>
<tr>
<td>Select two of the following:</td>
</tr>
<tr>
<td>1. Latin America (LAC 151)</td>
</tr>
<tr>
<td>2. Sub-Sahara Africa (LAC 152)</td>
</tr>
<tr>
<td>3. Asia and Western Pacific (LAC 153)</td>
</tr>
<tr>
<td>4. North Africa and the Middle East (LAC 154)</td>
</tr>
<tr>
<td>E. Literature</td>
</tr>
<tr>
<td>1. Readings in English and American Literature</td>
</tr>
<tr>
<td>ENGL 205 or 206</td>
</tr>
<tr>
<td>2. Three additional hours from ENGL 203, 204, 251, 252, 253, 255</td>
</tr>
<tr>
<td>3. Children’s Literature (EDUC 305)</td>
</tr>
</tbody>
</table>
Bilingual/Multicultural Education

A specialization in bilingual/multicultural education is offered within the early childhood and upper elementary education degree. Interested students should consult with an adviser in the Bilingual/Multicultural Education Center in the Education Department.

Vocational Education Program

The Vocational Education Program is a cooperative arrangement between the University and Northern Virginia Community College (NVCC). Freshman students may enroll in either institution. Individuals who have completed an AAS degree are accepted into the program with appropriate credit given for general education and technical courses taken at NVCC or other institutions. Some specialized technical laboratory courses are taught at NVCC. The Vocational Education program offers 2 specialties—Industrial Arts and Trade and Industrial Education.

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 the 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 4-year program.

Sample Industrial Arts Program

<table>
<thead>
<tr>
<th>Students Enter</th>
<th>GMU or NVCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>GMU</td>
</tr>
<tr>
<td>Education</td>
<td>Technical Teaching</td>
</tr>
<tr>
<td>Requirement</td>
<td>Courses</td>
</tr>
<tr>
<td>for</td>
<td>18 Sem. Hrs.</td>
</tr>
<tr>
<td>Certification</td>
<td>or AAS Degree</td>
</tr>
<tr>
<td></td>
<td>EDUC 370 3 EDUC</td>
</tr>
<tr>
<td></td>
<td>373 3</td>
</tr>
<tr>
<td></td>
<td>EDUC 371 3 EDUC</td>
</tr>
<tr>
<td></td>
<td>364 3</td>
</tr>
<tr>
<td></td>
<td>EDUC 372 3 EDUC</td>
</tr>
<tr>
<td></td>
<td>374 3</td>
</tr>
</tbody>
</table>

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</td>
<td>BIOL 151 or CHEM 106</td>
</tr>
<tr>
<td>PHY 151 (Spring Only)</td>
<td>PHY 151</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 121</td>
<td>HIST 122</td>
</tr>
<tr>
<td>Social science</td>
<td>Regional culture or foreign language</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>16</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 should take GMU technical teaching courses before enrolling in technical elective courses at NVCC.

Students may complete the minimum requirements for AAS Degree in Industrial Education by the end of their fifth semester.

Sample Schedule for Industrial Arts (7-12)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 121</td>
<td>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>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<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>EDUC 364, 373, or 374</td>
<td>World Literature or speech/communications</td>
</tr>
<tr>
<td>Math or science elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical education</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>17</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>Math or science</td>
</tr>
<tr>
<td>History, English elective</td>
<td>History, English elective</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>3</td>
</tr>
<tr>
<td>EDUC 359</td>
<td>3</td>
</tr>
<tr>
<td>Humanities, social science, lab science, or math</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15</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 and transfer an AAS degree or the equivalent from NVCC. 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 or meet state vocational certification by completing the requirements of this program. The program also requires appropriate work experience relating to the area of specialization. The University's Coordinator of Vocational Education evaluates prospective candidates' work experience and transcripts and recommends for approval university credit where applicable.

Sample Schedule for Trade and Industrial Education

Freshman and sophomore years: Obtain AAS degree, or equivalent, from NVCC with a major in industrial education.

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 369</td>
<td>EDUC 366</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></td>
<td>Government, history, geography, or economics</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 466</td>
<td>EDUC 436</td>
</tr>
<tr>
<td>EDUC 467</td>
<td>EDUC 460</td>
</tr>
<tr>
<td>Government, history, geography, or economics</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 110</td>
<td>Regional cultures</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

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.

Certification for Secondary School Teaching

The Secondary School Teacher Education Program has 3 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, govern-
ment, 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 bilingual/multicultural education is offered. Interested students should consult with an adviser in the Bilingual/Multicultural Education office. Students who major in music should consult the Department of Performing Arts. Students with majors in health education or physical education should consult the Department of Health and Physical Education. Students majoring in vocational education should consult the Department of Education.

2. General Education Requirements as mandated by the state of Virginia.

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Humanities</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENGL 101, 102</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>English, foreign language, oral communication, fine arts, music, or philosophy</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>HIST 121 or 122</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Anthropology, economics, geography, history, political science, psychology, or sociology</td>
<td>9</td>
</tr>
<tr>
<td>Laboratory Science and Mathematics</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Electives (from the above categories)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physical Education activities</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

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.

3. The Professional Courses required by the Department of Education: 27 Semester Hours

Recommended: EDUC 302
Required: EDUC 301, 313, 320, 325

One method course in the teaching discipline selected from:
EDUC 450, 463, 467, EDCI 567, 569, 572, 573, EDUC 435
(Credits earned in Student Teaching may not be applied toward a degree in the College of Arts and Sciences.)

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 adviser 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. Note: Post-baccalaureate students need to apply for admission as non-degree graduate education students.

Bilingual/Multicultural Education

A specialization in bilingual/multicultural education is offered within the secondary school education program. Interested students should consult with an adviser in the Bilingual/Multicultural Education Department.

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. BIS students may take a concentration in library science. LSCI 401 and 402 may be taken as electives by any student.

This program is being phased out. Consult the Department of Education for details.

Graduate

Master of Education Programs

The Department of Education offers the Master of Education degree (M.Ed.) 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.

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.

Graduate Assistantships

Administrative, research, and teaching related graduate assistantships are available in the Department of Education. Persons awarded assistantships may be assigned to one or more of the various programs, services, or faculty in the department. To be eligible for an assistantship, a student must be admitted to degree status and take a minimum of 6 semester hours of graduate credit each semester. Interested students should contact the Education Department office for applications. Information about other types of graduate financial assistance can be found in the Student Information section of this catalog.

Departmental Entrance Requirements

In addition to fulfilling the Graduate School entrance requirements, 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 being considered for admission as degree students.

Departmental Degree Requirements

In addition to fulfilling the Graduate School degree requirements, the candidate must:
1. Complete at least one course in each of the two foundations 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 activities are based. The following outline may serve as a guide. (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, 505, 506, or 602.
   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 and course requirements for the graduate program in which enrolled.
3. Pass a comprehensive examination (where required) covering the graduate program in which enrolled. The comprehensive examination given 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

No credit earned more than 7 years prior to admission to a program will be transferred. Credits earned within the 7 year period are evaluated by the student’s adviser. The adviser’s recommendation for transfer of credit must be approved by the appropriate associate chairperson of the department.

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.

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 in the Education Department and must be returned to the student’s adviser.

Computer Names

Names provided for specialized courses in the 6 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. Additional prerequisites pertaining to each course are listed with 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 3 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 3 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 3 persons qualified to judge the candidate’s professional competence.

Degree Requirements

In addition to the departmental degree requirements, students must take 6 hours of basic concentration courses, 9 hours in an area of specialization, and additional coursework to meet the degree total of 30 semester hours. Normally, students are required to take as the basic concentration EDUC 650 and 782, in that order (EDCI 782 is usually offered only in the Spring term). In addition, students normally take 9 hours in one of the following specializations:

1. Pre-elementary Education (Infancy-Kindergarten): EDCI 511, 512, 513, 514, or EDSE 541 (641) or other pre-elementary courses.
2. Elementary Education: EDCI 657, 658, 660, 661, 663, 666, EDGC 624, EDRD 559, EDSE 541 (641), or EDUC 565.

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Psychological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>18</td>
</tr>
<tr>
<td>1. Basic Concentration (6)</td>
<td></td>
</tr>
<tr>
<td>2. Area of Specialization (9)</td>
<td></td>
</tr>
<tr>
<td>Approved Electives</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

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 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 3 persons qualified to judge professional competence.

Degree Requirements

In addition to the departmental degree requirements, students must complete at least 9 semester hours of courses in the teaching field and in a related discipline; EDUC 652, 783, and one of the following as related to the teaching field: EDCI 567, 569, 572, 573, EDRD 614, 615, or EDUC 565. Approved electives bring the total to 30 semester hours. (EDCI 783 is normally offered only in the Fall term.)

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Psychological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>18</td>
</tr>
<tr>
<td>1. EDCI 652 and 783, EDCI 567, 569, 572, 573</td>
<td>(9)</td>
</tr>
<tr>
<td>EDRD 614, 615, or EDUC 565</td>
<td>(9)</td>
</tr>
<tr>
<td>2. Courses in the teaching field or in a related discipline</td>
<td>(9)</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>
Bilingual/Multicultural Education

Students in either the elementary or secondary Master of Education programs may specialize in bilingual/multicultural education. Twelve hours are required in the specialization: EDUC 517, 518, 519, and one Linguistics course (English, Spanish, Korean, or Vietnamese) or EDRD 615. Elective foundations courses offered within the specialty area are EDUC 504 and 506. Students should have full proficiency in English and one other language. Interested students should consult an adviser in the Bilingual/Multicultural Education Center.

Vocational Education

Students in the Master of Secondary Education Program may specialize in vocational education. This specialization is designed to meet the needs of persons with a background in such areas as Industrial Arts, Education, Occupational Education, Business and Office Education, General Vocational Education, Special Needs Education, Cooperative Education, Adult Education, and Home Economics Education.

In addition to meeting other departmental program requirements, 9 semester hours are required to meet the state certification requirements for administration and supervision of vocational education. A minimum of 6 hours of vocational methods courses are required. Each candidate also selects (with academic advisor's guidance) a minimum of 9 hours of work in the area of specialization. This may include up to 6 semester hours internship in business or industry. Interested persons should consult the Vocational Education Office in the Education Department.

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 or to work with adult readers.

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 2 years of successful teaching experience.
3. Be recommended by 3 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 3 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 ED 614; 611 or 612; 613, 615, 616, 617, 790 (6), or 790 (3) and 794 (3).

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>
<td>3</td>
</tr>
<tr>
<td>Research</td>
<td>6</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

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 as well as in governmental and community agencies.

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 2 years of successful teaching experience, a portion of which must be at the level where qualification is desired.
3. Be recommended by 3 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
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 MEd 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>
</tr>
</thead>
<tbody>
<tr>
<td>Psycological Foundations</td>
<td>3</td>
</tr>
<tr>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>15-18</td>
</tr>
<tr>
<td>Total</td>
<td>6</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 3 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 3 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 to the departmental degree requirements, students must complete 15 hours of guidance and counseling core courses, from 12-15 hours in an area of specialization, and elective coursework to meet the degree total of 39 semester hours. Students are required to take as the guidance and counseling core EDGC 604, 606, 608, 610, and EDUC 531. 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.

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>
<td>3</td>
</tr>
<tr>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>27-30</td>
</tr>
<tr>
<td>1. Core Courses</td>
<td>(15)</td>
</tr>
<tr>
<td>2. Specialization Courses</td>
<td>(12-15)</td>
</tr>
<tr>
<td>Approved Electives</td>
<td>0-3</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>

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 2 to 8 years; or severely multihandicapped-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 3 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:
   have Virginia Collegiate Professional certification or the equivalent from another state.
   complete or have completed one course in each of the following:
   teaching of reading,
   teaching of mathematics,
   human growth and development,
   tests and measurements, and Survey of Special Education.
   b. For Education of the Severely Handicapped, applicants must:
   provide evidence of successful completion of a baccalaureate degree in a human services area, such as education, psychology, sociology, or allied health services, and
   provide evidence of work-related experience with severely handicapped individuals.

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, with the Department of Education assuming 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 pursing 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 individual programs of study in concert with their goals, self-assessed skills and knowledge, and program requirements. Each student's program must include study in the liberal arts, sciences, and humanities; in a specific 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:

DAED 800, 801, 811; EDUC 800; EDUC 805 (four 2-credit seminars over 3 years of coursework)

EDUC 590, 911, 994, 998

A sequence of at least 3 courses (9 semester hours) must also be taken in a specific discipline related to the student'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 a specific discipline and participation in seminar discussions of similar papers presented by one's peers culminate this study in a 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.

Residency
The 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 colloquia.

Internship
Candidates enroll in at least one and up to 3 internships designed to broaden their professional expertise. These internships may occur in a variety of settings. 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 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 the University Graduate School admission requirements, each applicant must fulfill the following program admission requirements:

1. A minimum of 5 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. For applicants from elementary and secondary education, 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. 3 letters of recommendation.
5. Graduate Record Examination taken within the last 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 program planning seminar offered only during the summer session. Upon faculty approval of a doctoral program, applicants are admitted to full doctoral student status.

Information and Applications
For further information about admission and program requirements, contact the Graduate School Coordinator of the Doctor of Arts in Education. 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 (Chairman), Kilby, Stein
Associate Professors: Metcalf, Schack
Assistant Professors: Agne, Bennett, Bever Linn, Prager-Decker
Instructors: Masterson
Lecturers: Bhanos, Decker, Godin, Howze, Largent, Magruder, Wells

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 to the teacher education program during or upon completion of the spring semester of the junior year. To be considered for admission, students must meet the following requirements:

1. Have completed or be in the process of completing 72 semester hours, 6 of which must have been taken at the University before applying.

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2. Have completed EDUC 301, 302, 313.
3. Have a GPA 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 GPA 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. 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 GPA 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 must have a GPA 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>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>24</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>(ENGL 101 and 102)</td>
<td></td>
</tr>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>either COMM 100 or 120</td>
<td></td>
</tr>
<tr>
<td>Regional Cultures (Select Two)*</td>
<td>6</td>
</tr>
<tr>
<td>LAC 151, 152, 153, 154</td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td>6</td>
</tr>
<tr>
<td>Literature (200 level)</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Either Art, Music, Drama</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>HIST 121 or 122</td>
<td>3</td>
</tr>
<tr>
<td>Select 6 from the following</td>
<td>6</td>
</tr>
<tr>
<td>Anthropology, Economics, Geography, Government, History, Sociology, Psychology</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Required Courses</td>
<td>35</td>
</tr>
<tr>
<td>BIOL 124-125, HEAL 110, 205, EDUC 301, 302, 313, 436</td>
<td></td>
</tr>
<tr>
<td>Major Courses</td>
<td>49</td>
</tr>
<tr>
<td>Activity Courses</td>
<td>12</td>
</tr>
<tr>
<td>PHED 106, 313, 314, 315</td>
<td></td>
</tr>
<tr>
<td>Professional Courses</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
</tr>
</tbody>
</table>

*May substitute equivalent number of hours in foreign language.

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 GPA in the major and in the area of specialization for graduation. In addition, students are required to meet minimum standards in the area of cardiovascular fitness, strength, and flexibility in the semester preceding the internship. 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

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>47</td>
</tr>
<tr>
<td>Language, Arts, and Culture</td>
<td>24</td>
</tr>
<tr>
<td>ENGL 101, 102; COMM 120 and 130; LAC (3); Art, Music, Drama, or Philosophy (except Logic) (3)</td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>12</td>
</tr>
<tr>
<td>history, sociology, psychology, economics</td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>8</td>
</tr>
<tr>
<td>BIOL 124-125</td>
<td></td>
</tr>
<tr>
<td>Core Requirements</td>
<td>14</td>
</tr>
<tr>
<td>HEAL 110, 205, PHED 105, 107, 108, 151 (or 152 or 153)</td>
<td></td>
</tr>
<tr>
<td>Major Requirements</td>
<td>35</td>
</tr>
<tr>
<td>PHED 300, 303/304, 308, 316, 350, 490</td>
<td></td>
</tr>
<tr>
<td>Electives in HEAL, PHED, or PRLS at 300 level or higher</td>
<td>6</td>
</tr>
<tr>
<td>Specialization</td>
<td>24</td>
</tr>
<tr>
<td>Taken in any one discipline or program outside of Physical Education</td>
<td></td>
</tr>
<tr>
<td>15 hours must be in 300/400-level courses</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>120</td>
</tr>
</tbody>
</table>

Health Education

Bachelor of Science in Education Degree in Health Education with Teacher Certification

The health education major includes background in the biological and behavioral sciences with special preparation in health education and education to meet state certification requirements for teaching at the secondary level (grades 7-12). Students must take the Common Examination of the National Teacher Examinations prior to being recommended for state certification.

Admission to the Teacher Education Program

The program in teacher education is accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should apply to the teacher education program during or upon completion of the spring semester of the junior year if all requirements are met. To be considered for admission to the teacher education program in health education, students must meet the following requirements:

1. Have completed or be in the process of completing 60 semester hours, 6 of which must have been taken at the University before applying.

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2. Have a GPA 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 GPA 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 3 courses: HEAL 310, 325, or 330.

4. Have requested and received a recommendation from the Health and Physical Education Department.

5. Have submitted 3 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 GPA 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. Undergraduate and post-baccalaureate students should be admitted to the Teacher Education program prior to enrollment in HEAL 420 and 440. These courses are required for admission to student teaching.

3. Prior to student teaching the student should have 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>15</td>
</tr>
<tr>
<td>ENGL 101, 102; COMM 100 or 120</td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL 203, 204, 205, or 206</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>Art, Music, or Philosophy</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>21</td>
</tr>
<tr>
<td>PSYC 100, and 314; Sociology; HIST 121 or 122; Anthropology or Regional Cultures or Foreign Language</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Natural Science</td>
<td>27</td>
</tr>
<tr>
<td>CHEM 106, BIOL 103-104, 124-125, 185; MATH 252-254</td>
<td></td>
</tr>
<tr>
<td>Required Courses</td>
<td>7</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td></td>
</tr>
<tr>
<td>Health 110</td>
<td>3</td>
</tr>
<tr>
<td>Professional Sequence</td>
<td>24</td>
</tr>
<tr>
<td>EDUC 301, 302, 313, 435; HEAL 420, 440</td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>28</td>
</tr>
<tr>
<td>HEAL 120, 205, 220, 310, 315, 325, 330, 430, 460</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>122</td>
</tr>
</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 seminars and is supplemented by additional study in a support discipline(s) of psychology, government, and sociology.

Students planning to pursue this degree program must present a 2.000 or higher GPA in all courses and a 2.500 or higher GPA in health education courses completed prior to applying for admission to the program. Applications to major in this program should be submitted to the Health and Physical Education Department upon completion of 45 semester hours (must include Personal Health and Community Health courses). All students must be certified in standard first aid prior to graduation.

**Requirements for the Bachelor of Science Degree in Education**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Health Education</td>
<td></td>
</tr>
<tr>
<td>Language Arts and Culture</td>
<td>12</td>
</tr>
<tr>
<td>ENGL 101, 102; COMM 100 or 120</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>34</td>
</tr>
<tr>
<td>Required Core Courses</td>
<td></td>
</tr>
<tr>
<td>ANTH 114; PSYC 100; GOVT 241; HIST 121 or 122; SOCI 101 and 221</td>
<td></td>
</tr>
<tr>
<td>Support Discipline: Choose 15 Hours (with Adviser's approval)</td>
<td>15</td>
</tr>
<tr>
<td>No. 1 Psychology</td>
<td></td>
</tr>
<tr>
<td>PSYC 220, 321, 325 and 423</td>
<td></td>
</tr>
<tr>
<td>No. 2 Government</td>
<td></td>
</tr>
<tr>
<td>GOVT 302, 357, 358, 401, and 411</td>
<td></td>
</tr>
<tr>
<td>No. 3 Sociology</td>
<td></td>
</tr>
<tr>
<td>SOCI 240, 306, 390, 441 and Elective(3)</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>20</td>
</tr>
<tr>
<td>BIOL 103, 104, 124, 125, 185</td>
<td></td>
</tr>
<tr>
<td>Required Courses</td>
<td>16</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td></td>
</tr>
<tr>
<td>EDUC 225, SOCI 203, PHED 397/398</td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>35</td>
</tr>
<tr>
<td>HEAL 110, 120, 315, 323, 420, 430, 440, 450, and 460</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Health Education (One from the following)</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 205, 220, 310, 325, 330, Other (Choose 9 hours from any department)</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>120</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 BS degree in park, recreation, and leisure studies 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 M.Ed. degree in secondary education may select health education as a field of study. Certification at the collegiate professional level in secondary health education or related field is required. The applicant must possess a baccalaureate degree in health education or a related field. For information, see the M.Ed. in Secondary Education section of the Department of Education in this catalog.

**Nursing**

**Faculty**

Professors: D. Walker
Associate Professors: Ailinger, Billingsley, Carty, (Chairman), Harper, Koerber, Liu, Shine, Silva, Smith
Assistant Professors: Bednash**, Bennett, Boland, Cherry, Connelly, Feeg, Hackel, Hall, Hayes, Jenkins, Joseph, Kopac, Michael**, Millonig, Neill, Piemme, Pitts, Redmond, Schmalt, Sewall**, Vaughan, L. Walker, L. Williams

COLLEGE OF PROFESSIONAL STUDIES 97

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Instructors: Baker, Rhome
Lecturers: Boyd, Butler, Ciampa, Eckert, Geldmaker, Hollingsworth, Koch, Langley, Ledbetter, Miller, O'Reilly, Overby, Reafs, Roberts, Robinson, Swenson, Tackett, Tipton, J. Williams, Yoselle

*On Leave of Absence Spring, 1982
**On leave of absence, 1981-82

Staff: Brenchus, R.N. Adviser; Cianci, Agency Liaison

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 in Nursing

The Bachelor of Science in Nursing degree is designed to enable individuals to meet the challenge of a changing and increasingly demanding health care delivery service. Graduates are prepared to function as professional nurses in hospitals, nursing homes, community health agencies and in the home. Emphasis is placed on early detection of potential health problems, health maintenance in ambulatory services, and enlarged responsibilities for nurses in hospitals and other health agencies.

Degree Requirements

Candidates for the degree must present at least 120 semester hours of work. Specific requirements for the BS in nursing are as follows:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>15</td>
</tr>
<tr>
<td>English (ENGL 101-102)</td>
<td>6</td>
</tr>
<tr>
<td>Oral Communication (COMM 100, COMM 301, COMM 355)</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Art (appreciation, history, criticism, or theory)</td>
<td></td>
</tr>
<tr>
<td>Music (appreciation, history, criticism, or theory)</td>
<td></td>
</tr>
<tr>
<td>Literature (in addition to 6 hours of ENGL 101, 102)</td>
<td></td>
</tr>
<tr>
<td>Philosophy, Language, Religion, or Humanities</td>
<td></td>
</tr>
<tr>
<td>Social Behavior Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>21-23</td>
</tr>
<tr>
<td>Chemistry (CHEM 103-104)</td>
<td>8</td>
</tr>
<tr>
<td>Biology (BIOL 124-125 or BIOL 274)</td>
<td>6-8</td>
</tr>
<tr>
<td>Microbiology (BIOL 261)</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (MATH 250)</td>
<td>3</td>
</tr>
<tr>
<td>Nursing Major</td>
<td>58</td>
</tr>
<tr>
<td>NURS 254/260, 290, 292, 301, 302, 311, 312, 321, 322, 411, 426, 431, 450, 470, 476</td>
<td></td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>13-15</td>
</tr>
</tbody>
</table>

Total | 120 |

1Recommended
2No more than 3 hours of nursing department electives may be used to satisfy this requirement.
3COMM 301 or COMM 355 by permission of the department

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 performance 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. A student may not take a clinical experience in an agency in which he/she is employed. A junior student must have CPR certification before entering a junior clinical.

Completion of the program may require attendance in one or more summer sessions.

Special Quality Standards in the Major Field

Because knowledge, skills, and behavior patterns in the major field of this program are so vital to the health and perhaps even the survival of individuals or groups being served, failure or borderline achievement cannot be tolerated. Therefore, the faculty of the department has established, with approval of the University faculty and administration, the following special major field quality standards which go beyond the general University quality standards printed elsewhere in this catalog:

Acceptance into Junior Standing in Nursing

Acceptance into Junior Standing in Nursing is 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.

Application for acceptance into Junior Standing in Nursing for the Fall Semester must be made prior to March 15; for the Spring Semester, prior to November 15.

All prerequisite courses and credit by examination must be successfully completed before recommendations are made to accept the student into Junior Standing. These recommendations are made at the end of the semester when all courses are completed and grades have been reported. Students who have not successfully completed credit by examination by the end of Fall Semester or Spring Semester cannot be guaranteed clinical placement in Junior-level courses. The registered nursing student takes proficiency exams for junior standing.

A committee of nursing faculty will recommend to the department chairperson applicants judged on the basis of (1) cumulative GPA in courses (wherever taken) which are prerequisites for NURS 301, 302; and (2) performance in NURS 262, the first departmental clinical course. The student has the right to appeal.

Full time nursing requires carrying a heavy schedule; therefore, outside obligations should be limited to ensure success.

Additional Academic Grade Standards

A final nursing course grade of less than C prohibits further progress in the sequence of required nursing courses until that course is repeated and a satisfactory grade 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

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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 summer session (to include all summer academic sessions), petition the department chairperson to repeat the nursing course (or courses if 2 grades of less than C were earned in the same semester) which resulted in the suspension.

No more than 2 nursing courses may be repeated. Failure to produce a satisfactory grade of C or better in the trial course(s) or subsequently in any nursing course results in exclusion from the University's nursing program.

Sample Schedule for Undergraduate Nursing Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Sociology</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>Humanities</td>
</tr>
<tr>
<td>BIOI 124</td>
<td>BIOI 125</td>
</tr>
<tr>
<td>Physical education</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>2</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>Humanities</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>CHEM 104</td>
</tr>
<tr>
<td>BIOI 261</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>NURS 254/304</td>
<td>NURS 262</td>
</tr>
<tr>
<td></td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 301</td>
<td>NURS 302</td>
</tr>
<tr>
<td>NURS 311</td>
<td>NURS 321</td>
</tr>
<tr>
<td>NURS 312</td>
<td>NURS 322</td>
</tr>
<tr>
<td>Electives</td>
<td>Statistics</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
</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>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Graduate

Master of Science in Nursing

The graduate program in nursing is accredited by the National League for Nursing and 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 are 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 a baccalaureate program accredited by the National League for Nursing; (2) have obtained a cumulative GPA of 3.000 (on a 4.000 scale) in the last 2 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 3 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 2 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 U.S.; (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 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 2 years of undergraduate work or last 60 credits of undergraduate work. Students with provisional status must complete 12 credits of graduate work, 6 in graduate nursing courses, with a GPA 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 the 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 Graduate School degree requirements. In addition, the master's program in nursing requires 36 semester hours of graduate credit.

Core Research Courses ................................................. 12-15

Nursing Major Areas ...................................................... 12

1. Nursing Administration at the Middle Management Level

2. Long-Term Care Nursing

3. Gerontological Nursing

Nursing Electives ....................................................... 6

Related Discipline Electives ......................................... 6

Departmental Course Prerequisites

NURS 755 is co-or prerequisite to any course in the Nursing Administration Long Term Care or Gerontological Nursing majors.

NURS 759 is co-or prerequisite to NURS 790. NURS 763, 765, NURS 773-775, NURS 783-785 are co-or prerequisite to NURS 790.

BUAD 660 and BUAD 661 or equivalent are co-or prerequisite to NURS 763.

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, 773, 775, 783, 785, and 790 will be offered Fall Semester 1982.

2. NURS 766, 768, 776, 778, 786, 788, 791, and 799 will be offered Spring Semester 1983.

Students are to meet the health examination immunization requirements imposed by the agencies 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.

Middle Management Level must have 2 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 U.S.; (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 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 2 years of undergraduate work or last 60 credits of undergraduate work. Students with provisional status must complete 12 credits of graduate work, 6 in graduate nursing courses, with a GPA of 3.000 on a 4.000 scale in these courses to be considered for degree status.

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Students must meet all the Graduate School degree requirements. In addition, the master's program in nursing requires 36 semester hours of graduate credit.

Core Research Courses ................................................. 12-15

Nursing Major Areas ...................................................... 12

1. Nursing Administration at the Middle Management Level

2. Long-Term Care Nursing

3. Gerontological Nursing

Nursing Electives ....................................................... 6

Related Discipline Electives ......................................... 6

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BUAD 660 and BUAD 661 or equivalent are co-or prerequisite to NURS 763.

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, 773, 775, 783, 785, and 790 will be offered Fall Semester 1982.

2. NURS 766, 768, 776, 778, 786, 788, 791, and 799 will be offered Spring Semester 1983.

Students are to meet the health examination immunization requirements imposed by the agencies 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.

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Placement in practicum experiences will depend upon availability of appropriate clinical resources and preceptors. No student in the graduate nursing program may be enrolled in more than one Practicum course in any semester.

**Continuing Nursing Education**

Continuing education is an important commitment of the Nursing Department at the University and activities are planned so that individuals can grow personally and professionally.

The Department of Nursing, in cooperation with the 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.

**Certificate Programs**

The Department of Nursing participates in the graduate and undergraduate certificate programs in Gerontology. The graduate programs offers 2 graduate level certificates: Certification in Nursing Administration at the Middle Management Level and Certificate in Nursing Education. (See Certification Program section of 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. D. Boe, 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.

Requirements for the Degree

Undergraduate

Bachelor of Science Degree
The programs in business administration offered by the University culminate in a 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 5 faculties has developed groups of required and optional courses pertaining to specific areas of concentration within each major.

All students must complete at least 30 semester hours in this degree program following acceptance to 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 (MGMT 498).

Degree Requirements
The following requirements must be met by all degree applicants.

<table>
<thead>
<tr>
<th>Business Core Courses</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting (ACCT 201, 202)</td>
<td>6</td>
</tr>
<tr>
<td>Applied Statistical Analysis (DESC 202)</td>
<td>3</td>
</tr>
<tr>
<td>Computer-Based MIS (INF5 201)</td>
<td>3</td>
</tr>
<tr>
<td>Decision Models (DESC 301)</td>
<td>3</td>
</tr>
<tr>
<td>Business Legal Studies (BULE 401, 302)</td>
<td>6</td>
</tr>
<tr>
<td>Finance (FNAN 301)</td>
<td>3</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
<td>3</td>
</tr>
<tr>
<td>Marketing (MKTG 301)</td>
<td>3</td>
</tr>
<tr>
<td>Business Strategy and Policy (MGMT 498)</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>18</td>
</tr>
<tr>
<td>Language Arts and Culture</td>
<td>21</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Oral Communication (COMP 100 or 130 req)</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>6</td>
</tr>
<tr>
<td>Humanities (all ARTH (Art History) courses, or DAN 101, 391; MUSI 101, 105, 106, 107; or THR 101, 351, 352, 353, 356, 357; or Philosophy; or Religion)</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>21</td>
</tr>
<tr>
<td>Principles of Economics</td>
<td>6</td>
</tr>
<tr>
<td>Economics (Upper level, including ECON 306 or 310)</td>
<td>6</td>
</tr>
<tr>
<td>History or government or geography</td>
<td>3</td>
</tr>
<tr>
<td>Psychology and/or sociology and/or anthropology</td>
<td>6</td>
</tr>
<tr>
<td>General and Health Sciences</td>
<td>14</td>
</tr>
<tr>
<td>Mathematics (MGMT 108, 109)</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Sciences (astronomy, biology, chemistry, geology, physics)</td>
<td>8</td>
</tr>
<tr>
<td>Electives</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
</tr>
</tbody>
</table>

1Completion with a grade of C or better required before or in semester of application for acceptance to Junior Standing.
2Must be taken at the University.
3Approved areas of concentration within a major are shown in each program.
4May include no more than 4 semester hours of physical education activity courses.
5May include a maximum of 62 semester hours of credit from accredited 2-year colleges.

Change in Business Legal Studies Sequence
A change in the Business Legal Studies sequence for the School of Business Administration becomes effective with the 1982 Fall semester. The required sequence of BULE 301 and 302 is replaced by the sequence BULE 301, 401. Students who have completed the old sequence are not required to complete the new sequence, but may take BULE 401 for general elective credit. Students who have completed BULE 301 in the old sequence should take BULE 401 in order to finish the sequence.

Change in Mathematics-Statistics Sequence
A change in the mathematics-statistics sequence for the School of Business Administration became effective with the 1982 Fall Semester. The required sequence of MATH 107, 108, 109, DES 202, 203 replaced the old sequence. Students who have completed the old sequence are not required to complete the new sequence. Students who have only completed 1-3 courses of the old sequence should consult the table below for the courses they must complete in order to finish the mathematics-statistics sequence.

<table>
<thead>
<tr>
<th>Have Completed</th>
<th>Must Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 107</td>
<td>MATH 108, 109, DES 202</td>
</tr>
<tr>
<td>MATH 107, 108</td>
<td>MATH 109, DES 202</td>
</tr>
<tr>
<td>MATH 108</td>
<td>MATH 109, DES 202, 301</td>
</tr>
<tr>
<td>MATH 107, 108, DES 205</td>
<td>DES 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.

A minimum of 30 hours of coursework must be completed following acceptance to Junior Standing. Of these 30 hours, 18 must be in the upperlevel business courses required or elective concentration in a major offered by the School of Business Administration, and 3 must be in MGMT 498. 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.

Acceptance to Junior Standing in Business Administration

Acceptance to Junior Standing is competitive and limited to the resources available to the School and an appropriate share of projected total University enrollment. To apply for acceptance to Junior Standing, students must meet these eligibility requirements:

1. Completion of 60 or more hours at the 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; INFS 201; and DESC 202 by the end of the semester in which application is made.

*For the 1982-83 academic year, 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 the University and/or another college, including that completed during the semester of application.

Note: failure to perform satisfactorily (defined as satisfactory grades in more than two-thirds of the credit hours undertaken) during the semester of application is cause for denial of acceptance to Junior Standing, regardless of the student’s overall performance.

Acceptance to Junior Standing is competitive based on quality of academic work and the courses presented on the application. Special consideration is given to grades earned in the courses specified in eligibility requirement above and any other courses offered by the School of Business Administration that students may have completed prior to acceptance.

Students should file for acceptance to Junior Standing by the deadline established for the semester at the end of which they will have met the eligibility requirements. The deadline in a given semester is on or before February 1 or October 1. Applications received after these dates will be returned. Students have the right to appeal a denial.

Students planning to transfer to the University from another institution and who have completed or will complete the requirements for acceptance to Junior Standing by the end of their current term should make application on or before the appropriate deadline. A student planning to transfer to the University in, e.g., the Fall Semester, is required to apply for acceptance to Junior Standing on or before the deadline for application in the preceding 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. Upperlevel, non-core business courses (required or elective in the major) 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 should submit an application for acceptance to Junior Standing as soon as 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 program for prebusiness students is 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.

Sample Schedules

Sample schedules for pre-business students and students accepted to Junior Standing are shown below. The Sample Schedule shown for prebusiness students should be completed in the sequence shown if at all possible. The Sample Schedule for students accepted to Junior Standing is illustrative only. Courses need not be taken in the precise sequence or semesters indicated, except as prerequisites or other necessities prescribe.

<table>
<thead>
<tr>
<th>Sample Schedule for First Four Semesters in Pre-Business</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>ECON 103¹</td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>MATH 108¹</td>
</tr>
<tr>
<td>Laboratory Science²</td>
</tr>
<tr>
<td>Humanities²</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>DESC 202¹</td>
</tr>
</tbody>
</table>

| **Third Semester**                                      | **Fourth Semester**       |
| ACCT 201¹      | ACCT 202¹               |
| INFS 201¹      | History or government or geography |
| Literature     | 3                       |
| DESC 202¹      | Literature              |
| Psy or soci or anthro² | Oral communication |
| Psy or soci or anthro² | COMM 100 or 130 |
| Psy or soci or anthro² | 15                     |

¹Completion with a grade of C or better required before or in the semester of application for acceptance to Junior Standing.
²: 2 - may be taken in any order.

<table>
<thead>
<tr>
<th>Sample Schedule for Students Accepted to Junior Level Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fifth Semester</strong></td>
</tr>
<tr>
<td>BULE 301</td>
</tr>
<tr>
<td>DESC 301</td>
</tr>
<tr>
<td>FNAN 301</td>
</tr>
<tr>
<td>MGMT 301</td>
</tr>
<tr>
<td>MKTG 301</td>
</tr>
</tbody>
</table>

| **Seventh Semester**                                      | **Eighth Semester**     |
| Area of concentration  | MGMT 498               |
| ECON upper-level elective  | Area of Concentration  |
| Electives         | 3                      |
| Electives         | 6                      |

| **Eighth Semester**                                      | **Elective**             |
| Area of Concentration  | 6                      |

102 George Mason University
Accounting/Business Legal Studies

Faculty

Associate Professor: Coffinberger, Floyd, Samuels, Stagliano (Faculty Chairman)
Assistant Professors: Buchanan, Cao, Jones*, Millsapough, Potts, Swanson
Instructors: Clarkson, Ingram, Reisig*
Lecturers: Berkowitz, Buter, Capps, Carroll, Dabney, Dawson, Donovan, Gillespie, Harr, LeRosen, Mehal, Michaud, E. Miller, J. Miller, Norcio, O'Rourke, Pape, Pope, Patterson, Rizzo, Schoen, Schoenauer, Sielicki, Steele, Stephens, M. Williams, Wills, C. Woehrle, T. Woehrle

* on leave of absence.

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 general degree requirements for the BS degree, students 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: ACCT 311, 331, 332
Electives: Three or more from: DESC 352, ACCT 312, 351, 352, 333, 461, 411, 471, 491

Concentration in Management Accounting

Required: ACCT 311, 312, 411
Elective: Three or more from: DESC 352, ACCT 331, 332, 333, 351, 352, 461, 491, INFS 411, MGMT 311.

Concentration in Public Accounting

Required: ACCT 311, 331, 332, 461
Electives: Two or more from: ACCT 351, 333, 471, 491

Concentration in Government Accounting

Required: ACCT 311, 312, 471
Elective: Three or more from: DESC 352, ACCT 331, 332, 411, 491, DESC 352, MGMT 371

Concentration in Taxation Accounting

Required: ACCT 331, 332, 333, 351, 352
Electives: One or more from: ACCT 461, 491, DESC 352, MGMT 371

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.

Business Administration

The faculty of the School of Business Administration, with the Assistant Dean for Undergraduate Program, offers a major in business administration with 4 interdisciplinatory areas of concentration. In addition to the general degree requirements for the BS degree, students must complete 18 hours of upper-level courses. NOTE: Students may not utilize the major in business administration if credit for more than one major is desired.

Within the major, students must choose an area of concentration as shown below:

Concentration in General Business Administration

Required: ACCT 311, DESC 352, FNAN 401, MGMT 311, MKTG 471
Electives: One or more upper-level, non-core courses offered by the School of Business Administration.

Concentration in Operations Management

Required: ACCT 311, DESC 352, MGMT 461
Electives: Three or more from either Group A or Group B.
Group A: INFS 411, MGMT 311, 331, 381, MKTG 331
Group B: DESC 353, 354, 355, 451

Concentration in Financial/Accounting Information Systems

Required: ACCT 312, 411, FNAN 401, INFS 411
Electives: Two or more from: ACCT 311, 471, FNAN 321, INFS 311

Concentration in Accounting Information Systems

Required: ACCT 312, INFS 311, 411
Electives: Three or more from: ACCT 311, 333, 411, 461, FNAN 401, INFS 312

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

Associate Professors: Baum, Greenberg, Ruth, Siff (Chairman)
Assistant Professors: Mitchell, M. Oblak, Parent
Instructors: Bocast, Gardner, Quitmeyer, Schank
Lecturers: Beutel, Carlson, Chamberlain, Cruickshank, Fishburn, Gkeit, Holroyd, Hveng, Joscelyn, Millar, Onasch, Pinto, Powers, Rugh, Rubble, Sheehan, Weed, Woods

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. Within the concentration of Information Systems, one or three tracks in Applications, Decision Support Systems, or Computer Systems Programming may be pursued. As the names indicate, each track provides a different perspective on 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. Students should discuss their choice of major within Decision Sciences and the tracks within Information Systems with a faculty adviser.

Concentration in General Decision Sciences

Required: DESC 352 and INFS 411
Electives: Four or more from: BUAD 535, DESC 353, 355, 452, INFS 311, MGMT 381, and 461

Concentration in Management Science

Required: DESC 352, 353, 355, and 451
Electives: Two or more from: BUAD 535, DESC 452, INFS 411, MGMT 381, 461, MKTG 351

Concentration in Information Systems

Required: INFS 310, 312, 411
Electives: In addition to INFS 310, 312, 411, each student elects one of the following tracks within the concentration in Information Systems:

SCHOOL OF BUSINESS ADMINISTRATION 103

http://catalog.gmu.edu
Required Application Track Courses: INFS 311, 315, 403
Required Decision Support Systems Track Courses: BUAD 535, DESC 352, INFS 315
Required Computer Systems Programming Track Courses: CS 311, INFS 311, CS 460

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. For students graduating under the provisions of an earlier catalog, DESC 301 may be considered equivalent to DESC 351 (which is no longer offered). This substitution can be effected only if DESC 301 is not used to complete the required 12 hours mathematics-statistics sequence.
3. Individuals who have taken INFS 211 may use it to meet the prerequisites of courses requiring INFS 310. Individuals electing to graduate under this or future catalogs may not use INFS 211 to satisfy the requirement for INFS 310, an additional upper-level Information Systems elective must be substituted for INFS 310.

Important Scheduling Note: Because INFS 310 is prerequisite to so many required INFS courses, particularly for General Management Sciences and the Information Systems concentrations, students needing INFS 310 should take it in their fifth semester and defer one of FNAN 301, MGMT 301, or MKTG 301 until their seventh semester.

Finance/Real Estate and Urban Development

Faculty
Associate Professors: Johnston (Faculty Chairman), Hysom
Assistant Professors: Grimshaw, Oblak, Pierce
Acting Assistant Professor: Kim
Instructor: Kirks
Lecturers: Batt, Kevorkian, Pagett, Shaikh, Winter

The finance and real estate and urban development faculty offers a major in finance with 5 areas of concentration designed to prepare students for professional careers in finance as well as 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 Real Estate and Urban Development
Required: REUD 301, 411, 412, 421
Electives: Two or more from: ACCT 351, FNAN 311, 321, 421, 413, BUAD 581, 582

Management

Faculty
Professors: English, Steinhauer (Faculty Chairman)
Associate Professors: Kovach, Marchione, Sands
Assistant Professors: Bolce, Brooks, Carper, Duke, Meares, Ondec, Pejsar
Lecturers: Cohany, Dempsey, Fare, Godden, Gordon, Gray, Haggard, Hampton, Henry, Johnson, Kreps, Lambert, Martin, Mekaru, Mietus, L. Miller, O’Kelley, Platt, Ridolfi, Smart, R. Smith, Stimson, Wilson, Zimmer

(italics indicate graduate faculty.)

The management faculty administers a major in management with 3 areas of concentration designed to prepare students for managerial careers in the public and private sectors. In addition to general degree requirements for the BS degree, students must complete 18 hours in upper-level courses. Within the major, students must choose an area of concentration as shown below.

Concentration in General Management
Required: MGMT 311, 321, 461
Electives: Three or more from: MGMT 331, 341, 371, 381, 411, 421, 431, 451 (351), 471, 491

Concentration in Personnel/Industrial Relations
Required: MGMT 311, 321, 331, 421, 431
Electives: One or more from: MGMT 341, 371, 381, 411, 461, 491

Concentration in Small Business Management
Required: MGMT 311, 451 (351), 461
Electives: Three or more from: MGMT 321, 341, 381, 491, ACCT 311, INFS 411, MKTG 311, 332

Marketing

Faculty
Professors: DeBoer (Dean), Tongren
Associate Professor: Entrikin (Faculty Chairman), McCrohan
Assistant Professors: Domzal, Goretsky, Wintle
Instructors: Rishell
Lecturers: Cramer, Hoelzel, Iodice, B. Jones, Mason, McNallen, Rahn
(italics indicate graduate faculty.)

The marketing faculty offers a major in marketing with 6 areas of concentration designed to prepare students for careers in marketing and related fields. In addition to general degree requirements for the BS degree, students must complete 18 hours in upper-level courses. Within the major, students must choose an area of concentration.
Concentration in General Marketing
Required: MKTG 311, 313, 471
Electives: Three or more from: BUAD 307, MKTG 312, 331, 332, 333, 351, 451, 491

Concentration in Marketing Management
Required: MKTG 351, 471
Electives: Four or more from: MKTG 311, 313, 331, 333, 451, 491

Concentration in Marketing Research
Required: MKTG 351, 451
Electives: Four or more from: MKTG 312, 313, 331, 333, 471, 491

Concentration in Retail Management
Required: MKTG 312, 332, 471
Electives: Three or more from: (One must be in Marketing Area.) ACCT 331, MGMT 311, 451 (351), MKTG 313, 331, 351, 491

Concentration in Industrial and Government Marketing
Required: MKTG 311, 333
Electives: Four or more from: (Three must be in marketing area.) ACCT 471, MGMT 371, MKTG 313, 331, 351, 451, 491

Concentration in Sales Management
Required: MKTG 311, 471
Electives: Four or more from: MKTG 312, 313, 331, 332, 333, 351, 391, 451.

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.

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 6 hours of undergraduate work in a discipline (at least 3 hours must be upper-level undergraduate coursework in finance, marketing, management, law) or an equivalent graduate course. The minimum MBA program is 36 hours.

Coursework Alternative

<table>
<thead>
<tr>
<th>Coursework Alternative</th>
<th>Thesis Alternative</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>

MBA Entrance Requirements
In addition to fulfilling the Graduate School entrance requirements for the 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 GPA of 2.750 on a 4.000 scale for the last 60 semester hours of undergraduate 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 enrollee does not per se qualify a student for admittance into the MBA program.

MBA Degree Requirements
A candidate must fulfill all of the Graduate School degree requirements 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 the 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 602 BUAD 600, 610, 620, 630, 640, 650, 660 (24 semester hours)
Completion of all foundation coursework is prerequisite to coursework 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:

SCHOOL OF BUSINESS ADMINISTRATION 105

http://catalog.gmu.edu
BUAD 601, 611, 621, 641, 661, 797, 798 (21 semester hours) (See note below on Thesis option.) total: 21 hours

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 2 graduate courses in one of the areas. Areas currently available are:
   - 15 hours 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. 6 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 6 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 6 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 6 hours of graduate coursework may be transferred from other institutions. However, to be considered for transfer, such work must have been completed within 5 years prior to the date of admission to the Graduate School of the University.
6. In all cases, students must complete a minimum of 24 hours of graduate coursework at the 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 3 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>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>0-24</td>
</tr>
<tr>
<td>ECON 602, BUAD 600, 610, 620, 630, 640, 650, 660</td>
<td>21</td>
</tr>
<tr>
<td>MBA Core</td>
<td></td>
</tr>
<tr>
<td>BUAD 601, 611, 621, 541, 661, BUAD 797 (after completion of 27 semester hours of core and elective courses)</td>
<td>21</td>
</tr>
<tr>
<td>BUAD 798 (after minimum of 30 hours of core and elective courses)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>15</td>
</tr>
<tr>
<td>At least 6 hours from one of the following specialty areas: Accounting: BUAD 702, 703, 704, 705, 706, 707, 708, 709 Administrative Management: BUAD 583, 585, 762, 763, 764, 765, 766, 767, 769, 773 Financial Management: BUAD 703, 712, 713, 715, 716, 717, 719, 783, 785, 789</td>
<td></td>
</tr>
</tbody>
</table>

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 581, 582, 680, 780, 781 783, 784, 785, 787, 788, 789

Thesis Option
BUAD 799: Thesis (Substitute for BUAD 788 and one elective course)
Total Hours .......................... 36-60

Master of Science in Information Systems

The Master of Science in Information Systems is a rigorous program in the modern field of computer-based information systems technology. Offered by the Decision Sciences Faculty of the School of Business Administration, it is designed for baccalaureate degree holders from a variety of disciplines who wish to pursue careers in this vital field. Decidedly applications-oriented, the program recognizes, and is aimed at satisfying, the need in both the private and public sectors for graduate trained individuals who are both technically proficient and organizationally and managerially qualified. The program provides a strong technical foundation from which critical skills in the design, development, and management of information systems are developed.

It has been suggested that a computer science program develops individuals who can talk to the computer and an MBA develops individuals who can talk to organizations. Within this over-simplification, the University's MS in Information Systems program is aimed at developing individuals who can effectively communicate with both. In this way, it meets a real need in the information systems field for individuals who are more specialized than one can expect from an MBA degree and yet who are more organizationally sensitive than one could expect from a highly technically oriented computer science program. With its emphasis on the design, development, and management of human engineered information systems, this program complements the University's other degree programs, specifically the MBA degree and the new Master of Science in Computer Science.

The program is to be initiated in the Fall 1982 semester. All courses are scheduled in the late afternoon or evening to permit individuals who are employed full-time to enroll in the program. For those who wish to study in the program on a full time basis, financial aid may be available in the form of graduate assistantships.

MS in Information Systems Entrance Requirements

In addition to fulfilling the entrance requirements for the Graduate School, applicants for the MS in Information Systems 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 GPA of 2.750 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 letter explaining any such 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, including at least a score of 50% on the Quantitative portion) on the Graduate Management Admission Test (GMAT). The GMAT should have been taken within 5 years of applying for admission.
5. The School of Business Administration admits to the program for the Fall and Spring terms only. Admission to the MSIS degree program is on a competitive basis. The admissions decision is based on grades in prior academic course work, 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 enrollee does not per se qualify a student for admittance into the program.

MSIS Degree Requirements

Candidates must fulfill all of the degree requirements of the Graduate School and the following specific academic requirements of the program:

Foundation

Candidates must have completed the equivalent of the foundation courses or take them at the University. These courses provide a common body of knowledge for students wishing to pursue graduate work at the master's level. There are 30 hours of graduate foundation coursework. Some of these may be satisfied by academic coursework in the students' 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 the 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 program, either on a degree of provisional basis.

The foundation courses are: (10 courses, 30 hours) ECON 602 (offered by the Economics Department) BUAD 600, 610, 620, 630, 640, 650, 660, 641, INFS 600

Specialization

Completion of all foundation coursework is prerequisite to the courses in the Information Systems specialization. This specialization requires 30 hours of graduate coursework (10 courses) beyond the foundation as follows:

Required Courses: (5 courses, 15 hours) INFS 711, 710, 712, 714, 722

Elective Courses: (3 courses, 9 hours)

To be selected from a broad range of available courses, including a thesis option, wherein a student may elect to complete a thesis which would earn 6 hours of credit. Capstone Required Course: INFS 790 (3 hours)
Division of Continuing Education

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. Later a similar cooperative In-Service Education program began with the Department of Education.

In the fall of 1978, President George W. Johnson announced the upgrading of the status of the University's continuing education service from the Office of Extended Studies to the Division of Continuing Education, effective January 1, 1979. This change recognized the maturing of George Mason University and the essential place in its offerings for adults who turn to their regional university for educational renewal. The step emphasized the University's determination to provide an extensive lifelong learning program to the community.

Programs and Services

The Division of Continuing Education provides the Northern Virginia community with a comprehensive program of learning opportunities: the nontraditional Bachelor of Individualized Study degree program; undergraduate evening programs; the nursing continuing education program; in-service education; the Extended Studies Enrollment procedure; off-campus credit instruction: contract courses; undergraduate guest matriculant enrollment; senior citizen enrollment; community services; and noncredit courses. 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. Reithlingshofer, Assistant Director

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 entrance 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, explain registration procedures, and acquaint students with the University services available to Extended Studies enrollees. All academic policies and procedures apply to Extended Studies enrollees. Completed courses, earned credits, and grades are recorded on regular University transcripts.

Counseling appointments are required of all new Extended Studies students and of all returning Extended Studies students who have earned 15 or more semester hours of credit as Extended Studies students at GMU. Counseling appointments are optional for all other returning Extended Studies students who have taken courses at some time during the past 2 years, have transcripts on file, and have earned 14 or fewer semester hours of credit at GMU.

Counseling and enrollment services are available to the public throughout the entire year in the Division of Continuing Education. During non-registration times, career and academic counseling services are available on a walk-in basis, and appointments are not needed. During presemester registration periods, counseling services are limited to course approval only, and appointments are required. Interested students should call the Division for appointments and office hours.

Enrollment Requirements

Prospective enrollees are required to supply unofficial evidence of their academic background, their two previous college courses through 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 (2.000) in all undergraduate courses and at least B (3.000) in all graduate courses. Students who do not meet these criteria during 2 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.

Guest Matriculant Enrollment

Persons enrolled in undergraduate degree programs at other accredited institutions who wish to take undergraduate courses at the University for transfer back to their home institution enroll through the Division of Continuing Education during the fall and spring semester. Such students should submit transcripts and permission to enroll from the appropriate dean of the home institution to a counselor in the Division of Continuing Education. Only students in good academic standing at their home institution are permitted to enroll as guest matriculants at George Mason. Guest matriculants enrolled in graduate programs at other accredited institutions should contact the Graduate School to make arrangements for taking graduate courses.

During the summer terms, however, both undergraduate and graduate guest matriculants should contact the Office of the Registrar to arrange for 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 $7,500 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.

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.

The dean of the Division administers many academic policies for undergraduate evening students. Evening class schedules are included in the University’s Schedule of Classes.

Community Services Activities

A significant outgrowth of continuing education at the University has been the Office of Community Services. Its purpose is two-fold: to bring the University to the community, and the community to the University.

To accomplish this, the Office of Community Services focuses on both community education and community service programs. Community education programs at the University consist of two types of formal instructional activities which may extend the University’s teaching resources into the community at large. They may take the form of conferences, workshops, seminars, institutes or short courses. Such non credit courses may be taken for re-certification, to gain knowledge in a specific area, re-licensure, to provide in-service training or to upgrade skills. There has also included an extensive number of courses in nursing continuing education, library skills training seminars, music workshops, the English Language Institute, consumer programs on law, a conference on reading for pre-school children, a lecture series on the use of microprocessors in technology, and Elderhostel, a summer residential program for senior citizens. Additionally Community Services assists faculty members in sponsoring conferences, workshops and seminars to promote continuing education in their respective professions.

In this capacity it has facilitated meetings for educators in various fields as well as encouraging the academic departments of the University to work with public agencies, professional organizations and private concerns to offer one and two-day conferences and occasional residential programs to be conducted primarily by University faculty. Continuing Education Units (CEU’s) may be awarded to participants as permanent records of their attendance in previously designated community education programs.

The second facet of Community Services is its public service component. In this regard it assists with the planning of occasional programs of a non-instructional nature which provide an opportunity to share with the community some of the University’s unique capabilities, resources and faculty expertise. Public service programs may be part of other community education activities, such as a choral concert scheduled as the entertainment component of a professional conference. No CEU’s are offered for public service programs; they are designed for the general public to experience and enjoy.

The University’s physical plant offers outstanding accommodations for continuing education and service programs. Its three campuses provide wide choices of meeting rooms and facilities. Non-credit programs at the main campus are usually held in the Student Union, the Harris Theatre, or in several large lecture halls. Other sites may be used for specific activities, such as music programs which are usually hosted at the North Campus. The Professional Center, located on the third floor of the Metro Campus in Arlington, Virginia, is accessible through the Virginia Square Metro Station. Many community education and service programs are held there throughout the year, including art displays, theatre productions and numerous workshops, conferences, seminars and non credit courses.

Off-Campus Credit Instruction

Off-campus credit instruction is offered at sites convenient to the residential communities and places of employment in Northern Virginia. Courses are located where there seems to be a logical need or presumed interest, at all times that are convenient for working adults. Currently the Division 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. The courses can be used to fulfill certain necessary prerequisites for advanced degrees. Students may take several courses off campus, and take only those courses on campus which require the use of special facilities, such as a computer.

As off-campus credit instruction expands, the Division will attempt to respond to students enrolled at the Northern Virginia Community College campuses who wish to continue their studies in a bachelor’s program, and to undergraduate and graduate students who are located in U. S. government or business facilities in Northern Virginia.

All off-campus graduate and undergraduate courses are approved by the appropriate college or school in the University and are fully applicable as resident credit toward the appropriate degree at George Mason. In most instances, these courses are also approved by professional or licensing agencies. Transcript records for courses taken off campus are identical to those taken on campus. The University calendar, regulations, and tuition are the same for off-campus courses as for those on campus. The University insists that its faculty and students adhere to all regulations of the off-campus facilities, such as those governing smoking and/or drinking.

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 on-campus, at the work site of the client, or at a designated location. These contract courses are approved by the appropriate college or school of the University. They are taught by faculty or recognized authorities.

Contract courses are offered for credit or may also be offered on a non-credit basis specifically designed for that particular audience. The students may receive Continuing Education Units (CEU's) or some other recognition of achievement that may apply toward professional certification. The major topical areas have been Management Information Systems, Technical Project Management, Proposal Writing, Logistics Management, Purchasing, Performance Appraisal, and Communications. Contact the Coordinator of Off-Campus Instruction for specific information.

Professional Awareness Programs
The Division of Continuing Education Professional Awareness Programs provides quality training and education to professional managers and potential executives who are moving into positions requiring broad managerial or technical talent. Programs are generally conducted at the Metro Campus in Arlington, and are open to the public; however, programs can be arranged off-site at the organization, elsewhere in the Washington metropolitan area, or on one of the University's other campuses if requested. Program offerings are reasonably priced and conveniently designed to avoid taking participants away from their jobs for substantial lengths of time.


Contact the Coordinator of Off-Campus Instruction for specific information pertaining to offerings.

In-Service Education
Among the primary audiences served through contract courses are the teachers and administrators of local school divisions. In-Service experiences are specially designed to increase the knowledge and upgrade the competence of public and private school educators on a variety of topics. Contract courses are offered in school divisions by the University departments in such specialized areas as computer literacy, the teaching of writing, human relations and substance abuse.

Instructors for contract In-Service courses are adjunct University faculty as well as full-time faculty. In-Service credit courses are applicable to degree programs subject to advisor approval.

For further information contact the GMU In-Service Education Coordinator.

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 consultants.

When planning and presenting continuing education program activities, the Department of Nursing utilizes the wealth of available resources in Northern Virginia and the Washington Metropolitan area. Nationally recognized nursing consultants are frequent guests on campus.

Comments and suggestions for programming from the health care community are welcomed and encouraged. One may be placed on the mailing list to receive notice of specific activities scheduled throughout the academic year by contacting either the Division of Continuing Education or the Department of Nursing.

Bachelor of Individualized Study Degree Program (BIS)
The BIS Degree Program offers mature students an academically sound program providing an alternative to traditionally structured baccalaureate degrees. It provides each student, guided by a University academic adviser, an opportunity to formulate a course of study which complements individual needs and interests. The choices in any given instance are inter-institutional, individualized, and interdisciplinary.

The BIS degree is conferred by the University in partial fulfillment of its service obligation to Northern Virginians. Approximately 380 students have been granted BIS degrees since the establishment of the program in 1975. Another 400 students are currently enrolled in the Program. The Program is administered by the Coordinator of the BIS Program in the Division of Continuing Education, and the Dean of the Division is academic dean for all students in the Program.

The Program recognizes the breadth of an adult student's background by providing for generous transfer of credits earned at accredited institutions and by providing procedures to translate knowledge gained from prior experiential learning or self-education into academic credits as appropriate.

In acquiring credits toward a BIS degree, a student may proceed at his/her own pace. The Program recognizes that not all knowledge is gained in the classroom. It emphasizes the development and evaluation of the student's ability, not the manner in which the knowledge was acquired. The Program is aimed at meeting the varied needs of the mature adult student who may not need or desire the traditional BS or BA degree, or who is confronted with obstacles barring the pursuit of a more conventional degree.

Eligibility
Applicants to the BIS Program must have been out of high school at least eight years and have accumulated at least 30 semester hours of college credit with a minimum grade of C. At least 15 of the initial 30 hours required for admission must have been earned through conventional classroom instruction.

Application and Acceptance
Students who meet the eligibility requirements may fill out an application to the BIS Program after an initial counseling session with BIS counselors. Appointments for counseling may be made by calling (703) 3232342. Application deadlines are January 1, April 1, July 1, and October 1 of each year. Although a student may apply to the BIS Program before making application to the University, only students admitted to the University can be accepted into the program. Students are notified of their acceptance or denial by the last day of the month following each deadline. Acceptance into the BIS Program is conditional until the student obtains a faculty adviser and a signed educational contract. Although the BIS Coordinator and counselors can assist the student in this process, finding a faculty adviser remains the responsibility of the student.

Acceptance decisions are based on the Coordinator's assessment of the individualized, non-traditional nature of the course of study desired by the applicant; the availability of courses relevant to the desired field of study within the Northern Virginia Consortium for Continuing Higher Education (see final section below); the availability of academic advisors in the field; the GPA of the student, and the likelihood of the student benefiting from the proposed course of study. In general, a nontraditional, individualized course of study is defined as one not offered through established academic departments at the University. Denials of admission to the program may be ap-
pealed to the Dean, Division of Continuing Education and to the BIS Advisory Committee of the University Faculty Senate. Re-application to the BIS Program is required of students who have been inactive for two years or more or who wish to change the content of their individualized course of study.

Program Requirements

1. The student must complete a minimum of 120 semester hours of coursework. At least 45 semester hours must be upper level coursework (courses numbered in the 300 or 400 sequences), and at least 30 semester hours must be completed at George Mason University or other institutions of the Northern Virginia Consortium.
2. The student must complete the following minimum General Education requirements:
   a. 6 hours in English Composition/Literature (ENGL 101 (100), 102, or equivalent)
   b. 6 hours of Science or Mathematics
   c. 6 hours of Humanities
   d. 6 hours of Social or Behavioral Sciences
3. In conjunction with a University academic adviser, the student must design and complete an individualized program of coursework relevant to his/her non-traditional educational interest. This study core constitutes the student’s "individualized major." The core must include a minimum of 30 semester hours of credit, at least 12 of which must be upper level coursework. A maximum of 6 hours of grades of D may be included in the core. A student with 33 hours or less remaining in the degree program is required to obtain a faculty adviser before additional coursework is completed.
4. The student must complete a final project the content of which must be related to the individualized study core. This project is undertaken in the last semester of study under the course heading BIS 490. Three credits are given for successful completion of the project (grade of C or better). These credits can be counted toward all program requirements above but they may not be counted toward the 30 hours of the individualized study core. The student's academic adviser and 2 other faculty members constitute the grade committee for this project. One member of the committee is selected by the faculty advisor and one member is selected by the student. A grade of IP (in progress) may be given by the adviser, if appropriate, to allow the student additional time to complete the BIS project. The IP grade will be changed to F if the project is not completed by the end of the next grading period.
   The following are examples of the types of individualized, nontraditional concentrations designed by BIS students in conjunction with faculty advisers: American Folk Culture; Art Therapy; Aviation Management; Community Resources Program Development; Computer Applications to Health Care; Consumerism; Corporate/Community Relations; Economics of Politics; Eighteenth Century Medicine; Environmental Design; Procurement and Grants; Graphic Arts and Photography; Health Care Program Administration; History of Private Enterprise; Interpretive Naturalist; Investments and Commodity Trading; Liturgical Music; Medical Illustration; Meteorology and Oceanography; Museum Management; Music Management; Philosophy and Psychology of Sports; Psychology of Marketing; Senior Citizen Communities; Therapeutic Recreation in Gerontology; Women's Studies; Writing for Government.

Credit for Non-Traditional Modes of Learning

In addition to liberal acceptance of credit earned through traditional coursework at accredited institutions, the University's BIS degree allows a student to receive college credit for learning acquired through a variety of non-traditional methods. A maximum of 4 credits for experiential learning demonstrated by portfolio may be granted following an assessment and recommendation by the student's academic adviser or by a committee assembled by the faculty adviser. The number of credits granted for experiential learning is not limited if such learning can be demonstrated by examination such as course equivalency examinations offered by academic departments. Credit for experiential learning granted by other institutions, however, may not be transferred unless such credit was earned through examination.

Credit earned through CLEP, USAFI, or DANTES subject examinations can be granted. A limited amount of credit may also be earned through CLEP General Examinations. Credit earned through correspondence courses, television courses, and other non-traditional modes of imparting knowledge certified by accredited institutions of higher learning can be applied toward the degree. Completion of certain recognized certificate programs may also be granted credit. Coursework taken through branches of the military, government agencies, and some private corporations may be transferred if such coursework is indexed and evaluated as college level work by the American Council of Education.

The Northern Virginia Consortium for Continuing Higher Education

The members of the Northern Virginia Consortium are George Mason University (the host institution), Marymount College of Virginia, Northern Virginia Community College, the Falls Church Regional Center of the University of Virginia, and Virginia Polytechnic Institute and State University. As George Mason University awards the BIS degree on behalf of the Northern Virginia Consortium, courses completed at any Consortium institution count toward the 30 semester hour Consortium requirement of the BIS degree. In addition, fewer restrictions apply to the transfer of Consortium credits into the BIS program than into traditional programs. Although permission must be obtained from the Dean, Division of Continuing Education, for George Mason University admitted students to take courses at other institutions, the BIS program allows full utilization of the education resources of the Consortium in work toward the BIS degree. Faculty at Consortium institutions may serve on the BIS 490 Project Committee, although only a George Mason University faculty member may sign an educational contract or serve as the major adviser.
Interdisciplinary Programs

University Courses

Committee on University Curriculum Matters

John M. Smith, (Chairman), Richard F. Baum, Richard L. Coffinberger, Douglas G. Mose, Amelia A. Rutledge

On January 26, 1977, the Faculty Senate of the University voted to establish a new category of courses, University Courses. These were first offered during the Spring 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. Descriptions appear in the Course Dictionary. Recent offerings include:

UNIV 410: Assassination and Terrorism as Political Weapons (3). Offered Fall 1980.
UNIV 411: Electronic Communication (Television) and the Representation of Reality (3). Offered Fall 1980.
UNIV 412: Family Law (3). Offered Fall 1980.
UNIV 413: Life in the Universe (3). Offered Fall 1980.
UNIV 414: Feminist Perspectives on Sexual Liberation (3). Offered Spring 1981.

UNIV 416: Intelligence in the Universe (3). Offered Fall 1981.
UNIV 417: Energy Alternatives for the Eighties (3). Offered Fall 1981.

UNIV 418: Corporate-Government Relations in the International Environment (3). Offered Fall 1981.

UNIV 420: Nuclear War (3). Offered Spring 1982.

UNIV 423: Consciousness and Modern Physics (3). Offered Fall 1982.

UNIV 424: South Africa: Crisis and Conflict (3).

UNIV 425: Utopias and Utopian Thought in the Western World (3).

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 (chairman), Roberta Greene, Doreen Harper, Douglas McAdam, Jeanne Mellinger, Mary Montebello, Frederick Schack

The certificate programs in gerontology are designed for students who wish to train for work with older people and for professionals working with the elderly. The programs provide a background of basic knowledge in gerontology and then permit the students to train in professional skills in areas such as counseling, recreation, social services, nursing, and administration.

Individuals 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 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 hold a baccalaureate degree or be receiving a baccalaureate degree from the University at the time they receive the certificate. Students are required to have 8 hours of biology, anatomy, or physiology and 3 hours of psychology or sociology.

The 24 semester hours are divided as follows:

1. 6 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)
2. 6 semester hours in a practicum in gerontology: PSYC 548, 549 EDUC (to be arranged)
3. A minimum of 9 semester hours selected from:
   - NURS 480, PRLS 470, PSYC 415; SOCI 441, 483
4. 3 to 6 hours of electives selected from:
   - Gerontology Undergraduate Electives: EDUC 440, 441; NURS 494, 495, 499; PHED 499, PSYC 460; SOCI 499; Reading and Research in Gerontology
   - SOCI 350: Sociology of the Life Cycle
   - Gerontology Graduate Electives: EDUC 598, NURS 635, 636, 798; PHED 530; PSYC 614, 786, 796 *May be taken if student has prior interviewing skills.
   - Cognate Electives:
     - EDGC 654, 656, 606, EDUC 525, 526, HEAL 220, 330, PHED 616, PSYC 326, 423, PUAD 502, 503, SOCI 590, 550, 551

To qualify for the certificate, a student may present all courses applicable to the certificate in which satisfactory grades have been received and up to 6 hours in which D grades have been received.

Master's Level Certificate in Gerontology

Students who hold a master's degree or are enrolled in a master's degree program at the University may apply to enter the master's level certificate program in gerontology. This program combines theoretical and applied coursework 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 hold master's degrees must choose an area of specialization for 2 of their gerontology courses and their practicum.

Application to the program should be made to the Graduate School office. The student is required to have 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
Two graduate level courses in aging outside the major
Practicum in gerontology

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http://catalog.gmu.edu
Graduate Certificate in Nursing Education

Purpose
The Graduate Certificate in Nursing Education program combines foundational courses for education with courses in the principles and practice of nursing education. The program prepares students to function in educational roles in both academic and non-academic health care settings. Program Content
The Graduate Certificate in Nursing Education consists of the following 15 hours of graduate work:
EDUC 531 - Educational and Psychological Measurement...... 3
EDCI 701 - Educational Program Development.................. 3
NURS 657 - Perspectives in Nursing Education............... 3
NURS 658 - Practicum in Nursing Education..................... 3-6*
*Those individuals who by virtue of educational experience qualify for a 3 credit practicum may choose the remaining 3 credits, of the total 15 credits, from courses designated by the Department of Nursing.

Descriptions of each of the above courses may be found in the Course Dictionary section of this catalog. NURS 657 is a pre- or corequisite to NURS 658. Practicum placement is arranged, supervised, and evaluated by faculty teaching NURS 658 and enrollment depends upon availability of faculty preceptors in appropriate settings. For those enrolled in degree status in the M.S.N. program, EDUC 531 and EDCI 701 may fulfill related discipline degree requirements and NURS 657 and NURS 658 may fulfill nursing elective degree requirements.

Program Requirements
Individuals applying to the Graduate Certificate in Nursing Education program must be in degree status in the Graduate Nursing Program or hold a master’s degree in nursing from an N.L.N. accredited program. Although recommendation for admission is made by the Graduate Nursing Admissions Committee, applications to the certificate program are made through the Graduate School. On approval of the nursing faculty, the Graduate Certificate in Nursing Education is awarded to individuals who (a) have earned a master’s degree in nursing from an N.L.N. accredited program and (b) have completed the required 15 hours of the certificate with a grade of B or better in each course.

Graduate Certificate in Nursing Administration at the Middle Management Level

Purpose
The certificate program is designed for the student with a masters degree in nursing who wishes formalized study in theory and practice in management of nursing care and practice at the middle management level in health care delivery agencies.

Program Content
The program for the certificate consists of the following 18 semester hours of graduate course work:

BUAD 660 - Management Theory and Practice or equivalent 3
BUAD 661 - Cases in Human Behavior........................................ 3
NURS 763 - Seminar in Nursing Administration at the Middle Management Level I ............................................. 3
NURS 765 - Practicum in Nursing Administration at the Middle Management Level I ............................................. 3
NURS 766 - Seminar in Nursing Administration at the Middle Management Level II ................................................... 3
NURS 768 - Practicum in Nursing Administration at the Middle Management Level II ................................................... 3

Total.................................................................................................................. 18

Students must have completed all required course prerequisites in order to enroll in the practicum. Practicum placement is arranged, supervised, and evaluated by faculty teaching the practicum courses. Enrollment in NURS 765, 768 depends upon availability of qualified preceptors in appropriate health care agencies.

Program Requirements
Individuals applying to the Certificate program must have a masters degree in nursing from a National League for Nursing accredited nursing program. Application is made through the Graduate School of the University and recommendations on admission to the certificate program are made by the Graduate Admissions Committee of the Department of Nursing. Upon completion of the 18 hours of required course work and the maintenance of a 3.00 or higher GPA, the Graduate Certificate in Nursing Administration at the Middle Management Level is awarded.

Certificate Program for Psychology Technicians
Inquiries should be directed to Dr. Carol Erdwins (Department of Psychology).

Purpose of Program
The psychology technician program provides the theoretical background and behavioral skills necessary for successful performance at the paraprofessional or introductory level in many human service settings and agencies. Completion of this program enhances the graduate's ability to perform in settings such as group homes, sheltered workshops, and activity centers for emotionally disturbed children and adults; training centers for mentally retarded persons; adolescent treatment programs; and residential facilities for juvenile offenders and the aged.

Program Content
This certificate program consists of 24 semester hours in psychology beyond the introductory level course (PSYC 100, which is a prerequisite to all other courses). These hours include:

PSYC 220, 325, 326, 322
One of the following:
PSYC 211, 313, 314, 397
One of the following:
PSYC 320, 414, 420, 423 and PSYC 421, 422

Note: Some courses are prerequisites to others and need to be taken in sequence. Specifically, PSYC 220 is a prerequisite to PSYC 322, 325, and 423; PSYC 325 is a prerequisite to PSYC 326, 414, and 420; and both PSYC 325 and 326 must be completed before beginning the practicum (PSYC 421, 422).

This practicum is ordinarily taken during the student's senior year; it offers the student an opportunity to gain work experience under supervision in a variety of human service agencies. The work placement is for approximately 8 to 10 hours per week with a minimum of 240 hours during the 2 semesters.

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 welfare. 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 2 unsatisfactory grades (D) and a minimum grade of B in

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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-numerical 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.

Inquiries should be directed to Dr. Carleton W. Cox (Department of Public Affairs).

Program Requirements

The certificate program in cartography consists of 24 semester hours of courses. Students receiving the certificate must hold a baccalaureate degree or be receiving a baccalaureate degree from George Mason University at the time they receive the certificate. Only those courses with grades of C or better will be counted towards the certificate program.

No more than 12 hours may be completed at the 100 level. At least 12 semester hours must be completed at the 300-400 level.

1. Fifteen semester hours of required courses in the Management Core:
   - GEOG 303, 403, 241, 357 and ENGL 310

2. At least 9 hours of elective courses approved by the Certificate Program Adviser. Students must elect at least 6 hours from Group A and at least 3 hours from Group B.
   A. Environmental Management Electives (at least 6 hours):
      - BIOL 230, 307, C49, CHEM 106, GEOG 102, 206, GEOL 204, 205, 301, 302, GOVT 358, 401, -HYSS 201
   B. Environmental Tool Electives (at least 3 hours):
      - CS 261, 262, GEOG 411, 412, MATH 252, 255

Master of Science in Conflict Management

The Center for Conflict Resolution was officially established in March, 1981 to espouse the concept of conflict resolution as one means of establishing the University's commitment to the field of public affairs. Recognizing that society is badly in need of alternative solutions to the violence which permeates it, the University saw that it could serve the community, state, and nation by being in on the ground floor of new and growing profession.

In the Fall of 1982, the University will offer a multidisciplinary Master of Science degree in Conflict Management to train the first credentialed conflict intervenors, thus giving impetus to a new professional discipline. The program will integrate training in conflict resolution with the academic study of social processes; patterns of conflict interaction among individuals, social groups, institutions, and nations; and the role of conflict in shaping society. The core of the entire curriculum is the professional service function. The focus is on conflict and the conditions of its solution; it is not on specific issues or levels of analysis.

Applicants to this program must meet the entrance requirements of the Graduate School. In addition, they must submit two letters of recommendation and a resume if their baccalaureate degree is more than five years old. Exceptions to the requirement may be made for equivalent experience on an individually assessed basis. The 54 hours required for this program will entail two years of study including a summer internship. Additionally, details are being worked out to permit part-time students to take this program and extend it over a longer period of time.

Curriculum Outline

1st Year
Semester I
Philosophical Aspects of Conflict and Conflict Management (3)
- Theories of Conflict and Conflict Management (3) Laboratoy and
- Simulation in Conflict Processes I (3) Cross-Cultural Communication (3)
Semester II
Interpersonal Conflict and Conflict Management (3)
Organizational Conflict and Conflict Management (3) Laboratoy and
- Simulation in Conflict Processes II (3) Fieldwork in Cross-cultural Conflict Processes I (3)

Internship in Conflict Management (3)

2nd Year
Semester III
Community Conflict and Conflict Management (3)
International Conflict and Conflict Management (3)
Laboratory and Simulation in Conflict Processes III (3)
Fieldwork in Cross-cultural Conflict Processes II (3) Semester IV

INTERDISCIPLINARY PROGRAMS 115
Master Of Science in Operations Research And Management Science

The Master of Science in Operations Research and Management Science is an interdisciplinary program offered in the Graduate School by the Decision Sciences Faculty and the Department of Mathematical Sciences. The program is designed to provide broad based training combining theory, methodology and application to individuals who are or will be involved in the rapidly expanding activity of applying mathematical and other scientific techniques to the problems of business, industry, governmental agencies and other organizations. The program is designed primarily for individuals with quantitative backgrounds who want a greater depth of study of operations research theory and methodology than is provided by the management science specialization in the M.B.A. program and a greater emphasis on application than is provided by the operations research option in the M.S. program in mathematics. This program is offered in addition to the currently offered M.B.A. with concentration in Management Science, the M.S. in Mathematics with concentration in Operations Research, and the M.S. in Mathematics with concentration in Statistics.

The program contains five core courses (Operations Research I, II, Applied Statistics, Computer Simulation, Seminar in Management Science) which provide students with a comprehensive understanding of the basic techniques and applications of OR/MS. Students then select three additional methodology courses in Operations Research, one in Applied Statistics, and two Applications courses from a large number of offerings to complete the 33 hour program.

A joint committee established by the Decision Sciences Faculty and Mathematical Sciences Department will evaluate the applicants for admission to the program, act as advisors and in general administer the program.

Admissions Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants for the Master's degree in Operations Research and Management Science must:

1. Hold a baccalaureate degree including the following courses or their equivalents:
   - MATH 113, 114, 213: Calculus, including calculus of several variables
   - MATH 351: Probability
   - MATH 303 or 322: Matrix Algebra or Linear Algebra
   - ECON 103: Microeconomics
   A student with deficiencies in preparation may be accepted provisionally pending removal of the deficiencies. Courses taken to remove entrance deficiencies cannot be counted toward the degree.
2. Have a knowledge of at least one scientific computer programming language.
3. Have three letters of recommendation submitted by former professors and/or supervisors.

Degree Requirements

In addition to fulfilling the degree requirements of the Graduate School, the candidate for the Master of Science degree in Operations Research and Management Science must complete thirty-three credits divided as follows:

1. The core curriculum will consist of the following five courses (15 credits):
   - BUAD 535 Computer Simulation
   - BUAD 743 Seminar in Applications of Management Science
   - OR 541 Operations Research I
   - OR 542 Operations Research II
   - STAT 654 Applied Statistics
   *With approval of his/her adviser, a student may replace BUAD 743 with an appropriate mathematics seminar.
2. One additional statistics course must be chosen from the following list (3 credits):
   - STAT 653 Survey Sampling
   - STAT 655 Analysis of Variance
   - STAT 656 Regression Analysis
   - STAT 657 Nonparametric Statistics
   - STAT 752 Mathematical Statistics
3. Three additional methodology courses must be chosen from the following list (9 credits):
   - MATH 681, 682 Systems Optimization and Control
   - OR 641 Linear Programming and Network Flows
   - OR 642 Integer Programming
   - OR 644 Nonlinear Programming
   - OR 645 Stochastic Models in Operations Research I
   - OR 646 Stochastic Models in Operations Research II
   - OR 648 Queuing Theory
   - OR 649 Topics in Operations Research
4. Two additional application courses must be chosen from the following list (6 credits):
   - BUAD 563 Operations Management
   - BUAD 732 Computer Based Information Systems
   - BUAD 744 Contemporary Issues in Decision Analysis
   - BUAD 772 Managerial Economics I
   - BUAD 773 Managerial Economics II
   - ECON 513 Macroeconomic Theory
   - ECON 555 Resource Economics
   - ECON 575 The Economics of Urban Transportation Planning
   - PUAD 641 Policy Analysis
   - PUAD 642 Program Evaluation
   With the permission of his/her adviser, a qualified student may elect to write a thesis in place of three credits of course work from the methodological or applications area.

Less than one-half of the total credit hours may be taken in School of Business Administration courses.
Course Dictionary

This dictionary is a comprehensive list of undergraduate and graduate credit courses 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. Except where obvious (i.e., English), the department offering the course is cited in the heading. The computer names used are:

Accounting
American Studies
Anthropology
Art History
Art Studio
Astronomy
Biology
Business Administration
Business Legal Studies
Cartography
Chemistry
Classics
Communication
Computer Science
Doctor of Arts in Education
Economics
Education
Education: Administration/Supervision
Education: Elementary/Secondary
Education: Guidance/Counseling
Education: Research
Education: Special Education
Engineering
English
European Studies
Finance
Foreign Language
French
Geography
Geology
Germán
Government and Politics
Greek
Health Education
History
Information Systems
Italian
Japanese
Korean
Latin
Latin American Studies
Library Science
Management
Marketing
Mathematics
Medical Technology
Music
Nursing
Operations Research
Philosophy
Physical Education
Physics
Portuguese
Psychology
Public Administration
Public Affairs
Real Estate and Urban Development
Regional Cultures
Religion
Russian
Social Work
Sociology
Spanish
Statistics
Theatre
University

General

Course titles are followed by numbers in parentheses (0:0), separated by colons. The numbers have the following significance:

First number: semester credit hours for the course
Second number: hours of lecture/seminar per week for the course
Third number: hours of laboratory/studio per week for the course

2. For independent study, reading, topics, or similar courses, individual instructors set hours.

3. The following abbreviations are used in the course dictionary:

- Pol: Permission of instructor
- PoC: Permission of chairman, chairperson
- PoD: Permission of department
- hr: hour(s)
- cr: credit(s)
- sem: semester(s)
- regis: registration/register
- 24 hr: sophomore standing
- 54 hr: junior standing
- 84 hr: senior standing
- lab: laboratory (ies)
- sci: science(s)
- nat: natural
- non-W: non-Western
- undergrad: undergraduate(s)
- grad: graduate(s)
- prereq: prerequisite(s)
- coreq: corequisite(s)
- req: required(d)/requirement(s)
- intro: introduction/introductory
- incl: including
- rec: recommend(ed)/recommendation(s)
- equiv: equivalent(s)

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 single number indicates that the course is complete within a single semester, and that the semester course may be taken separately with credit toward a degree.
- 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.
- 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.

Graduate

1. Courses numbered 500 and above are graduate courses.

2. Courses are occasionally renumbered by departments. 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. 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- Graduate courses open only to graduate students (admitted 599 to master's or doctoral programs) to 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- Graduate courses open only to graduate students (admitted to master's or doctoral programs) and to other bachelor's degree holders.

700- 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- 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.)

609 Limited applicability graduate credit courses. Courses intended for in-service 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.

799 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.

998 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.

999 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.

790 Supervised practicum.

890 794 Internship.

894 796 Directed reading and research courses for master's and doctoral level students.

897 797 Independent reading and research courses for master's and doctoral level students.
Accounting Courses (ACCT)

School of Business Administration

Effective Fall Semester 1981, non-core, upper-level (300-400 level) 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.

201 Financial Accounting (3:3:0) Basic financial accounting and reporting practices, incl financial controls.

202 Managerial Accounting (3:3:0) Prereq ACCT 201 Topics incl statement analysis, resource flow statements, budgeting cost concepts and applications, and the role of income taxes in decision making.

311 Cost Accounting (3:3:0) Prereq ACCT 201, 202, or Pol Cost analysis, reporting, and control. Identification of complicating factors and alternative treatments that occur in financial and management accounting.

312 Accounting Systems (3:3:0) Prereq ACCT 201, 202, and INFS 201, or Pol Topics incl systems design and integration with other information systems. Emphasis on automated systems incl evaluation of existing systems and design and installation of new systems.

313 Intermediate Accounting I (3:3:3) Prereq ACCT 201 and 202 Preparation and analysis of financial reports incl statement of financial position, earning statements, combined financial statements, statements of changes in financial position, and financial statements adjusted for price-level changes.

312 Intermediate Accounting II (3:3:3) Prereq ACCT 313 A continuation of ACCT 331.

333 Advanced Accounting (3:3:0) Prereq ACCT 201, 202, 331 and 332, or Pol An examination of current conceptual and practical issues in accounting for corporate combinations, preparation of parent and subsidiary consolidated statements, partnership accounting, segment reporting, foreign currency translation, and fund accounting.

351 Federal Taxation (3:3:0) Prereq ACCT 201 History, theory, and outlines of federal income taxation for individuals, partnerships, and corporations.

352 Advanced Federal Taxation (3:3:0) Prereq ACCT 351 or Pol Practical and theoretical training in provisions of federal income tax, advanced problems, tax case research, and preparation.

411 Advanced Managerial Accounting (3:3:0) Prereq ACCT 311 or Pol Quantitative and behavioral aspects of managerial accounting.

416 Auditing (3:3:3) Prereq ACCT 331, 332, and DESC 202, or Pol Audit objectives, reports, and procedures. Professional ethics and legal liabilities.

417 Institutional and Governmental Accounting (3:3:0) Prereq ACCT 201 and 202 Advanced study of accounting for governmental, not-for-profit institutions, incl fund accounting and budgetary control.

491 Accounting Seminar (3:3:0) Prereq 6 hrs and ACCT 331 and 332 Topics incl accounting systems, advanced accounting theory and practice, and topics from current literature.

492 Corporate Accounting (4:3:3) May not be taken for credit toward an undergraduate degree in business administration. Emphasis on corporate financial accounting and analysis incl an intro to managerial concepts and techniques.

American Studies (AMST)

201, 202 Studies in Popular Culture (3:3:0) Aspects of popular culture and its significance in contemporary society. Topics incl the social and intellectual back­ground of the major forms of communications; and the conventions of such media as television, film, comic books, advertising, and westerns. May be repeated if topics vary with POC.

301, 302 Introduction to American Studies (3:3:0) Prereq 54 hr Seminars are limited to 15; pref to AMST majors. Intro to interdisciplinary methods through 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 determined by instructor.

401 Themes in American Civilization (3:3:0) Prereq ANTH 401 or Pol Seminar in American Civilization. Study of a significant theme, motif, or idea in American culture. Subject determines the relationships between contrasting ethnic groups in modern South Asia. Instructors.

402 Readings in American Studies (3:3:0) Prereq 54 hr Seminars are limited to 15; pref given to AMST majors. Application of AMST methods to materials drawn from 2 or more of the participating disciplines, not examined in traditional disciplines. Subject determined by instructor.

403 American Studies Independent Study (1-6:0:0) Prereq 54 hr, Pol and Intensive study of a period, problem, or project related to American culture proposed by an individual student to be conducted in close consultation with an AMST faculty member.

490 Internships (2-6:0:0) Prereq 40 hr and POC Internships are non-credit, work-study positions established by the AMST Program with employers involved in interdisciplinary AMST issues. Qualified students are placed with area schools, interest groups, agencies, museums, parks, or corporations. Placement depends upon availability of positions.

502 Problems in American Culture (3:3:0) Prereq grad stad Topics of general interest featuring an interdisciplinary approach to an intensive study of various aspects of American culture. Limited to 15 students. Specific content varies and is announced before reg. May be repeated with POC. Past offerings included: A) The Hudson River, B) Early American Culture, C) The American Imagination and World War I.

690 Internship (2-6:0:0) Prereq Pol Internships are non-credit, work-study positions established by the AMST Program with employers involved in interdisciplinary AMST issues. Qualified students are placed with area schools, interest groups, agencies, museums, parks, or corporations. Placement depends upon availability of positions.

Anthropology Courses (ANTH)

Sociology

114 Introduction to Cultural Anthropology (3:3:0) Introduc­tion to the branch of anthropology that describes people living in societies today, and that seeks to explain human behavior and various aspects of culture.

120 Introduction to Archaeology (3:3:0) Survey of anthropological archaeology. Development and use of contem­porary theory and an introduction to the methodology.


201 Native North Americans (3:3:0) Prereq ANTH 114 or Pol Examination of native North American contemporary cultures and selected aspects of Indian-white historical relations. Emphasis on human culture and the environment.

202 Indigenous Populations of Mesoamerica (3:3:0) Prereq ANTH 114 or Pol Examination of Mesoamerican contemporary cultures and selected aspects of human history.

204 Peoples of the Pacific (3:3:0) Prereq ANTH 114 or Pol Survey of twentieth-century Melanesian, Polynesian, and Micronesian cultures. Case studies of interplay between contemporary cultural systems and island ecology.

206 Peoples and Cultures of Island Asia (3:3:0) Prereq ANTH 114 or Pol Examination of island Asia: cultures of Indonesia, Borneo, and the Philippines. For non-W cr.

210 Ethnology of Sub-Saharan Africa (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures in sub-Saharan Africa. Several traditional societies are studied in depth, with attention to their emerging cultures and modern African networks of influence.

210 Peoples and Cultures of Selected Regions (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures of a specific region, e.g., India, South America, Africa. Prereq ANTH 114 or Pol Survey of islands of the world, with emphasis on cultural and psychological dimensions.

220 Old World Culture and Change (3:3:0) Prereq 54 hr, ANTH 114 or Pol Examination of relationship between environment and culture and human behavior with emphasis on cultural and psychological dimensions. May be repeated with Pol.

270 Ethnology of the Middle East (3:3:0) Prereq ANTH 114 or Pol Examination of Middle Eastern and North African cultures. Subject is divided into four parts:

370 Ethnology of Sub-Saharan Africa (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures in sub-Saharan Africa. Several traditional societies are studied in depth, with attention to their emerging roles in modern African networks of influence.

370 Peoples and Cultures of Selected Regions (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures of a specific region, e.g., India, South America, Africa. Prereq ANTH 114 or Pol Survey of islands of the world, with emphasis on cultural and psychological dimensions.

370 Ethnology of Sub-Saharan Africa (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures in sub-Saharan Africa. Several traditional societies are studied in depth, with attention to their emerging roles in modern African networks of influence.

370 Peoples and Cultures of Selected Regions (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures of a specific region, e.g., India, South America, Africa. Prereq ANTH 114 or Pol Survey of islands of the world, with emphasis on cultural and psychological dimensions.

370 Ethnology of Sub-Saharan Africa (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures in sub-Saharan Africa. Several traditional societies are studied in depth, with attention to their emerging roles in modern African networks of influence.

370 Peoples and Cultures of Selected Regions (3:3:0) Prereq ANTH 114 or Pol Examination of contemporary cultures of a specific region, e.g., India, South America, Africa. Prereq ANTH 114 or Pol Survey of islands of the world, with emphasis on cultural and psychological dimensions.
112 History of Urban Design in Early Modern Europe (3:3:0)
Development of city planning from Middle Ages to the Baroque era, with an emphasis on the role of planning in the rise of the new industrial city in the eighteenth century. Examination to placement of buildings and public spaces in the city. Projects will be presented.

170 American Architecture (3:3:0)
American architecture from colonial times to present, with emphasis on buildings in the DC, MD, and VA area.

280 Survey of Far Eastern Art (3:3:0)
Art of India, China, Japan, Southeast Asia, Korea, and Indonesia from Bronze Age through the 20th century exploring role of Buddhism and Hinduism through visual representation.

315 History of Twentieth Architecture (3:3:0)
Prereq A 100 or 200 level course in ARTH or ARTS or Pol History and development of modern architecture in America from the 19th to the 20th century. An exploration of stylistic and structural elements.

319, 320 Near Eastern Art (3:3:0)
Prereq 24 hr Art and architecture of Egypt, Mesopotamia, Anatolia, Bronze Age Crete and Greece; Moslem, Iran, Iraq, Turkey, and its effect on other centers. ARTH 319 covers developments in Antiquity; 320, Islam.

321 Greek Art (3:3:0)
Prereq 24 hr History of ancient Greek architecture, sculpture, and painting.

322 Roman Art (3:3:0)
Prereq 24 hr History of Roman architecture, sculpture, and painting.

323 Ancient Painting (3:3:0)
Prereq 24 hr or a 100 or 200 level ARTH course Ancient wall painting, its functions and styles, in Mediterranean area.

324 Medieval Art (3:3:0)
Prereq 24 hr Architecture, sculpture, and painting from early Christianity through Gothic in Byzantine and European Art.

340 Early Renaissance Art in Italy (3:3:0)
Prereq 24 hr Architecture, sculpture, and painting in Italy from ca. 1300 to 1500.

341 Northern Renaissance Art (3:3:0)
Prereq 24 hr Architecture, painting, and sculpture in France, Germany, and the Netherlands from ca. 1300 to 1600.

342 High Renaissance Art in Italy, France, and Spain (3:3:0)
Prereq 24 hr High Renaissance style in architecture, painting, and sculpture in Italy and its transformation through Mannerism.

343 Baroque Art in Italy, France, and Spain (3:3:0)
Prereq 24 hr European Art, and painting in Southern Europe from ca. 1600 to 1750.

345 Northern Baroque Art (3:3:0)
Prereq 24 hr Architecture, painting, and sculpture in England, and the Netherlands from ca. 1600 to 1750.

350 History of Photography (3:3:0)
Prereq ARTH 101, 200, or 201 Development of photography from origins in France in the 19th century to the present.

360 History of Nineteenth-Century Art (3:3:0)
Prereq 24 hr Western painting, sculpture, and architecture from the Neoclassical period to 1900.

370 History of Twentieth-Century Art (3:3:0)
Prereq 24 hr Western painting, sculpture, and architecture from 1900 to the present.

371 History of American Art (3:3:0)
Prereq 24 hr U.S. architecture, painting, and sculpture from Colonial period to the present, emphasizing historical nature of the objects studied and relation to European prototypes.

392 Exhibition Projects (3:3:0)
Prereq 6 hr in ARTS or in ARTH or Pol Planning, promotion, and production of visual art presentations and related events on the GMU Campus. Exhibitions are produced by students who alternately serve as studio assistants from pinned research and budget planning to the graphic design of announcements and the installation of exhibitions.

393 Art Apprenticeships (3:0:0)
Prereq major with Pol Sponsorship of an internship project with a professional individual or organization in the field of visual arts in the D.C. area. Apprenticeship may provide an introductory work experience in the professional area in which the student is considering a career.

399 Special Topics in the History of Art (3:3:0) Topics vary and incl women in art, art patronage, art criticism and others.

400 Methods of Research in Art History (3:3:0) Prereq 2 courses in ARTH at the 300 level or Pol Investigation of different approaches involved in art historical research.

401 Advanced Study in Ancient Greek Sculpture (3:3:0) Prereq ARTH 321 or 322 Advanced study and research into the development of freestanding and architectural sculpture in Ancient Greece; works in bronze, stone, and terra cotta.

402 Advanced Studies in Renaissance and Baroque Art (3:3:0)
Prereq 300-level course in Renaissance or Baroque Art or Pol Study in a particular aspect of Renaissance or Baroque Art. Topics may be monographic, such as a study of Michelangelo or Rembrandt, thematic, such as a study of art theory or narrative art of a particular time, concentrated on the art of a smaller time period, e.g., 1500-1525—on a particular area, such as Venetian Art. May be repeated for cr.

470 Twentieth-Century American Painting (3:3:0)
Prereq ARTH 362 Development and interrelationships in 20th century American painting incl stylistic, social, and historical backgrounds.

490, 491 Independent Study in Art History (3:3:0)
Prereq 54 hr, Pol art faculty and Pol, plus 9 hr in ARTH beyond ARTH 200, 201 Intensive study of a particular artist, period, or theme, arranged by an individual student in consultation with instructor. Study proposal submitted prior to reg.

800 Studies for the Doctor of Arts in Education (var cr)
Prereq DA Ed student admission to study in Art History Program of studies designed by student's discipline director and approved by student's doctoral committee. Coursework allows the student to participate in the research 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. Enrollment may be repeated.

Art Studio Courses (ARTS)

Department of Art

101, 102 (120, 121) Visual Thinking (3:0,6), (3:6)
A studio primer incl an investigation into drawing, visual thinking, printmaking, and filmmaking, Satisfies non-major Humanities req.

Conceptual approach to art-making through 2 and 3 dimens. Knowledge of basic art elements gained through problems employing a variety of media.

120, 121 Introduction to Ceramic Art (3:6, 3:6) Foundation course in representational drawing and expressive pictorial design. Emphasis on the figure and basic principles of 1- and 2-point perspective.

180, 181 (107), 190, 191 Intermediate Ceramics (3:6, 3:6) Intro to potential of ceramics as a creative medium. Basic manipulation, throwing, glaze technology, and kiln operations.

207, 208 Color (3:0, 3:6), (3:6)
Same as THR 207, 208. The first sem covers study in colors as pigment examination of various color theories and their application, using aqueous paints and color paper. The second sem covers theories of color in light and their application using a variety of light sources and color media.

210, 211 (211, 212) Intermediate Design (3:6, 3:6)
Prereq ARTS 111, 112, 120 or 121 or equiv. Or Pol continuation of program in the structural tradition. Further explorations into materials and processes which affect art-making.

220, 221 (203, 204) Intermediate Drawing (3:6, 3:6)
Prereq ARTS 120 and 121 or Pol An intermediate course in drawing. Emphasis upon advanced exploration of techniques and approaches. Original compositions from the figure and nature supplemented by problems of personal and expressive content.

230, 231 (201, 202) Introductory Painting (3:6, 3:6)
Basic course in the fundamentals of painting. Structural and conceptual approach in various media, including oil, acrylic, and tempera.

240, 241 (205, 206) Printmaking—Relief and Intaglio (3:6, 3:6)
The first sem covers relief methods of printmaking color, woodcut, linooleum block, wood engraving, and silkscreen techniques. The second sem
Intro to pamphlet and hardcase binding and basic typogra-

491, 492 Advanced Studio Problems (2:0:0, 2:4:0) 
Prep 54 hr, Poly, and PoC Study proposal submitted prior to regis.
Opportunity for development of advanced skills and concepts in drawing, painting, sculpture, and other media. 
601, 602 Graduate Drawing and Painting (3:0:3) 
Prep Undergraduate degree in art or art education (BA or BFA) or equiv independent painting and workshop emphasis in individual studio project.
800 Studies for the Doctor of Arts in Education (var cr) 
Prep DA Ed student admission to study in Art Program of studies designed by student’s discipline director and approved by student’s doctoral committee. Coursework allows the student to participate in the research activity of the discipline director and results in the defense of original studies. The paper is presented in a seminar. An enrollment may be repeated.

Astronomy Courses (ASTR)

Physics

103 Astronomy (3,0,3) Intro to origin of life, earth, planets and sun, stars, galaxies, quasars, and nature of space radiation; incl general theory of relativity. Not for physics majors. 
105, 106 Introduction to Modern Astronomy (4,3,2) Lab course in astronomy for nonscience majors. Topics incl astronomical instruments, coordinates and time, celestial mechanics, astrophotography, planets, satellites, meteors and meteories, the sun, magnitudes and distances of the stars, and other topics. Can be fulfilled the 8 hr lab sci req; not for physics majors.
328 Introduction to Astrophysics (3:3:0) Prep PHYS 342 or 351, and MATH 113 or 115 Topics incl basic concepts, magnitudes of stars, hertzsprung-Russell diagram, stellar evolution, stellar mass, and more.
505 Fundamentals of Astronomy (3,0,3) Prep Grad stgd or Poly Emphasis on the connection of astronomy to other disciplines as well as the recent developments in astronomy. Plane geometry and trigonometry of the universe, spherical trigonometry, thermodynamics and the universe.

Biological Science (Biol)

103 Contemporary Biology I (4,3,2) For nonscience majors Emphasizes human evolution and domesticate mechanisms. Students who have taken BIOL 113-114 or BIOL 124-125 are not eligible to take this course. Fall, Summer Term A.
104 Contemporary Biology II (3,3,0) Prep BIOL 103 Topics incl reproduction, genetics, major eco-systems, and ecological problems. Students who have taken BIOL 113-114 or BIOL 124-125 are not eligible to take this course. Spring, Summer Term A.
113 Biological Science (3,3,0) For science majors and 100-200 level Prepr students. Emphasize the major ecosystems. Topics incl freshwater biology, fish, and the gymnosperms and gymnosperms. Students who have previously passed BIOL 103, or 103 and 104, should consult the dept undergrad coordinator before enroll. Fall, Summer Term D.
114 Biological Science (3,3,0) Prep BIOL 113 Topics incl the structure and function of plants and animals, ecology, and evolution. Spring, Summer Term D.
124-125 Human Anatomy and Physiology (3,0,3) Intro to structure and function of major vertebrate organs. Open only to seniors and majors.

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ecology, evolution, and economic importance. Spring or even-numbered yrs.

342 Plant Morphology (4:3:3) Prereq 8 hr in 100-level BIOL or Pol Origin and development of organs, tissue systems, and life cycles of green plants, with phylogenetic comparisons from land plant lineages. Spring.

343 Mycology (4:3:3) Prereq BIOL 301 or Pol Intro to the biology of the fungi inc. morphology, taxonomy, growth and development, physiology, reproduction, and ecology. Lab emphasizes representative organisms and isolation and culturing techniques. Fall.

344 Taxonomy of Flowering Plants (4:3:3) Prereq 8 hr in 100-level BIOL or Pol Study of taxonomy, classification, and systematics of flowering plants. Fall.

345 Plant Communities (4:3:3) Prereq 8 hr in 100-level BIOL or Pol Plant associations and their successions in North America. 3 Sat & 3 Lab hrs. Fall.

361 Microbiology (4:3:3) Prereq BIOL 301 or Pol Classification, metabolism, genetics, immunology, host-parasite relationships, and ecology. Emphasizes bacteria and viruses. Fall.

371 Animal Distributions (3:3:3) Prereq 8 hr in 100-level BIOL or Pol Relations of the North and South American faunas with other regions in the light of continental drift. Emphasis on vertebrates. Spring.

425 Mammalian Physiology (4:3:3) Prereq BIOL 301 and 326 An organism approach to the study of mammalian homeostasis, inc cardiovascular, respiratory, renal, digestive, reproductive, sensory, and neural functions. Spring.

440 Field Biology (4:2:6) Prereq BIOL 113, 114 and 54 hr or Pol Directed field studies emphasizing ecology and behavior. Topics vary, but incl design of field manipulations, data collection, and writing of an interim and a final report of study site. Students bear the cost of required trip expenses.

451 Animal Anatomy (4:3:3) Prereq BIOL 311-114 and 54 hr or Pol Detailed study of plant cells and tissues, their development and development, Emphasis on angiosperms. Fall.

464 Environmental Physiology (3:3:0) Prereq BIOL 326 or Pol Physiological responses of animals to environmental factors. Topics incl biological rhythms, acclimation or adaptation to the environment, and the physiological basis of the behavior of organisms. Emphasis on vertebrates. Fall.

469 Marine Ecology (3:3:0) Prereq BIOL 307 or Pol Plants and animals of marine environments and physical and chemical conditions that affect their existence. Fall.

810L or Pol Introduction to the study of plants, their structure and function. Spring.

392 Plant Anatomy (4:3:3) Prereq BIOL 311 and 312 or Pol Study of the development of plant organs, their structure and function. Spring.

535 Paleobotany (4:3:3) Prereq Plant morphology or anatomy or vertebrate or invertebrate paleontology Evolution of fossils, their origin, history, and extinction, incl the various selective pressures responsible for these events. Lab presents techniques to elucidate fossil plant structure. 3 Sat & 3 Lab hrs. Fall.

536 Ichthyology (4:3:3) Prereq 8 hr in BIOL or Pol Study of the systematic evolution, phylogeny, and behavior of fishes. Fall.

537 Ornithology (4:2:6) Prereq Course in ecology or Pol Study of the evolution, systematics, physiology, ecology, and behavior of birds emphasizing field work. Spring.

538 Mammalogy (4:2:5) Prereq Course in ecology or Pol Study of the evolution, systematics, physiology, ecology, and behavior of mammals, emphasizing field work. Fall.

539 Herpetology (4:2:6) Prereq Course in ecology or Pol Study of the evolution, systematics, physiology, ecology, and behavior of amphibians and reptiles, emphasizing field work. Spring.

540 Comparative Animal Physiology (3:3:0) Prereq BIOL 326 or Pol Study of taxa of vertebrates and invertebrates and studied selected physiological systems of invertebrates and vertebrates, emphasizing current research.

752 Human Genetics (3:3:3) Prereq General genetics or Pol Study of the inheritance of man, emphasizing current problems, incl genetic control of metabolic diseases, effects of radiation and chemical agents in the environment, and directed genetic change.

753 Developmental Genetics (3:3:3) Prereq General genetics or Pol Study of genetic approaches to the problem of eukaryotic development emphasizing current research on the regulation of gene expression.

754 Population Genetics (3:3:0) Prereq General genetics or Pol Study of the genetic structure and dynamics of populations, both real and ideal.

755 Selected Topics in Genetics (3:3:3) Prereq General genetics or Pol Different topics in different years. Topics incl molecular, developmental, physiological, and classical genetics emphasizing current problems and research. May be repeated.

601 Advanced General Biology: Classical Principles and Modern Views I (3:3:3) Prereq 24 hr in life sciences or Pol Introduction to classical research and scientific concepts relating to cellular biology and to the structure and function of plants and animals. Available for cr toward MS with specialization in interpretive biology only.

602 Advanced General Biology: Classical Principles and Modern Views II (3:3:3) Prereq 24 hr in life sciences or Pol intensive review of the fundamental concepts relating to genetics, development, evolution, behavior, and ecology. Available for cr toward MS with specialization in interpretive biology only.

603 Field Studies for Interpreters (3:3:0) Prereq Prior experience in Pol Intensive course in identifying techniques emphasizing techniques for evaluation of communities and ecosystems, methods for study of wild populations, and demonstrations that support key concepts in ecology and evolution. Available for cr toward MS with specialization in interpretive biology only.

622 (522) Methods and Principles of Animal Taxonomy (3:1:8) Prereq Course in evolution or Pol Theoretical basis of techniques used in animal classification with emphasis on their practical application to a lab problem dealing with a particular animal group.

623 Reproductive Strategies (3:3:0) Prereq Pol Evolution of reproductive tactics, incl sexual and asexual reproduction, sex ratios, parental investment, propagule sizes and numbers, mating systems, and social structure. Animals and plants emphasized as appropriate.

624 Coevolution of Plants and Animals (3:3:0) Prereq Course in evolution Topics incl the mechanisms of evolution of plant and animal interactions, chemical communication, population dynamics, and community ecosystems, and development of the interactions over time.

625 Animal Navigation (3:3:0) Prereq Course in animal behavior or statistics, or Pol Exploration of mechanisms by which animals orient and navigate while moving or migrating. Emphasizing on vertebrates.

626 Paleocology (3:3:0) Prereq BIOL 301 or Pol Study of the ecological aspects of animal behavior.

641 Environmental Biology I (3:3:3) Prereq Course in ecology, Pol Study of the ecological aspects of animal behavior. Modern physical environment emphasizing their effects on species and biological communities. Fall.

642 Environmental Biology II (3:3:3) Prereq Course in ecology or Pol Study of the ecological aspects of animal behavior. Spring.
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 application for any major in the School (except as specified by the School). This restriction does not apply to such courses taken prior to Fall Semester 1981.

307 Introduction to International Business (3:0)

For majors in international business, this course provides a historical dimension of international business, emphasizing the role of government in international trade, how international business affects the domestic economy, and the role of domestic business in international trade. Emphasis will be placed on the impact of U.S. foreign policy on international trade.

499 Independent Study in Business Administration (1-3:0)

Prereq 8 grad hr in BUAD or BUAD, 641 or 649 undergrad. Independent study under the direction of instructor and dean. Prereq may be an advanced course in international business, policy and practice of international business, and the role of government in international trade. Prereq may be an advanced course in international business, policy and practice of international business, and the role of government in international trade.

653 Computer Simulation (3:0)

Prereq BUAD 630 and 641 or undergrad equiv. Computer simulation as a scientific methodology in corporate planning and operations analysis, emphasizing model development, implementation, and analysis of results. Prereq: BUAD 630 and lab. Fall

563 Operations Management (3:0)

Prereq BUAD 600, 640, 660. Aspects of productivity, technology, new processes, materials, products, equipment, and facilities. Implications of new technology in the operation (production) function are treated. Lecture, discussion, cases, and problems.

565 Management of Research and Development (3:0)

Prereq BUAD 660 and ECON 502 or equiv or Pol Sci 602 of management concepts in R & D, inc. examination of selected international practices (e.g. Japan, West Germany, etc.) and current problems in R & D. Emphasis on the incentives and disincentives for R & D climate and the organizational and management techniques which affect R & D performance. Economics affecting R & D decisions. Emphasis on government and universities in international R & D activities.

566 Principles of Organizational Behavior (3:0)

Prereq BUAD 600 or BUAD 660. Emphasis on interdepartmental aspects of organizational behavior in the workplace. Emphasis on decision-making processes.

570 Environmental Policy and Management (3:0)

Prereq RECOL 301 or BUAD BUAD 660 Business of creating housing, income policy, market and marketing problems in urban and suburban areas. Emphasis on the application of principles of economics to governmental decision-making processes.

575 Environmental Policy and Management (3:0)

Prereq BUAD 600 or BUAD 660. Emphasis on the application of principles of economics to governmental decision-making processes.

580 Commercial Property Development and Management (3:0)

Prereq BUAD 600 or BUAD 660. The business of creating industrial and commercial real estate, inc. office space, shopping centers, recreation facilities and specialized commercial properties. Emphasis on feasibility and market studies, design and construction, location analysis, site selection, and financing.

600 Accounting and Reporting (3:3)

All aspects of accounting from the basic concept of a transaction through financial statements and their interpretation.

611 Macroeconomics for the Business Student (3:0)

Prereq BUAD 600 or equivalent. Principles of macroeconomics. Emphasis on the analysis of national income, price levels, and trends in international trade and investment. Examination of major problems affecting the global economy. Emphasis on recent trends and uncertainties in economic policy. Fall

635 Business Law (3:0)

Prereq BUAD 600 or equivalent. Applications of principles of business law and economic principles to the study of current problems in business law and economics. Emphasis on the role of government in business and the role of business in the political process. Fall

641 Quantitative Analysis in Business and Operations Management (3:0)

Prereq BUAD 640. Scientific approach to decision-making emphasizing the operations management function. Decision theory, forecasting, linear programming and other techniques are used for planning, scheduling, design, and operations planning.

650 Management Theory and Practice (3:0)


651 Cases in Organizational Behavior (3:0)

Prereq BUAD or equivalent. Analysis of principles of individual and group behavior to the solution of human problems in business organizations, domestic and international. Emphasis on relationships with superiors and subordinates in formal and informal settings. Emphasis on the interface between business organizations and their environments. Emphasis on issues arising out of those environments, and the role of government policy in those environments.

655 Information Systems Analysis and Design (3:0)

Prereq BUAD 500. Application of principles of information systems to the design and implementation of information systems in business organizations.

656 Statistical Theory and Practice (3:0)

Prereq BUAD 660. Emphasis on the use of statistical models and techniques in business organizations, including the design and interpretation of research experiments. Emphasis on the use of statistical models and techniques in business organizations, including the design and interpretation of research experiments.
734 Seminar in Applications of Management Science (3:3:0) Prereq BUAD 742. Model development and implementation involved in the practice of operations research in management science. Spring.

744 Contemporary Issues in Decision Analysis (3:3:0) Prereq BUAD 650. Analysis of analytic reasoning and skills to practical problems in business administration. Topics include problem structure, analysis and solution implementation, emphasizing contemporary approaches to decision analytic techniques.

751 Business and the Regulatory Process (3:3:0) Prereq BUAD 650 or equiv. Regulatory process as it affects business; emphasis on interaction of legislative, administrative and judicial phases as they influence the formulation and interpretation of regulations.

762 Seminar in Personnel Administration (3:3:0) Prereq BUAD 601 and emerging theories and practices of manpower management. Problems of white-collar and professional employees in "knowledge" industries. Research in contemporary problems.

763 Seminar in Labor Management Relations (3:3:0) Prereq BUAD 660. The U.S. labor movement and its present political-economic status. Legal environment surrounding labor relations and current rulings by regulatory bodies. Executive and administrative skills in sources of labor contracts at the local level.

764 Organization Analysis and Development (3:3:0) Prereq BUAD 650. Research and research in study of organizational effectiveness. Emphasis on diagnosis of contributing factors; use of models; and design and implementation of organization development programs.

765 Strategic Planning and Control (3:3:0) Prereq BUAD 621, 641, 681. Theories and applications of modern strategic planning and control. Strategic decision making within the supportive framework of a strategic planning system. Emphasis on the methodology "how to do it" aspects of strategic decision making, planning, and control. Lecture, readings, discussion, case analysis, and projects.


767 Small Business Ventures and the Entrepreneur (3:3:0) Prereq BUAD 661. Small business and its economic, competitive, and social environment. Lectures, case studies, and research illustrate and develop solutions to potential problems of initiating, operating, and managing a small business.


772 Managerial Economics (3:3:0) Prereq ECON 602 and BUAD 680. Application of economic theory as it applies to specific business situations and decisions. Production levels, price determination, costs, competition, profits, supply, demand.

773 Managerial Economics II (3:3:0) Prereq BUAD 772. 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 effects.

775 Theory and Policies of International Business (3:3:0) Prereq BUAD 611, 621, 661 Management of international business operations as segments or subsidiaries of U.S. firms. Problems of political stability, operations in developing countries, and impact of foreign policies on multinational and multinational firms.

776 International Business Management (3:3:0) Prereq BUAD 775. Topics emphasize international market entry and expansion; financial considerations in the international context; legal considerations; risks and how to manage; and applying policies and procedures of multinational companies.

777 International Accounting (3:3:0) Prereq BUAD 601. Principles, practices, and techniques used by multinational enterprises in international trade and investment. Topics include financial and managerial accounting, auditing, foreign currency translations, and U.S. tax policy toward the multinational firm.

778 Seminar in Comparative Business Management (3:3:0) Prereq BUAD 651. Comparative analysis of business practices and management systems in different economic, political, and social, and political-economic environments. Emphasis on management and business enterprises as modified in varying environments.

780 Urban Development and Land Use (3:3:0) Prereq REUD 301 or BUAD 680 or Pol Urban growth and process of change, emphasizing regional development. Incl factors in socio-economic change, local interdependence and consumer preferences.

781 Land Use Control and Regulation (3:3:0) Prereq REUD 301 or BUAD 680 or Pol and BUAD 650. Basic principles of law affecting use of land and natural resources incl legal remedies and defenses available to the private citizen. Emphasis on recent law and federal and state statutes.

783 Real Estate Investment Analysis (3:3:0) Prereq BUAD 610 or Pol Real estate investment decision making process and skills to function effectively in the investment environment.

784 Real Estate Market Analysis (3:3:0) Prereq BUAD 610 or Pol Real estate market analysis and sources of data, problems and techniques that apply to each of the analyses of various types of real estate.

785 Mortgage Markets and Finance (3:3:0) Prereq BUAD 610 or Pol Mortgage banking with emphasis on markets, instruments, and financial environment and techniques.

787 Real Estate and Urban Development Systems (3:3:0) Prereq BUAD 630, 641 or Pol Systems in use today by professionals in the field of real estate for land use and development, including fields for asset management, appraisal, consulting, and financial analysis.

788 Advanced Appraisal Theory & Practice (3:3:0) Prereq BUAD 660 and BUAD 411. Critical review of existing appraisal theory and presentation of a variety of reform appraisal techniques; field appraisal work to apply market simulation approaches to most probable market price theories.

789 Seminar in Real Estate and Land Use Analysis (3:3:0) Prereq BUAD 680, 783, and 785 or Pol Policy planning in selected areas of real estate and land use analysis in response to current issues and needs.

796 Independent Study and Directed Readings (3:0:0) Prereq Foundation and core courses by special arrangement with professor and approval of the assistant dean for the grad prog.

797 Business Policy (3:3:0) Prereq 25 grad sem hr beyond foundation coursework. Examines entrepreneurial functions in business; determination of the field of business in which the firm will operate, its goals, corporate strategy to reach these goals, and major policies to implement the corporate strategy.

798 Seminar in Business Research (3:3:0) Prereq 30 grad sem hr beyond foundation coursework. Study of research design plans, methodologies, data collection and analyses, and their application to business research projects. Students prepare a written report covering an approved research topic in a specified area.

799 Thesis (6:0:0) Prereq 30 hr of grad coursework beyond the foundation.

Business Legal Studies Courses (BULE)

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 undergrad degree application for any major in the School (except as general elective cr) if taken prior to acceptance to 54 Hr. This restriction does not apply to such courses taken prior to Fall Semester 1981.

301 The Legal Environment of Business (3:3:0) Prereq 60 hr incl ENGL 101, 102 and ECON 103, 104 or Pol Legal environment and its role in the management of business organizations. Incl the Uniform Commercial Code and selected government regulations.

311 Principles of Business Law (3:3:0) Prereq BULE 301 Law of agency, bailments, business organizations, contracts, and property.

401 Law, Business and Society (3:3:0) Prereq BULE 301, FNAN 301, MSMG 301, and MKGT 301. Business and society: the role of businesses in the social, political, economic, and international, and ethical environments along with consideration of the public
Chemistry Courses (CHEM)

CHEM 211-212 is prerequisite to all other undergraduate chemistry courses except those numbered below 200.

103-04 Chemical Science in a Modern Society (4:3:3) CHEM 103-104 for nonmajors or for those interested in nursing majors. Principles and application of chem. Topics: incl environmental pollution, medicine, syndethetics, earth and marine science.

106 Chemistry in a Changing World (4:3:3) Chemical nature of the world in which we live. Emphasis on nature and importance of chemical pollutants in environment, energy-related chemical problems, to consumer and agricultural chemistry, and relationship between chemistry and health. Students who have cr for CHEM 103-104 or 211-212 are not eligible to take this course. Enrollment restricted to majors in elementary education.

20-212 General Chemistry (4:3:3-4:3:3) Basic facts and principles of chemistry, incl atomic and molecular structure, the gas laws, kinetics, equilibrium, electro-chemistry, and other chemical structures. An emphasis on the major elements and their compounds. Students majoring in science, engineering, or mathematics should choose this course.

313-314 Organic Chemistry (3:2:3-3:2:3) Prereq CHEM 211212; coreq for 313: CHEM 315; coreq for 314: CHEM 318 or 320 The theoretical, synthetic, industrial, and biological aspects of the chemistry of carbon compounds. In the first sem all students attend lecture, CHEM 315. In the second sem, students may choose either of 2 accompanying labs, CHEM 318 or 320. Chemistry majors req to take both.

315 Organic Chemistry Lab I (2:0:3) Coreq: CHEM 313 Lab techniques and reactions arranged to accompany CHEM 313. One hour recitation.

318 Organic Chemistry Lab II (2:0:3) Coreq CHEM 315; coreq CHEM 314 Continued from CHEM 315, arranged to accompany CHEM 314. One hour recitation.

320 Organic Chemistry Lab II (2:0:3) Coreq CHEM 315; coreq CHEM 314 Continuation of CHEM 315. Emphasis on separation and identification of organic compounds, using both classical and instrumental methods. Arranged to accompany CHEM 314. One hour recitation. *Students planning to grad under the req of a catalog class toward graduation.

321 Elementary Quantitative Analysis (4:2:6) CHEM 2111212 Chemical principles with particular emphasis on quantitative determinations.

322 (222) General and Biochemical Equilibrium (2:2:2) Prereq CHEM 211-212, CS 111 or CS 161 or ENGR 110 Study of general and biochemical equilibrium in gas-phase, ionic, and heterogeneous systems. Topics incl gas reactions, solution equilibria, ionization constants, and free energy relationships. Will involve experience using computer algorithms to solve equilibrium problems.

323 Physical Chemistry (3:2:3) Prereq CHEM 211-212; MATH 113, 114. Prereq or coreq PHYS 341 or 250 CHEM 331 and 332 constitute a year-long survey covering topics incl thermodynamics, equilibria, kinetics, solution properties, elementary quantum mechanics, atomic and molecular structure, and nuclear chemistry.

323 Physical Chemistry II (3:2:3) Prereq CHEM 331 Continuation of CHEM 331.

335 Physical Chemistry for the Life Sciences (3:3:0) Prereq CHEM 211-212 Chemical topics with emphasis on application to biology and health sciences. Rigorous mathematical approaches to the theory of physicochemical processes are avoided. Topics incl covalent and ionic theory, structure of solids and liquids, applied thermodynamics, kinetics and chemical equilibria. Not open to students who have passed CHEM 333. Cr is not allowed toward a major in chemistry.

336 Physical Chemistry Lab I (2:0:3)** Coreq or coreq: CHEM 331 Quantitative experimental study of physical chemical principles. CHEM 336 and 337 constitute an intro to lab practices in the field of experimental physical chemistry. One hour recitation.

337 Physical Chemistry Lab II (2:0:3)** Coreq CHEM 331 Continuation of CHEM 336. One hour recitation. *Students planning to grad under the req of a catalog prior to the 1980-81 catalog can apply only 1 cr for this course toward graduation.

431 Fundamental Inorganic Chemistry (3:3:0) Prereq CHEM 2111212 Descriptive chemistry, incl chemical properties, reactions, and reaction mechanisms, of inorganic elements and compounds. Topics incl main group and transition elements, organometallic compounds, and bioinorganic chemistry.

422 Instrumental Analysis (4:2:6) CHEM 314, 321, 331, or Pol Application of physicochemical methods to analytical chemistry. The qualitative study of chemical reactions by the use of modern analytical instrumentation. Intro to theory and practice of spectroscopy, ultraviolet, visible, and infrared absorption spectroscopy, electrical methods of analysis, gas chromatography, non-aqueous studies, and on exchange.

441 Properties and Bonding of Inorganic Compounds (3:3:0) Prereq CHEM 313-314, or-prereq CHEM 331-332. Interpretation of physical and chemical properties of inorganic compounds in terms of currently used bonding concepts. Topics incl structure and bonding of ionic compounds; covering bonding via covalent, ionic, and covalent ionic mechanisms. All topics will be introduced using ionic, covalent, and molecular orbital theories, and the stereochemical, electronic, and magnetic properties of elements.


451, 452 Special Projects in Chemistry (2:0:6), (2:6:0) Prereq CHEM 321, 322; coreq: CHEM 321; coreq: Polbach committee. Independent research to chemical research or development. Incl literature search, conferences, and lab. Written and oral technical reports req.

500 Selected Topics in Modern Chemistry (3:3:0) Topics of interest in biochemistry and in physical, organic, inorganic, and analytical chemistry. Req for teachers of general science and chemistry.

501 Lab Demonstration Techniques in the Teaching of Chemistry (3:3:0) CHEM 321-324 Synthesis and developing proficiency in the conduct of lab demonstrations. Req for teachers of chemistry and general science.

550 Special Topics in Organic Chemistry (3:3:0) Prereq CHEM 313-314 Synthetic and mechanistic organic chemistry with emphasis on topics such as heterocyclics, natural products, and biologically active compounds. Relating synthesis and organic chemistry to consumer products, incl drugs and agricultural chemicals.

523 (423) Selected Topics in Analytical Chemistry (3:3:0) Prereq CHEM 422 Principles and applications of currently used methods of analysis. Topics incl differential pulse polarography, anodic stripping voltammetry, atomic absorption, fluorescence, emission spectrometry, neutron activation, and spark source mass spectrometry. Advances and applications to trace metal determinations in environmental samples.

533 (431, 432, 433) Selected Topics in Physical Chemistry (3:3:0) Prereq CHEM 331, 332 Advanced study of topics in physical chemistry, selected from among the areas of thermodynamics, atomic and molecular structure, spectroscopy, and chemical kinetics. Content varies; announced before regis. May be repeated for credit.

563 (461), 564 (462) Biochemistry (3:3:0, 3:3:0) Prereq CHEM 313, 314, CHEM 461 is prereq for CHEM 564 (462), important biological compounds, viz. proteins, carbohydrates, lipids, and nucleic acids. Complements the corresponding lecture course. Designed for those who have had no previous exposure to the specialized techniques used in biochemical research. One hour recitation.

566 (446) Biochemistry Lab I (2:0:3) Prereq or coreq CHEM 563 (461) Intro to experimental methods used to study the chemical and physical properties of proteins, carbohydrates, lipids, and nucleic acids. Complements the corresponding lecture course. May be taken for credit toward advanced degree.

800 Studies for the Doctor of Arts in Education (var cr) Prereq DA Ed student admission to study in chemistry Program of studies designed by student’s discipline director and approved by 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 are repeated according to each student’s program.

Classics Courses (CLAS)

Foreign Languages and Literatures

250 Classical Myths and Legends (3:3:0) Prereq ENGL 101, 102 or equiv, or Pol. Myths and legends of Greece and

COURSE DICTIONARY
Communication Courses (COMM)

Communication

100 Introduction to Communication (3:3:0) Elements affecting speech communication at the individual, small group, public, and mass communication levels with emphasis on practice of communication in a small group level.

110 Oral Interpretation (3:3:0) Principles involved in the oral communication of the written word from writer, to reader, to audience. Practice in oral communication of prose, poetry, and drama.

120 Introduction to Public Speaking (3:3:0) Principles and types of public speaking; emphasis on informing and persuading. Intensive practice in composition and presentation.

130 Introduction to Small Group Discussion (3:3:0) Emphasizes the development of presentational ability in a group, decision making group maintenance, and leadership aspects. A practical study of group dynamics.

140 Forensics Seminar in Creative Arts (1:3:0) Prereq Audition Intensive work in creative forensics events—rhetorical criticism, epidictic speaking, informative speaking, persuasive speaking, extemporaneous speaking, after-dinner speaking, and impromptu speaking. May be taken 4 times.

141 Forensics Seminar in Re-creative Arts (1:3:0) Prereq Audition Intensive work in re-creative forensics events; spoken word, mixed interpretation, poetry interpretation, dramatic pairs, original poetry, and prose interpretation. May be taken 4 times.

142 Principles of Public Speaking Debates: Affirmative Strategies (1:3:0) Work in affirmative research, case construction, and oral presentation, directed toward affirmative analysis of the intercollegiate debate proposition. May be taken 4 times.

143 Principles of Public Speaking Debates: Negative Strategies (1:3:0) Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken 4 times.

201 Speech and Decision Making for International Students (3:3:0) Prereq International student status in first year of study in the U. S. or Pol Development of communication skills req to cope effectively with life in American society. Intro to speaking, listening and nonverbal factors affecting communication appropriately in university study. Students become acquainted with U.S. media, and understand U.S. social, political, economic and religious values and customs. Does not fulfill general education req met by COMM 100, 110, 120, or 130.

203 Introduction to Journalism (3:3:0) American journalism as components in journalism history and the First Amendment. Role of the professional journalist, print and broadcast news operation, the economics of newspaper publishing and other topics. The course serves both as a starting point for those desiring to pursue journalism studies and an orientation for the news consumer interested in learning more about how the news business operates.


230 Case Studies in Persuasion (3:3:0) Case study applications of common persuasive message strategies and approaches. Basic principles of the persuasive process. Case studies include advertisements, speeches, and individuals involved in persuasive activities from all segments of society.

260 Basic Debate Theory and Practice (3:3:0) Theory and practice of formal debate; reasoning, decision making, reasoning, delivery and the conceptual basis for debate. Does not require tournament participation.

261 Theories of Argumentation (3:3:0) Critical analysis of elements of argumentative speech, focusing upon deductive and inductive forms of reasoning, fallacies in reasoning, tests of evidence, and the models for such analyses.

281 Public Communication (3:3:0) Prereq 3 hr of 100- or 200-level COMM cr, or 54 hr. Theories and principles of public communication with emphasis upon methods of persuasion, propaganda, speaker/listener alignments in the public setting, and measurements of effective public communication.

301 Interpersonal Communication (3:3:0) Prereq 3 hr 100- or 200-level COMM cr, or Pol Introduction to the principles of interpersonal communication with emphasis upon models of communication, verbal and nonverbal message systems, and analysis of communicative relationships.

302 Mass Communication 3:3:0 Prereq 100 or 200-level COMM cr, or 54 hr. Principles of mass communication covering history and development of mass media, techniques and effects of advertising, characteristics unique to the various mass media, responsibility of media to the public, and role of media.

305 Intercultural Communication (3:3:0) Prereq ANTH 114 and 3 cr COMM cr or Pol Analysis of communication variables in intercultural encounters. Emphasis upon developing (a) an understanding of the comm process, (b) an awareness of differences in cultural assumptions and values, (c) respect for cultural diversity, and (d) comm behaviors that lead to more effective intercultural relationships.

306 Cases in Intercultural Communication (3:3:0) Prereq COMM 305. Cases and problems of intercultural communication. May be taken 4 times.


320 Techniques of Social Movements and Political Contrv (3:3:0) Prereq 3 hr of COMM or Pol Social and political forces of the contemporary era from a communication perspective with emphasis on political leadership, pressures for social/political change, and transformations in the communication environment.

332 Nonverbal Communication (3:3:0) Prereq 3 hr of COMM or Theory, principles, and methods of analysis of nonverbal communication context, culture, posture, facial expression, personal space and territoriality, physical appearance, vocal cues, and environment.

335 Organizational Communication (3:3:0) Prereq COMM 100, 130, or 301, or Pol Theory, practice, and methods of analysis of communication within organizations. Emphasis on the process and structure, interaction formats, mechanisms for modification, and career paths in organizational communication.

340 Forensics Seminar in Creative Arts (1:3:0) Prereq 4 cr COMM 140 or 54 hr, and Audition Intensive work in various discourse types in dramatic duos, mixed interpretation, poetry and prose interpretation, dramatic pairs, original poetry, and prose. May be taken 4 times.

341 Forensics Seminar in Re-creative Arts (1:3:0) Prereq Audition Intensive work in various types of re-creative forensics events—dramatic duo, mixed interpretation, poetry and prose interpretation, dramatic pairs, original poetry. May be taken 4 times.

342 Forensics Seminar in Debate: Affirmative Strategies (1:3:0) Prereq 4 cr COMM 142 or 54 hr, and Audition Work in affirmative research, case construction, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken 4 times.

343 Forensics Seminar in Debate: Negative Strategies (1:3:0) Prereq 4 cr COMM 143 or 54 hr, and Audition Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken 4 times.

344 Parliamentary Procedure (1:1:0) Prereq 54 hr or Pol Procedure of parliamentary practice applied to voluntary organizations. Practice in chairing groups that conduct business according to Roberts Rules of Order Newly Revised; a brief review of other parliamentary systems.

345 Mass Communication Internship (1:3:0) Prereq 54 hr or Pol Speech, or COMM 351. Supervised mass communication experience either in writing and editing for the student newspaper or other papers, coordinated with the instruction in COMM 351. May be taken 3 times.

346 Yearbook: Student or News 1:3:0 or COMM 351 Practical experience at writing and editing for the student yearbook, coordinated with the instruction in COMM 351. May be taken 3 times.

347 Literary Magazine Workshop (1:3:0) Supervised practical experience in editing, make-up, and reviewing for the University's literary magazine. May be taken 3 times for a total of 3 or hours.

348 Radio Workshop (1:1:0) Prereq COMM 354 or Pol Practical experience at broadcasting, production, programming and management for the student radio station, coordinated by the radio station faculty adviser. Most students work more than 2 hr per week at the station. May be repeated.

349 Student Leadership Seminar (1:3:0) Prereq 54 hr or Pol Intro to leadership concepts. An experiential seminar focusing on practical application of leadership concepts in a student organization setting.

350 Mass Communication and Public Policy (3:3:0) Prereq COMM 100, 302, or Pol An investigation of the manner in which matters of public importance are communicated via the various channels of mass communication. Emphasis on regulations designed to minimize the influence of mass media on public decision making, and manipulation of the media by pressure groups, politicians, and media gatekeepers.

351 NewsWriting and Reporting (3:3:0) Prereq COMM 203 An experience course where the student spends en­gages in actual news gathering outside the University envi­ronment. In addition to the news reporting component, numerous in and out of class exercises students in the unique writing style of the journalist.

352 News Editing (3:3:0) Prereq COMM 351 Techniques of cross editing; news selection; layout; fact checking; news judging, and newspaper make-up. Intro to working on newspaper copy desks. Applications for anyone preparing copy for publicized events.

353 Broadcast Journalism (3:3:0) Prereq COMM 351 or Pol Investigation of the unique writing style of journalists in the electronic media. Emphasis on concise, conversational, and timely news writing. Techniques of mixing the words of the report with the sight and sound of the news story.

354 Radio Broadcast Operations (3:3:0) Prereq COMM 353 or Pol Theory and practice of operational radio broad­casting. Production of public affairs programs for broadcast. Topics incl the programming, promotion, and sales aspects of commercial radio.

355 Television Broadcast Operations (3:3:0) Prereq COMM 354 or Pol Broadcasting of television production. Familiarization with the tools of production through hands-on experience. Production of video programs through practice in all operational capacities.

356 Broadcast Announcing (3:3:0) Prereq COMM 120 or 210 Development of radio and television announcing skills. Practice in news, entertainment, commercial and sports announcing. Discussion of studio technology and voice and diction skills for broadcast.

389 Internal and Public Relations Communication for Trade Associations (3:3:0) Prereq 54 hr or 3 hr lower division in communication or Pol Theory applied to the publications, public relations and advertising needs within a corporate environment. Job req of editorial positions in the fields of public relations publications and information services, public relations firms, non-profit organization and large corporations.

399 Special Topics in Speech Communication (3:3:0) Prereq Pol A study of speech communication by topics, such as the basis for speech production, Afro-American rhetoric, communication reticence. Topics vary. May be repeated with PoD.

400 Research Methods in Communication (3:3:0) Prereq 54 hr or Pol Primary research methodologies used in communication. Rhetorical and experimental-statistical methodologies.

410 Relational Communication (3:3:0) Prereq COMM 301 or Pol A comprehensive study of the theories and research associated with the development and deterioration of interpersonal relationships. Emphasis on such dimensions as attraction, sexual norms, rituals, trust, body language, intimacy, conflict and conflict resolution, roles, mate­female communication, and rhetorical sensitivity.

402 Theories of Mass Communication (3:3:0) Prereq 3 hours of Pol or COMM 351. Analysis of communication which have guided the development of mass media. Emphasis on the major scientific and humanitarian approaches to the question of mass media effects.

410, 411 Research Methods or Topics (3:3:0), (3:3:0) Prereq COMM 110 Development and current concepts of group communica­tion of literature. Adaptation of literary material with practical application to the classroom.

420 Theories of Communicative Interaction (3:3:0) Prereq 54 hr or Pol Primary theories explaining human

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communicative behavior. Traditional rhetorical theory and contemporary social science theories.

430 Persuasion (3:3:0) Prereq COMM 100, 120, or 130, or Pol. Theories of persuasive communication incl traditional and contemporary theories; the relationship between speaker, message, and audience; and the relationship between attitude and behavior change.

434 Interviewing (3:3:0) Prereq 54 hr of Pol Theory, principles, and practical skills essential to the interview process. Emphasis on situations as the information-gathering interview, the journalistic interview, the employment interview, and the performance appraisal interview.

450 Communicating with Professors (3:3:0) Prereq COMM majors 54 hr and PoD On-the-job training in communication through approved field-work study programs. Internships are arranged and supervised by the Department of Communication through an internship coordinator or advisor, and cr is based on the granting of hours per week to be spent on the job.

454 Freedom and Responsibility of Communication (3:3:0) Prereq COMM 300 or Pol. Major issues surrounding the role of speech, press, and electronic media in society. Areas of study will incl the history of free speech, press, and public opinion in the place of the government in regulating the marketplace of ideas, and the responsibility of the individual in a free society.

455 History of Print Journalism (3:3:0) Prereq 3 hr of COMM or Pol. Prereq of print journalism from its inception to the present, with emphasis on the interaction of technology, audience, and government intervention. Topics incl birth of press, development of the modern newspaper, and the role of the media in development, incl the Revolutionary and Civil Wars, the rise of the independent press and the Yellow Journalism period.

456 Comparative Mass Media (3:3:0) Prereq COMM 302 or Pol. Major foreign mass media systems as they compare to the American mass media system. Emphasis on comparisons between the American system and the systems of England, France, Germany, and other countries.

457 Women in Public Advocacy (3:3:0) Prereq COMM 300 or Pol. An analysis of religious, political, and social speaking from colonial times to the present. Such speakers as Cotton Mather, Jonathan Edwards, Daniel Webster, and others are considered.

475 (455) Journalism Law (3:3:0) Prereq PoL Pr Law as it relates to the working journalist. Topics incl libel, invasion of privacy, Free Press/Fair Trial, First Amendment, broadcast regulation, access to media, and advertising. Extensive use of the "case approach" involving the study of leading court decisions in mass media law.

489 Junior Seminar in Communication (3:3:0) Prereq 54 hr and PoD In-depth study of a selected area in public, interpersonal, or mass communication. Through the independent study format students are able to concentrate on a special topic in areas of faculty expertise. May be repeated by department approval. Communication courses at the 500 level are open to post-baccalaureate students or Communications majors with advanced undergraduate standing and other seniors with PoD.

501 Communication in Professional Relationships (3:3:0) Theoretical perspectives and relevant research related to communication techniques useful in various professional roles and situations. Relates theoretical foundations to practice, allowing individual students to assess theories of communication and their implications in individual professional areas.

502 Theories of Interpersonal Communication (3:3:0) Prereq COMM 301 or Pol. Contemporary theories of interpersonal communication. Analysis of theories, concepts, and approaches to the improvement of interpersonal comm. Extensive examination of interpersonal comm research is incl.

505 (550) Intercultural Communication (3:3:0) Analysis of communication variables as they relate to communication across cultures. Topics incl non-verbal communication, time conceptualizations, perceptual and attitudinal dimensions, role-playing games, and the impact of computer technology on intercultural comm. Concepts in organizational and managerial functions within multinational organizations. Focus on interpersonal aspects of government and business relations both inside the U.S. and with foreign visitors in the U.S., with extensions being made to management of subcultural differences within U.S. national organizations. Emphasis on developing an understanding of how cultural differences influence managerial activities, and an ability to apply an understanding of those differences upon learning to deal effectively with these cultural differences.

530 Theories of Small Group Communication (3:3:0) Advanced levels of theory and practice of small group interaction. Focus on research in small group communications: a focus on learning the theory and application of the theory to relevant setting.

536 Communication Consulting (3:3:0) Prereq COMM 321, 322, 325, 326, 327 and 328. Designed to provide both the theoretical information and mechanisms for application necessary to modify communicative behavior within organizations.

542 Directed Debate Activities (3:3:0) Theory and practice of competitive debate. Emphasis on traditional and contemporary theories related to the direction of a debate program, and methods of instruction in debate, incl analysis of current debate topics. Designed for both novice and experienced debate coaches.

543 Advanced Debate Theory (3:3:0) Prereq Prior debate experience and the debate coaching experience or PoL Theoretical issues involved in the practice of debate. Critical examination of new issues in theory and discussion of revisions theories designed to enhance academic debate.

550 Communication Research (3:3:0) Prereq 84 hr Examination of both verbal and nonverbal elements in the classroom which produce meaning among teachers and students. Communication theories and skills needed to manage the communication in the classroom. Nonverbal aspects of space, time, action, and form are considered as they impact teaching choices. Verbal patterns for skills of classroom management, questioning, enhancing student participation, self-concept, systematic feedback, parental communication, and student development.

551 Developing Students' Speaking and Listening Skills (3:3:0) Prereq 84 hr Speaking and listening skills which develop the general communication competency of children and adolescents. Emphasis on development of assignments that both directly and indirectly develop communication competence. The 5 functions of communication and steps in developing them are developed in the context of integrating the basic skills at the elementary level and direct teaching at the secondary level. Issues of definition in terms of philosophies of communication and curriculum development, as well as competency assessment are covered.

590 Seminar in Communication (3:3:0) Intensive study of specific topics in interpersonal, public, and mass communication. Content varies. May be repeated for cr with PoD.

808 Studies for the Doctor of Arts in Education (var cr) Prereq DA Ed student admission to study in communication. A program of advanced study designed independently of particular machines or languages. incl control, binding, procedural abstraction, types. Systematic survey of capabilities of diverse high-level languages.

365 Computer Systems Architecture (3:3:0) Prereq CS 311 and ENGR 301 Computer hardware organization, software structure, and data organization. Students complete a term project involving simulating one computer system on another.

370 Introduction to File Processing (3:3:0) Prereq CS 311 File organization methods and access methods for secondary storage; examination and direct file structure on tapes and direct access devices.

382 Software Design and Development (3:3:0) Prereq CS 311 Techniques in software design and development. Includes formal methods of program development, stepwise refinement, segmentation, top-down design and documentation. Students organize, manage, and develop a large scale software project, working in teams.


440 Language Processors (3:3:0) Prereq MATH 305, CS 212, 311 Survey of basic language processing processes, problems, interpreters, and compilers. Topics incl design and construction of language processors, formal syntactic definition methods, parsing techniques, and code generation techniques.

350 Computer System Programming (3:3:0) Prereq CS 212, 311 Assemblers, compilers, system structures, operating systems, and machine architecture.

351 Operating Systems (3:3:0) Prereq CS 468, 365 Development of operating systems. Implementation techniques for parallel processing of input/output and interrupt handling, Multiprogramming and multiprocessing. Memory management, system access, software, interprocess communication and interfaces, and deadlocks.

480 Introduction to Artificial Intelligence (3:3:0) Prereq CS 212 and MATH 305 Principles of representation, heuristic search, and control, in the context of specific intelligent systems in such areas as problem-solving, vision, medical diagnosis, and natural language. The LISP programming language as a means of representation.
Doctor of Arts in Education—Interdisciplinary Courses (DAED)

Education
For other DA Ed courses see also EDUC 800, 805, 890, 897, 911, 994, 998, and 999.

800 Ways of Knowing (3:3) Open only to students admitted to the DA Ed program. PREREQ EDUC 800 Provides an understanding of the methods of inquiry in various fields of study. Examines selected disciplines in terms of subject matter, scope, key concepts, principles, generalizations, and theories in each field. The characteristic way of knowing in each discipline is studied as a tool for the analysis and solution of educational problems.

801 Seminar in Liberal Education (3:3) PREREQ Successful completion of DA Ed 800 Analysis of American education from a variety of discipline perspectives. Students apply concepts and methodologies studied to a study of liberal education in America. Incl regular seminar papers and critiques.

Dance Courses (DANC)

Performing Arts

101 Dance Appreciation (3:3) Intro to dance as a cultural art form. Elements of dance examined separately and combined in various dance forms. A brief survey of the basic forms leads to a more intensive study of modern and the new. Criticism and evaluation are stressed.

125 Beginning Intermediate Modern Dance (3:3) Designed to develop knowledge, skills, and an appreciation of modern dance through the presentation of fundamental techniques and creative movement experiences.

126 Beginning Modern Dance (3:3) Designed to develop knowledge, skills, and an appreciation of modern dance through the continuous exploration of technique, aesthetics, and creativity.

127 Contemporary Dance I (3:3) PREREQ CS 125 Suggested Mechanics of movement in the jazz style of dance. Emphasis on development of techniques for jazz training. May be repeated once for cr.

131 Beginning Jazz Technique (3:3) PREREQ DANC 125 Suggested Mechanics of movement in the jazz style of dance. Emphasis on development of techniques for jazz training. May be repeated once for cr.

141 Beginning Tap Dance (3:3) Intro to the elements of ballet technique and vocabulary. Stress upon learning the elementary positions and movements characteristic of this highly stylized art form. May be repeated once for cr.

142 Beginning Intermediate Tap Dance (Same as PHED 125) PREREQ DANC 141 or Pol Further development of knowledge, skills, and appreciation through the technique, vocabulary and history of ballet.

150 Dance Improvisation (3:3) Exploration into the creation of spontaneous movement experiences. Emphasizes on encouraging freedom of self expression and creative awareness.

151 Beginning Tap Dance (3:3) Elementary exploration into the rhythms and steps basic to the art form of tap dancing.

224 Intermediate Modern Dance (3:3) PREREQ DANC 125 or Pol Continued exploration in movement and motion to further develop technical ability in dance. Emphasis on increased ability in technical training and performance skills. May be taken 4 times.

231 Intermediate Jazz Techniques (3:3) PREREQ DANC 131 or Pol Continued study of movement in the jazz style of dance. May be taken 4 times.

241 Intermediate Ballet (3:3) PREREQ DANC 141 or Pol Continued training at the intermediate level. Emphasis on increasing technical proficiency and aesthetic awareness. May be taken 4 times.

251 Dance Composition I (3:3) PREREQ DANC 125 or Pol Intro to basic principles for composing movement for dance. Emphasis on simple compositional forms in dance as they apply to the solo performer.

252 Dance Composition II (3:3) PREREQ DANC 251 or Pol Further exploration of the elements of compositional forms in dance as they apply to group forms. Experience in composing and performing duets, trios, quartets, and mass pieces.

305 Dynamic Alignment (3:3) PREREQ 6 hr prior work in DANC, course in anatomy and biology rec. Aspects of anatomical and kinesiological learning and using these in the correct development of dance technique. Emphasis on the use of exercise correctives and imagery to correct insufficient muscle pattern and reduce stress upon the body.

306 Aesthetic Dance Laboratory (3:3) PREREQ Fundamentals of Music or 6 hrs of prior work in dance, or Pol Rhythmic structure of music for dance is examined through example, analytical methods, and practical procedures. Disciplinary resources include study of forms and styles from the Medieval period through the Twentieth Century.

314 Music Accompaniment for Dance (3:3) PREREQ DANC 213 or Pol Lecture practical course designed to give both dance and music students practical experience in dance accompaniment primarily through the use of percussion instruments. Students use their knowledge of music and rhythm to accompany and enhance a dance technique class.

327 Advanced Modern Dance (3:3:6) PREREQ DANC 224 or Pol Continued training for advanced students. Emphasis on attainment of high quality technical and performing skills. May be taken 8 times.

341 Advanced Ballet (3:0:3) PREREQ DANC 241 or Pol Performance/lab dealing with ballet at the advanced level. Emphasis on attainment of high quality technical and performing skills. May be taken 8 times.

350 Advanced Dance Improvisation (3:3) PREREQ DANC 125, 126, and 150, or Pol A lecture/performance course for continued study of dance improvisation. Each student creates and directs pieces with input from previous advances in dance improvisation.

360 Choreography (3:3:0) PREREQ DANC 252 or Pol Students engage in learning to choreograph a dance work. Students are responsible for auditioning dancers, casting, staging, lighting, selecting musical accompaniment, and composing original movement material.

370 Dance Performance (3:3:0) PREREQ Pol Practical experience in the areas of performance, production, and/or repertoire—with participation in University dance productions or special guest artist programs. May be taken 4 times.

390, 391 Dance History (3:3:0) PREREQ DANC 101 or 6 hr of DANC History of dance chronicling its growth and development through the twentieth century. Emphasis on the social, cultural, and philosophical factors shaping the progress of dance in successive historical periods.

420 Special Topics in Dance (3:3:0) PREREQ 3 hr of DANCE or Pol An in-depth presentation and exploration of topical studies in dance and/or related study areas, e.g. dance as therapy, avant-garde dance, philosophical approach to 20th century dance artists, etc. Topic depends on instructor. May be taken twice.

454 Teaching Principles of Modern Dance (3:3) PREREQ Pol Practical methodology of teaching methods and concepts to advanced dance students with the methods, principles, and background knowledge for teaching modern dance. Students are expected to apply knowledge gained from previous courses in technique and alignment in the demonstration of their ability to teach a modern dance class.

510 Independent Study (3:0:0) PREREQ DANCE major with 84 hr grad status in dance or theatre, or Pol Individual research or a creative project in close consultation with an instructor. Projects selected from: performance, choreography, technical theatre as it applies to dance, management, dance history, or criticism.

Decision Sciences Courses (DESC)

School of Business Administration

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 or if taken prior to acceptance to Junior standing. This restriction does not apply to such courses taken prior to Fall Semester 1981.

202 Applied Statistical Analysis (3:3:0) PREREQ MATH 109 Introduction to statistical tools and their use in the analysis of practical problems in business and economics. Topics include methods of statistical inference—estimation and
Economics Courses (ECON)

ECON 103 Contemporary Economic Principles and Issues I (3:3:0) May be taken after ECON 104 Intro to microeconomics in the context of current problems. Prereq: ECON 101 or 102 or Pol Economy 101.

ECON 104 Contemporary Economic Principles and Issues II (3:3:0) May be taken before ECON 103 Intro to macroeconomics in the context of current problems. Prereq: ECON 101 or 102 or Pol Economy 101.

ECON 203 Intermediate Microeconomics (3:3:0) Prereq ECON 103 and 104 or Pol Important economic problems in light of current and proposed public policies.

ECON 306 Money and Banking (3:3:0) Prereq ECON 103 and 104 or Pol Important economic problems in light of current and proposed public policies.

ECON 311 Macroeconomics I (3:3:0) Prereq ECON 103 and 104 or Pol Important economic problems in light of current and proposed public policies.

ECON 312 Macroeconomics II (3:3:0) Prereq ECON 311 and Pol Important economic problems in light of current and proposed public policies.

ECON 313 Money and Banking (3:3:0) Prereq ECON 312 and Pol Important economic problems in light of current and proposed public policies.

ECON 314 Macroeconomics I (3:3:0) Prereq ECON 311 and Pol Important economic problems in light of current and proposed public policies.

ECON 315 Macroeconomics II (3:3:0) Prereq ECON 314 and Pol Important economic problems in light of current and proposed public policies.
762 Political Economy and Public Policy II (3:3:0)
Prereq ECON 511 (501), 515 (513), and 725 or Pol Specfic issues related to political economy of public policy. Topics incl privatization, public choice, political economy of deficit spending, regulation and deregulation and the economies of rent-seekers.

731 (542) Mathematical Economics II (3:3:0) Prereq ECON 530 (541) or Pol Mathematical treatment of economic theory. Analysis of market equilibrium, input-output analysis. Optimization techniques such as Lagrangian multipliers, linear programming, nonlinear programming, and game theory.

736 (548) Foundations of Economic Growth (3:3:0) Prereq ECON 537 (544) or Pol Econometric models and simultaneous equation systems. Identification of parameters and least squares bias; alternative estimation methods and block recursive systems.


741 Economics of Human Resources (3:3:0) Prereq ECON 511 (501) or Pol Effects of government manpower programs on allocation of labor. Techniques of evaluation, role of unions and collective bargaining.

742 (522) Economics of Income Distribution (3:3:0) Prereq ECON 511 (513), or Pol Econometric models of income distribution and determination. Microeconmic functional income and personal income; human capital, screening, education, and family background; macroeconomic determinants of income distribution.


746 Industrial Organization and Public Policy II (3:3:0) Prereq ECON 511 (501) and 745 (570) Relation between law and economics and theories of social control of property rights. Theories of market structure and industrial performance.

749 (571) Health Economics (3:3:0) Economic analysis of problems such as manpower substitution, malpractice, health insurance, hospital cost inflation, demand for medical care, regulation and licensure, and the hospital as a nonprofit institution.


751 Applied Urban and Regional Economics (3:3:0) Analysis of public spending and taxation at the subfederal level. Theory of public goods, positive and normative explanatory models of public expenditure determination, and intergovernmental fiscal relations. Problems in the provision of specific state and local services, inc education and police and fire protection.

752 Public Choice (3:3:0) Prereq ECON 511 (501) or Pol Application of economic theory and methodology to the study of nonmarket decisionmaking.

753 Special Topics in Public Finance (3:3:0) Prereq ECON 511 (501) and 750 (533) Topics vary; announced in School of Public Affairs bulletin.

755 (552) Urban and Regional Economics (3:3:0) Prereq ECON 511 (501), or Pol Regional development and metropolitan growth economics incl locational decisions of housing, employment, and community problems associated with high density urban economic activity.

758 (575) The Economics of Urban Transportation Planning (3:3:0) Issues and problems in urban transportation planning. Urban transportation techniques, planning for future; techniques of evaluation, environmental and sociocenomic impact.

760 (555) Resource Economics (3:3:0) Resource management in the public sector with emphasis on development of water resources. Problems of uncertainty, time horizon considerations, joint costs, multiple benefits, nonquantifiable benefits and costs.

761 (556) Economics of the Environment (3:3:0) Analysis of economic models of ecosystems and pollutant discharges into the environment. Methods of improving economic efficiency; review of public policies.

765 (560) Economic Development (3:3:0) Factors contributing to and retarding economic progress in developing countries. The role of foreign trade, economic integration, fiscal and monetary policies, multinational corporations, and technological transfers.

766 (563) Seminar on Latin American Development (3:3:0) Seminar on Latin American economic development. Topics incl industrialization and import substitution, the rural sector and agrarian reform, population and unemployment, foreign trade and economic integration, development finance, foreign investment, and assistance.

770 (591) International Trade and Policy (3:3:0) Classical, neoclassical, and modern theories of international trade. A study of theory and practice of world trade models such as project LINK. Analysis of foreign investment and economic growth, tariffs and non-tariff barriers, and economic integration; recent developments with emphasis on natural resources. May not be taken for cr by students who have completed ECON 590.

771 (592) International Monetary Economics (3:3:0) Examination of the international adjustment mechanism, price and income effects, controls and the monetarist approach. Development of the international monetary system, the demand for international reserves, capital movements, and the role of the International Monetary Fund. (May not be taken for cr by students who have completed ECON 590.)

776 Marxian Economics (3:3:0) Prereq ECON 511 (501) and 515 (513) Major Marxian economic theories and critiques of contemporary trends in economics.

778 Economic Analysis of Soviet-type Systems (3:3:0) Prereq ECON 511 (501), 515 (513) and 576 (580) In-depth analysis of the Soviet-type economies of Eastern Europe with emphasis on the Soviet Union.

780 Austrian Theory of the Market Process I (3:3:0) Prereq ECON 511 (501) Economy theory developed by Menger, Mises, and Austrian School and comparison to other currently popular theories.

781 Austrian Theory of Market Process II (3:3:0) Prereq ECON 511 (501), 515 (513) (ECON 780 is req) Continuation of ECON 780; topics vary; include emphasis on market process approach to analysis of capital accumulation, growth, money and credit institutions, inflation, unemployment, and industrial fluctuations.

795 (596) Special Topics in Economics (3:3:0) Topics vary according to interest of instructor. Emphasis on new areas of the discipline. May be repeated for cr as new topics vary.

796 (598) Directed Reading and Research (3:3:0) Independent reading and research paper on a topic agreed to by student and faculty member.

799 (599) Thesis (3-6:0:0) Students who take ECON 799 (598) or Pol 799 (599) are required to complete all Prereq hours and courses for the grad course in which they wish to enroll. Students taking EDUC 407 may not receive departmental credit for ECON 799. Multiple and prerrequisites undergrad may, with the written permission of the course instructor and the chairperson of the department offering the course, register for grad courses (those numbered 500 and above) and apply the cr earned toward the undergrad degree. Undergraduate students electing this option must have completed all ECON and EDUC hours and courses for the grad course in which they wish to enroll.

300 Foundations of Secondary Education (3:3:0) Introduces early childhood and upper elementary education majors to the teaching profession through an examination of the role of the teacher, the nature of American schools, and the student's potential contributions to the profession. Field experiences req.

301 Foundations of Education (3:3:0) Prereq Secondary education major Surveys the historical, philosophical, and sociological foundations of education with emphasis on the development of American education and persons influencing it. Topics incl current issues and problems in education, relationships between educational objectives, as well as the structure of the educational system, and curricula. Field experiences req.

302 Human Growth and Development (3:3:0) Introduces human development from conception through adolescence. Topics incl: major theories and hazards of development, and also studies of cognitive, intellectual, physical, emotional, psychological, and language development. Field experiences req.

303 Children's Literature (3:3:0) Prereq 9 hr of English The historical development, types, representative authors, and illustrations of children's literature suitable for nursery school, kindergarten, and the elementary school are studied. Topics incl critical analyses of selected works, techniques of storytelling and presentation of literature to children.

308 Historical and Philosophical Backgrounds of Industrial Arts (3:3:0) Intro to industrial arts and its beginnings in Europe, and the U.S. Emphasis on current trends related to curriculum and methods. Field experiences req.

309 History and Philosophy of Trade and Industrial Education (3:3:0) Intro to the historical and philosophical backgrounds of trade and industrial education in Europe and the U.S. Emphasis on current trends in curriculum and methods. Field experiences req.

313 Educational Psychology (3:3:0) Principles and applications of psychology to teaching. Inc learning theory, variables, testing of educational concepts, principles of differentiation, motivation, and adjustment. Field experiences req.

320 Introduction to Tests and Measurements (3:3:0) Introduces basic principles, techniques, and tenets used in the measurement of individual differences. Emphasis on standardized tests. Emphasis on construction and interpretation of testing devices used in the classroom.

325 Production and Utilization of Instructional Materials (3:3:3) Study of media production and utilization, empha-
izing individual projects.
Course Offerings:

1. **Physics**
   - **Phy 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

2. **Chemistry**
   - **Chem 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

3. **Mathematics**
   - **Math 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

4. **Computer Science**
   - **CS 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

5. **Biology**
   - **Bio 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

6. **Economics**
   - **Econ 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

7. **Geography**
   - **Geo 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

8. **History**
   - **Hist 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

9. **Sociology**
   - **Soc 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

10. **Psychology**
    - **Psych 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

11. **English**
    - **Eng 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

12. **Business Administration**
    - **Bus 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

13. **Accounting**
    - **Acc 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

14. **Marketing**
    - **Mark 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

15. **Human Resources**
    - **HR 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

16. **Communication Studies**
    - **Comm 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

17. **Criminal Justice**
    - **CJ 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

18. **Sociology**
    - **Soc 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

19. **Psychology**
    - **Psych 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

20. **Economics**
    - **Econ 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

21. **Health Services**
    - **Health 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

22. **Social Work**
    - **SW 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

23. **Education**
    - **Ed 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

24. **Business Administration**
    - **Bus 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

25. **Accounting**
    - **Acc 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

26. **Marketing**
    - **Mark 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

27. **Human Resources**
    - **HR 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

28. **Communication Studies**
    - **Comm 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

29. **Sociology**
    - **Soc 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

30. **Psychology**
    - **Psych 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

31. **Economics**
    - **Econ 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

32. **Health Services**
    - **Health 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

33. **Social Work**
    - **SW 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.

34. **Education**
    - **Ed 154 General and Job Analysis (3:3:0)** Emphasis on selection, development, and placement of students in the occupational structure as fitted to their needs and capabilities; occupational and job analyses, testing procedures, occupational counseling, and the use of information. Field experiences req.
581 Cooperative Work Study Programs (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req Study of historical, philosophical, and theoretical foundations of the teaching profession and the speci-
580 Cooperative Work Study Programs (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. Preparatory work in Vocational Education for industrial cooperative 
579 Role and Function of the School Psychologist (Curriculum and Instruction (C53:00) Surveys roles and functions of the school psychologist within the educational environment. Consider certificate-
578 History and Philosophy of Vocational Education (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. History and philosophy of vocational education in the United States. Vocational education in the public school system and the development of policies.
577 Curriculum Development in Vocational Education (Curriculum and Instruction (C53:00) Curriculum development for teachers of vocational subjects. Program development and evaluation are related with emphasis on current trends in voca-
576 Competency-Based Instruction in Vocational Education (Curriculum and Instruction (C53:00) Intro to practical and theoretical components of instruction and evaluation in Vocational Education program in VA. Incl are methods and strategies of implementation for specific areas of vocational education; industrial arts, trade and industrial education, home economics, business and office education, health occupations, and cooperative programs.
575 School Psychology Internship (Curriculum and Instruction (C53:00) Prereq Completion of the grad degree or appropriate educational req. Opportunity to complete a total of 6 hr placed in industry or business associated with the area of teaching responsibility. Emphasizes the development and implementation of behavior modification techniques in industrial education. May be repeated for a max of 6 hr credit.
574 Comparative Education Systems and Philosophy of Education (Curriculum and Instruction (C53:00) Prereq Admission to a degree program and/or VD. Various subjects and projects; principally by directed study, discussion, research, and participation under the supervision of a member of the grad faculty. May be repeated for a max of 6 credit.
573 Thesis (Curriculum and Instruction (C53:00) Prereq Completion of all grad degree or appropriate educational reqs. Research, analysis and interpretation of research results. Critique of research and use of findings in education.
572 Directed Research, Research, and Individual Projects (Curriculum and Instruction (C53:00) Prereq Admission to a degree program and/or VD. Various subjects and projects; principally by directed study, discussion, research, and participation under the supervision of a member of the grad faculty. May be repeated.
571 Role and Function of the School Psychologist (Curriculum and Instruction (C53:00) Surveys roles and functions of the school psychologist within the educational environment. Consider certifica-
569 Practicum in Vocational Education (Curriculum and Instruction (C53:00) Prereq Completion of all grad degree or appropriate educational req. Emphasizes planning, production techniques, and evaluation standards. Students are given an opportunity to work on their own projects and experience the classroom situation. May be repeated.
568 History and Philosophy of Vocational Education (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. History and philosophy of vocational education in the United States. Vocational education in the public school system and the development of policies.
567 Industrial Safety (Curriculum and Instruction (C53:00) Prereq Completion of under degree or appropriate educational req Designed to provide accident prevention and human safety. Includes an overview of existing and industrial programs in the community.
566 Teaching and Working with Adult Learners (Curriculum and Instruction (C53:00) Prereq Completion of under degree or appropriate educational req Designed to provide accident prevention and human safety. Topics include industrial and occupational accidents, workplace violence, and the legal responsibilities related to various industrial and educational environments. Incl field visits.
565 Product of Instructional Materials (Curriculum and Instruction (C53:00) Prereq Completion of Vocation Education for Industrial Arts curriculum development. Emphasizes methods and strategies of implementing educational副市长es in VA. Incl are methods and strategies of implementation for specific areas of vocational education; industrial arts, trade and industrial education, home economics, business and office education, health occupations, and cooperative programs.
564 Curriculum Development in Vocational Education (Curriculum and Instruction (C53:00) Curriculum development for teachers of vocational subjects. Program development and evaluation are related with emphasis on current trends in voca-
563 Education Research and Professional Development (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. Emphasizes the development and implementation of behavior modification techniques in industrial education. May be repeated for a max of 6 hr credit.
562 School Psychology Internship (Curriculum and Instruction (C53:00) Prereq Completion of all grad degree or appropriate educational reqs. Opportunity to complete a total of 6 hr placed in industry or business associated with the area of teaching responsibility. Emphasizes the development and implementation of behavior modification techniques in industrial education. May be repeated for a max of 6 hr credit.
561 Practical Research in School Psychology (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. Emphasizes planning, production techniques, and evaluation standards. Students are given an opportunity to work on their own projects and experience the classroom situation. May be repeated.
552 Education and Cultural Transmission (Curriculum and Instruction (C53:00) Prereq Grad stgd in the Education Department or Pol Examination and application of studies in educational anthropology, with focus on the process of cultural transmission in the U.S. through formal and informal institutions. Analysis of U.S. values, cultural discontinuity, hidden transmission of values, in schools, U.S. schools' response to cultural pluralism, cultural transmission in educational systems within other countries, and the interaction between cultures, biculturalism in schools.
551 Human Relations for Educators (Curriculum and Instruction (C53:00) Prereq Completion of a bachelor's degree or appropriate educational req. Opportunity to complete a total of 6 hr placed in industry or business associated with the area of teaching responsibility. Emphasizes the development and implementation of behavior modification techniques in industrial education. May be repeated for a max of 6 hr credit.
550 Comparative Education Systems and Organizations in the Contemporary World (Curriculum and Instruction (C53:00) Comparative study of educational systems and international educational organizations and their significance; emphasis on elementary and secondary education.
549 Social Problems in Education (Curriculum and Instruction (C53:00) Prereq Grad stgd in the Education Department or Pol Examination and application of studies in educational anthropology, with focus on the process of cultural transmission in the U.S. through formal and informal institutions. Analysis of U.S. values, cultural discontinuity, hidden transmission of values, in schools, U.S. schools' response to cultural pluralism, cultural transmission in educational systems within other countries, and the interaction between cultures, biculturalism in schools.
548 Advanced Human Growth and Development (Curriculum and Instruction (C53:00) Prereq Grad stgd in the Education Department or Pol Examination and application of studies in educational anthropology, with focus on the process of cultural transmission in the U.S. through formal and informal institutions. Analysis of U.S. values, cultural discontinuity, hidden transmission of values, in schools, U.S. schools' response to cultural pluralism, cultural transmission in educational systems within other countries, and the interaction between cultures, biculturalism in schools.
547 Evaluation of Student Progress (Curriculum and Instruction (C53:00) Teacher evaluation of the progress of the learner through observation of performance and through measurement devices; teacher interpretation of standardized tests.
546 Industrial Arts Curriculum Development (Curriculum and Instruction (C53:00) Prereq Acceptance into teacher ed prog Principles of instructional development as applied to secondary industrial arts ed, principles of management and diseases with emphasis on competency-based instructional methods; demonstration teaching; curriculum construction and classroom/lab management procedures.
545 History of Education in Western Culture (Curriculum and Instruction (C53:00) Critical historical analysis of old world backgrounds influencing American education.
994 Advanced Internship in Education (3:0:3) Prereq Admission to candidacy in the DA Ed prog; and Po student's doctoral committee. Req internship in a setting related but not identical to the student's major area of study. Req a minimum of 100 hr completed over at least a 5-week period. Each Internship is to provide an appropriate staff member in a cooperating school, school system, other educational institu- tion or agency, or in a setting that may differ from regular employment.

998 Doctoral Project Research (3:0:3) Prereq Admission to candidacy in the DA Ed prog. successful completion of the doctoral qualifying examination, and EDUC 590 or its equivalent. Provides an opportunity for assistance on an individual basis in the completion of projects planned in EDUC 911 and the initiation of new projects. No more than 8 hr of EDUC 911 and EDUC 998 may be applied toward the minimum DA Ed degree req.

999 Doctoral Research (3:0:3) Prereq Enrollment in EDUC 998 for req cr. Po DA Ed Coordinator Students engaged in doctoral project research and writing must reg in this course for the equiv of 3 cr each sem following approval of their project unless req for EDUC 996. Does not count toward the DA Ed degree cr req. Open only to candidates for the DA ed degree in Education. For additional DA Ed courses see DAEED.

Education Courses
Administration/Supervision (EDAS)
500 - See EDUC 500.
600 - See EDUC 600.

611 School Counseling Relations (3:3:0) Principles, philosophy, practices, and activities involved in developing and maintaining desirable relationships between schools and communities.

612 School Administration (3:3:0) Prereq Teaching experience. Principles and practices of school organization and administration. Emphasis on elementary, middle, and high schools with reference to state and district structures.

625 Introduction to Educational Finance (3:3:0) Study of the economic interdependence of educational systems and society and economic concepts as they relate to schooling. Focus on issues, solution sets, and philosophies of educational funding.

631 Supervision of Instruction (3:0:5) Prereq Teaching experience and EDCC 650, 651, or 652. Basic principles and practices of instructional supervision. Elementary, middle, and high school specialization may be accomplished through options in reading and project assignments.

789 Seminar in School Leadership (3:0:3) Prereq EDCC 650, 651, or 652; and 621; admission to the degree prog in school administration and supervision; or PoD Advanced study in school leadership for the evaluation and facilitation of instruction. Emphasis on individual and group processes in supervision. Field experiences req.

790 Practicum in School Administration and Supervision (3-0:6:0) Prereq Po advisor; admission to and completion of the grad prog except for practicum; or enrollment in the final term of the prog. Students translate administrative and supervisory theory into practice through field experiences and intensive seminar inquiry. Placement in elementary school, middle school, high school, or central office situations.

Education Courses
Elementary/Secondary (EDCI)
500 - See EDUC 500.

511 Preparing the Pre-Elementary Environment (3:3:0) Study of properties, materials, and organization of environments for young children (infancy-kindergarten). Field experiences req for students without previous teaching or administrative experience at the preelementary levels.

512 Home-School Relations in Pre-Elementary Education (3:3:0) Examination of patterns and problems of family life for the purpose of improving communication between teachers and parents.

513 Play as a Growth Process in Pre-Elementary Education (3:3:0) Focus on play as an approach to teaching and learning; examined as an intellectual, social, and emotional tool to facilitate the development of young children (infancy-kindergarten). Field experiences required for students without previous teaching or administrative experience at the preelementary levels.

514 Administering and Supervising Pre-Elementary Education (3:3:0) Examines programs and techniques relating to the administration and supervision of pre-elementary education. Emphasis on the director's role in staff recruitment, hiring, development, and evaluation. Leadership and management techniques.

517 Introduction to Bilingual Education (3:3:0) Analysis of concepts, principles, and practices of bilingual education; its present status, and its future direction. Focus on current programs and their relationship with curricula in English as a second language.

518 Introduction to Multicultural Education (3:3:0) Examination of problems faced by an individual in an alien culture, theories of bilingual/multicultural education, relationships between non-verbal communication and language systems, and interpersonal skills needed for encouraging harmony between our dominant culture and minority ethnic communities.

519 Methods of Teaching in Bilingual/English-as-a-Second- Language Settings (3:3:0) Examination of strategies which can be used by the teacher in Bilingual/English-as-a-Second-Language classrooms. Students analyze concept models of bilingual education, study methods of evaluating diagnostic instruments and classroom materials, and demonstrate specific competencies.

567 Teaching the Elementary School (3:3:0) Advanced course in methods, materials, content, and organization of social studies progs in the secondary schools. Field experience req for those seeking initial teacher certification. Sp sm only.

569 Teaching English in the Secondary School (3:3:0) Advanced course in methods, materials, content, and organization of English progs in the secondary school. Field experiences req for those seeking initial teacher certification. Spring sm only.


573 Teaching Science in the Secondary School (3:3:0) An advanced course in methods, materials, content, and organization of science programs. Emphasis on curriculum planning, contemporary methodologies, and trends in science education in secondary schools. Field experience req for those seeking initial teacher certification. Spring sm only.

580 See EDUC 600.

640 An Introduction to the Instructional Use of Microcomputers in Elementary and Junior High Schools (3:3:0) Designed to acquaint teachers with microcomputers; beginning teachers will learn to handle microcomputers and interact with and choose software programs available for classroom use. Attention is given to when and how to involve microcomputers in the classroom. Hands-on experience with current microcomputers.

650 Curriculum Development in the Elementary School (3:3:0) Study of development of the curriculum in the pre-elementary, lower elementary, and upper elementary levels; historical backgrounds; present progs; development of new progs; methods of implementing new progs; and evaluative methods and procedures.

651 Curriculum and Instruction in the Middle School (3:3:0) Study of development of curriculum in the middle school grades; historical backgrounds, present progs; development and implementation of new progs; program evaluation; methods and techniques.

652 Curriculum Development in the Secondary School (3:3:0) Study of development of the curriculum in the secondary school; historical backgrounds, present progs; development of new progs; implementation of new progs; and evaluative methods and procedures.

657 Language Arts in the Elementary School (3:3:0) Study of methods, curricula, current issues, and research literature in English-language arts progs of the elementary school. Emphasis on recent innovations in methodology and traditional concerns of the communication arts.

663 Teaching Science in the Secondary School (3:3:0) Prereq Course in teaching social studies in the elementary school. Study of methods, materials, content, and organization of science programs in the secondary school. Emphasis on the use of hands-on experiences to facilitate understanding of science concepts.


701 Educational Program Development (3:3:0) Prereq Admission of student teacher or a bachelor's degree from an accredited underwriting institution. Analysis and application of principles and procedures essential to the planning, design, testing, evaluation, revision and implementation of instructional programs for use in schools, colleges, community centers, public agencies, museums and business settings. The study of theory, research and exemplary practice; identification of variables involved in program development, an investigation of alternative strategies for developing instructional programs that acknowledge these variables.

782 Seminar in Pre-Elementary and Elementary School Teaching (3:3:0) Prereq Must have completed grad prog except for seminar, or be in final semester of prog, or Po/Doublec of grad coursework to instructional situations through discussion, projects, and reports related to practice and/or research.

783 Seminar in Secondary School Teaching (3:3:0) Prereq Must have completed grad prog except for seminar, or be in final semester of prog, or Po/Doublec of grad coursework to instructional situations through discussion, projects, and reports related to practice and/or research.

Education Courses
Guidance/Counseling (EDGC)
500 - See EDUC 500.
600 - See EDUC 600.

604 Analysis of the Individual (3:3:0) Prereq EDUC 531 Development of a framework for understanding the individual in counseling, incl methods of gathering and interpreting data; choosing, administering, and interpreting individual and group tests; the study of individual differences; use of case study technique.

606 Counseling Theory and Practice (3:3:0) Prereq EDUC 540, 541, 542 and 543 Study of theories, techniques, and techni- ques of counseling and applications to counseling settings. Attention to supervised practice sessions.

608: Career Process: Information (3:3:0) Prereq EDGC 565 incl theories appropriate to various types of groups, and descriptions of group practices, methods, dynamics, and facilitative skills. Attention to application of theory to practice.

610 Career and Educational Counseling (3:3:0) Prereq EDUC 531, EDGC 604 and 605 Study of vocational choice theory, sources of occupational and educational information, approaches to career decisionmaking processes, and career development exploration techniques. Attention to application of theory to practice.


629 Organization and Administration of a Guidance Program (3:3:0) Prereq EDGC 624 or 634 Principles of organizing and administering a guidance program with emphasis on role and function of a school personnel in various, organizational programs, and major services of the adequate guidance program.


644 College Student Personnel Work (3:3:0) Introduces theory, nature, and background of student personnel work in higher education. Structure, organization, and administration of services and programs.
646 College Students and Campus Groups (3:3:0)  
Prereq EDGC 644 or appropriate experience, or Polt Study of nature, characteristics, and needs of college students as they interact in groups which form student subcultures on campus. Analysis of collective and individual development programs relating to campus groups, group activities, and development of student leadership.

648 Seminar in College Student Personnel Work (3:3:0)  
Prereq: EDGC 644 or appropriate experience, or Polt Current social and legal issues in college student personnel work, incl professional ethics and standards. Role of counseling, consulting, and collaborating with students and other educators in efforts to facilitate student development and self-direction.

654 Guidance and Counseling in the Community Agency (3:3:0)  
Emphasis on the types of services and facilities provided, needs and problems of the client population served, role and function of the counselor or guidance worker in the agency setting, and personnel needs of the individual agency.

656 Case Studies in Agency Counseling (3:3:0)  
Prereq EDGC 608 By using actual and hypothetical cases, the course helps the student develop written plans and simulate implementation for overall treatment of agency clients and their families.

658 Couples and Family Counseling (3:3:0)  
Prereq EDGC 606 Introduces major approaches to counseling couples, families, and groups. Emphasis on development of counseling skills supervised practice of guidance and counseling in a setting similar to that in which the student plans to work. (Elementary and secondary school practice open to certified personnel only. All other students are placed in a setting related to their career goals.)

Education Courses

Educational Readings (EDRD)  
500 - See EDUC 500  
559 Teaching Developmental Reading in the Elementary School (3:3:0)  
Prereq: EDUC 558 or appropriate experience. Emphasis on reading: principles, techniques, and materials for developmental reading programs.

611 Remedial Reading (3:3:0)  
Prereq EDRC 559 or 614 Includes diagnostic techniques for remedial reading programs; use of remedial techniques, teacher aids and learning centers, psychological and health services, and innovative methods and materials.

612 Physical and Psychological Factors in Reading (3:3:0)  
Prereq EDRC 559 or 614 Advanced course. Incl physical and psychological factors involved in the reading process, clinical diagnosis, and remediation.

613 Diagnostic and Evaluation Techniques in Reading (3:3:0)  
Prereq Admission to grad prog in ERED 611 or 612, or EDSE 531 or 561; and Po adviser Technical diagnosis of reading problems. Procedures in testing, scoring, and evaluating standardized and informal tests, individual and group tests, physical and psychological tests, and techniques of reporting test results.

617 Teaching Reading in the Secondary School (3:3:0)  
Emphasis on reading in content areas; reading problems; causes, diagnosis, remediation; skills and speed reading.

615 Teaching Reading in Multicultural/Multilingual Setting (1:1:0)  
Prereq EDRC 559 Day Teaching methods and techniques for students from multicultural or bilingual backgrounds. Emphasis on increasing the teacher’s knowledge and understanding related to effective reading instruction. Particular emphasis on teaching 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 (3:3:0)  
Incl 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 (3:3:0)  
Prereq ERED 559 or 614 Study of higher levels of reading attainment: speed reading, critical reading, advanced study skills, intellectual development of the gifted, and literature and materials for enrichment programs.

790 Practicum in Reading (3:4:0)  
Prereq Admission to and completion of grad prog in reading except for practicum; or enrollment in the final semester of the program; and Po adviser 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 req.

794 Internship in Reading (3:3:0)  
Prereq Admission to and completion of grad prog in reading except for practicum; or enrollment in the final semester of the program; and Po adviser supervised practice as a reading specialist in a public school system. Participation in scheduled group sessions req.

Education Courses

Special Education (EDSE)  
500 - EDUC 500  
541 Survey of Special Education (3:3:0)  
Emphasis on historical developments of definitions, characteristics, identification, incidence and legislation. Field observations and volunteer experience. 600 - EDUC 600

530 Characteristics and identification of Gifted (3:3:0)  
Study of characteristics, techniques, and procedures associated with identification of talented youngsters.

531 Curriculum and Methods—Gifted and Talented (3:3:0)  
Emphasis upon cognitive styles, strategies for developing creative thinking, and curriculum content modification.

562 Socialization of the Handicapped in Regular Education (3:3:0)  
Survey of management/discipline theory and related socialization/techniques specifically applied to handicapped children and youth enrolled in regular education.

643 Emotional and Behavioral Disorders of Children (3:3:0)  
Prereq EDSE 541 or Po adviser Focus on in-depth study of characteristics of individuals experiencing emotional and/or psychological disturbance. Implications for educational intervention. Field experiences req.

545 Characteristics of Children with Learning Disabilities (3:3:0)  
Prereq EDSE 541 or Po adviser Studies characteristics of individuals experiencing receptive, integrative, and/or expressive learning disabilities. Implications for educational intervention. Study of characteristics, techniques, and procedures associated with identification of talented youngsters.

546 Curriculum and Methods—Mental Retardation (3:3:0)  
Prereq Grad stgd and Po adviser Educational programming of the mentally retarded. Design, implementation, and evaluation of reading programs and procedures.

547 Medical and Health Aspects of Handicapping Conditions (3:3:0)  
Prereq EDSE 541 or EDUC 525 or Po adviser Nature of causes of disability and/or special health conditions. Examinations and evaluation techniques and procedures. Completion of graduation requirements in field and in some cases, completion of coursework in another field.

550 Precision Teaching for the Severely Handicapped (3:3:0)  
Prereq Grad stgd and Po adviser Focus on applied behavior analysis for instruction of handicapped children; systematic approach to developing individual programs. Field experiences req.

549 Psychodiagnostic Assessment in Special Education (3:3:0)  
Section A: ED/DE Mildly and moderately handicapped. Section B: SYMCH Severely handicapped and early childhood handicapped. Prereq Course in tests and measurements; grad stgd and Po adviser Administration, scoring, and interpretation of education evaluation instruments with emphasis on the generated educational plan and written report. Supervised experiences req.

551 Characteristics of Children with Crippling Conditions (3:3:0)  
Prereq EDSE 541 or Po adviser Study of physiological, behavioral, and psychological characteristics of children with crippling conditions. Implications for educational interventions are introduced. Field experiences req.

561 Language Development and Disorders (3:3:0)  
Examines influence of the interaction theories concerning language acquisition; analysis of verbal and non-verbal communica-
Engineering Courses (ENGR)

Physics

100 Introduction to Engineering (1:1:0) Intro to technological problems encountered in the engineering profession and the role of the engineer in society. Overview of the engineering disciplines and their relation to technological problem solving.

107 Engineering Fundamentals (2:1:0) Intro to engineering fundamentals and problem solving. Topics: description of engineering disciplines, functions of the engineer, professionalism, ethics and recognition, problem solving and representation of technical information, mechanical drawing, estimation and approximations, analysis and design.

110 Engineering Computations (3:3:0) Coreq MATH 113 or Pol Study of computational processes as algorithms. Simulation of engineering problems and their implementation on computers. Techniques for the representation of algorithms by the use of BASIC and FORTRAN languages. Experience with both of these languages in writing and running programs to solve problems from an engineering point of view.


182 Engineering Graphics II (2:1:2) Prereq ENGR 161 Application of engineering graphics to specific topics of engineering analysis and design.


207 Material Science (3:3:0) Prereq CHEM 111 Intro to microscopic structure of engineering materials and effects on mechanical properties. Topics: crystals, amorphous structures and defects, semiconductors, ceramics, and metals.

208 Mechanics of Materials (3:3:0) Prereq ENGR 205 and PHYS 250 or Pol Concept of stress, strain, elasticity and plasticity, combined stress, torsion, stresses and deflection of beams, statically indeterminate members, unsymmetrical bending, buckling of columns.

240 Introduction to Microcomputer Applications (3:3:0) Intro to hardware and software fundamentals of a typical microcomputer system. Topics: Programming techniques, hardware considerations in various research applications, case study of microcomputer implementation, computer graphics, real-time man-machine interaction, word processors, and how to choose a microcomputer system. (Not intended for those majoring in Computer and Electronics Engineering.)


286 Network Circuit Analysis II (3:3:0) Prereq ENGR 285. Coreq MATH 204 Principles of linear circuit analysis dealing with the frequency domain. Topics: sinusoidal excitation and phasors, AC Steady State analysis and power, complex frequency and network functions, frequency response, transformers, two part networks, state variable analysis, Fourier Methods and Laplace transforms.

301 Digital Electronics (3:2:2) Prereq A laboratory PHYS course or Pol Intro to digital systems, circuits, and computers. Topics: digital logic gates and circuits, microelectronic and integrated circuits, coding and multiplexing, multivibrators, shift registers, counters, A/D converters, microcomputers, microprocessors, and interfacing techniques.

302 Electronics (4:3:3) Prereq PHYS 350, 351, or Pol Lecture and laboratory course in electronics, semiconductor physics, electronic devices and circuits, feedback, design and operational characteristics of power supplies, amplifiers, oscillators, and digital logic circuits.

305 Electromagnetic Theory (3:3:0) Prereq PHYS 350 and MATH 304 Interaction of static charges, interaction of stationary currents, electromotive induction, Maxwell's equations.

307 Engineering Thermodynamics (3:3:0) Prereq MATH 213, PHYS 250 Classical concepts of energy and temperature, first and second laws, and their application to closed and open thermodynamic systems. Properties of pure substances, equation of state, analysis of thermodynamic processes and systems. Application to engineering systems.

311, 312 Mathematical Methods in Physics and Engineering (3:3:0), (3:3:0) Prereq PHYS 352 and MATH 304 or PHYS 311 MATH 313 is a prerequisite for PHYS 312. Study of mathematical techniques as applied in physics and engineering. Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices, and complex variables.

311 Digital Electronics and Computer Logic Design (3:0:0) Prereq ENGR 285 or Pol Principles of operation and application of digital devices and circuits. Topics: number systems, logic fundamentals, logic circuit families, flip-flops and latches, counters, registers, memory organizations, programming techniques, and latches, digital devices and circuits. Techniques for the representation of algorithms by the use of BASIC and FORTRAN languages. Experience with both of these languages in writing and running programs to solve problems from an engineering point of view.

302 Linear Electronics (3:3:0) Prereq ENGR 285 and PHYS 350. ENGR 334 is normally taken concurrently with 333. Cr may not be received for ENGR (PHYS) 301 and 333.

302 Digital Electronics and Logic Design (2:0:4) Prereq PHYS 351 or Pol, Coreq ENGR 332 Lab associated with ENGR 331.

333 Linear Electronics (3:3:0) Prereq ENGR 285 and PHYS 350. ENGR 334 is normally taken concurrently with 333. Cr may not be received for ENGR (PHYS) 302 and ENGR 333 Principles of operation and application of linear and analog electronics, circuits and devices.

333 Linear Electronics Lab (2:0:4) Prereq PHYS 351 or Pol, Coreq ENGR 332 Lab associated with ENGR 333.

341 Computer Organization I (3:3:0) Prereq ENGR 331 or Pol Review of digital technology fundamentals, arithmetic circuits, memory organization, special purpose computers, bit serial computer architecture, basic word organized stored program computer architecture, microprocessor architecture.

342 Computer Organization II (3:3:0) Prereq ENGR 341 Design of a variety of computers. Topics: historical overview, data representation, microcomputers, memory and storage, input/output, microprogramming, pipeline computers, parallel computers.

421 Systems and Control Theory (3:3:0) Prereq MATH 313 or Pol Intro to the analysis and synthesis of feedback systems. Functioning of linear and nonlinear systems. Block diagrams and signal flow graphs. Space-state representation of dynamical systems. Frequency response methods. Root Locus, Nyquist and other stability criteria. Application to mechanical and electromechanical control systems.

429 Control Systems Lab (2:0:4) Coreq ENGR 421 Lab associated with ENGR 421.


432 Digital Circuits and Systems Design (3:2:4) Prereq ENGR 301 or Pol with emphasis on advanced digital circuits and systems and their theories and applications. Topics: sequential circuits - principles and implementations, tabular minimization, and state models. Logic design, digital logic circuit analysis, digital systems case studies, code conversions.

441 Digital Computer Structure, Programming, and Applications (3:3:0) Prereq ENGR 301 or Pol. Coreq ENGR 301. Study of computer structure, computer memory organizations, programming techniques and program structures, microcomputer and microprogramming, real-time interacting computing, Input/Output organization and programming, examples and applications.

442 Digital Computer Design and Interfacing (4:2:4) Prereq ENGR 301 or Pol Design of digital computers, microprocessor systems, and interfacing techniques, digital logic circuits, flow diagrams, memory systems, I/O equip�ent interfacing techniques.


460 Communication and Information Theory (3:3:0) Prereq ENGR 333 or Pol Probability concepts, description of random variables, theory of discrete systems, encoding, theory of continuous systems, systems with memory, applications in communication system design.

490 Advanced Design Project (3:0:0) Prereq ENGR 84 hr A design project to be conceived, designed, constructed (as appropriate), and tested. Final oral and written reports are req at the completion of the project.

491 Engineering Seminar (1:0:0) Prereq ENGR 84 hr Engineer­ ing ethics, professionalism, the role of the engineer in society.

511 Microprocessors, Microcomputers and Applications I (3:3:0) Prereq undergraduate course in electronics intro to microprocessors and microprocessor-based computer systems. Analyzing and understanding the system from the scientist's and engineer's point of view with their immediate applications. Emphasis on hardware and software aspects of microcomputer systems. Req some hands-on experience with microcomputer systems.

512 Microprocessors, Microcomputers and Applications II (3:3:0) Prereq ENGR 511 or equiv Emphasis on microcomputer controlled systems, interfacing techniques and related subjects. Topics: basic input-output, interfacing the peripherals analog circuitry, multiplexers, POS systems, process control with microprocessors, microcomputers for communications, 16-bit microprocessors, etc.

513 Applied Electromagnetic Theory (3:3:0) Prereq PHYS 350, MATH 313, or equiv Classical electromagnetic theory with applications. Topics: electrodynamics, magnetic fields and materials, electromagnetic wave propagation, wave guides, transmission lines, radiation, antennas.

520 Electronic Systems Analysis (3:3:0) Prereq ENGR 331, 333, MATH 313 or equiv A study of basic and advanced methodologies for analyzing electric circuits. Topics: state variables, resonance and signal filtering, Laplace, Fourier and discrete transform techniques, feedback analysis, frequency response techniques, and operational amplifier systems.

530 Communications Electronics (3:3:0) Prereq ENGR 331, 333, MATH 313 or equiv Principles of electric communication systems, communication circuits and systems. Topics: waveguides, cascading circuits, oscillators, linear systems, analysis techniques, convolution and impulse responses, communication circuits, AM/FM, PM. Binary communications, noise and filtering, digital signal processing and communication systems.

540 Computer Engineering: Design Principles, Operating Systems and System Development (3:3:0) Prereq ENGR 542, 441, CS 311 or equiv General design principles of computer systems, the operating system of various types of computers, selected topics in software engineering, the design of systems with specific applications, microprogramming, and computer networks.

590 Selected Topics in Engineering (3:3:0) Prereq Grad stg or Pol Selected topics from recent developments and applications in engineering. Designed to satisfy the needs of the professional engineering community to study current developments in various engineering disciplines.

640 Spatially Parallel Computers (3:3:0) Prereq ENGR 540 Study of spatially parallel computer architecture, design and use of high ultra speed computer. Topics: basic concepts of parallelism, types of interconnection networks between processing elements, single instruction stream-multiplex data stream computers, computers with "massive parallelism", multiple instruction stream-multiplex data stream computers and parallel processing of images.

798 Research Project (3:0:0) Prereq 9 hr of grad level coursework and Pol Research project to be chosen and completed under the guidance of a graduate faculty member which results in an acceptable technical report.
English Courses (ENGL)

ENGL 101 is the usual pre req for ENGL 102. With the PoD, students may use ENGL 101 instead of ENGL 101 as the pre req for ENGL 102. Students may not receive cr for both ENGL 100 and ENGL 101.

100 Composition for Foreign Students (4:4:0) For non-native speakers of English, limited proficiency in the language. Principles and practice of expository writing, with intensive drill in grammar, vocabulary, and principles of organization. Students must attain a minimum grade of C to fulfill.

101, 102 Composition and Introduction to Literature (3:3:0) Prereq ENGL 101 (or 100) is pre req to ENGL 102. Expository writing, ranging from paragraphs to essays of some length and complexity. Study of the logical, rhetorical, and linguistic structure of expository prose. The methods and conventions of preparing research papers, and intro to analysis and appreciation of major literary types. Students must make available 6 cr of English in 100-level courses are pre reqs for all 200- level courses. 6 cr of English in 100-level courses and 6 cr of English in 100-level courses are pre reqs for all 300- and 400-level courses with these exceptions: (1) Students who have completed 6 cr of English composition may enroll in ENGL 310. (2) Non-degree students who have completed 6 cr of English composition may enroll in courses numbered 300-309. Any cr of English taken at 200 level, taken in any order, may be used to fulfill the general degree reqs in literature.

203, 204 Western Literary Masterworks (3:3:0), (3:3:0) Great men and movements authors such as Homer, Sophocles, Euripides, Dante, Cervantes, and Flaubert; 204: writers such as Dostoevsky, Tolstoy, Mann, Camus, Mann, Hemingway, Flaubert, Dostoevski, Tolstoy, and Galdos. ENGL 379 deals with the novel from the eighteenth century to the present, with emphasis on such novelists as Flaubert, Gide, Slone, Kafka, Sartre, Cela, Moravia, and Grass. Attention to the influence of this novel on the novel in English. (Offered in cooperation with the Department of Foreign Languages and Literatures.)

377, 378 Selected Continental Novels in Translation (3:3:0), (3:3:0) Students must be enrolled in CAS.

379 Selected Continental Novels in Translation (3:3:0) Concerns the continental novel from the eighteenth century to the present, with emphasis on consideration of the nature and implications of literary and linguistic structures. Some myth theory is considered in separate sems and drawn from a variety of topics; the development of themes and techniques, interaction of life and work, adjustment of artistic vision to cultural change.

Special Studies II: A single major work, studied systematically in different ways. Emphasis on multiple critical perspectives, what each reveals fails to account for.

Special Studies III: An interdisciplinary cross section of a particular historical moment: relations between literature and fine arts, theology, philosophy, and social history. May be repeated with PoD.

380 Myth and Symbol in Western Literature (3:3:0) Study of the traditional myths and archetypes which have affected the development of Western literature. Sources include Bible, classical, Hebrew Bible, and other mythical traditions and their influence on literature consciously influenced by mythic structures. Some myth theory is considered.

381 American Folklife (3:3:0) Topics include folktales, personal narratives, legends, proverbs, jokes, folk songs, art, folk craft, and folk architecture. Consideration of community, custom, family, festival, folklore in literature, and oral history. Discussion of traditions in students' own lives.

382 Literary Approaches to Popular Culture (3:3:0) Emphasis on popular fiction and adaptation of popular prose genres to media which have strong verbal and visual elements. Relations between verbal and visual elements of such media as film, comics, and radio.

384 American Renaissance Drama (3:3:0) Major plays and dramatists of the American Renaissance, exclusive of Shakespeare.

385 English Poetry and Prose of the Seventeenth Century (3:3:0) English poetry and prose from 1600 to 1688, excluding Milton.

387 Development of the American Novel to 1914 (3:3:0) Major American novels of the pre-World War I period with emphasis on the work of Brown, Cooper, Hawthorne, Melville, Twain, and others.

388 Development of the American Novel since 1914 (3:3:0) The American novel from the end of World War II to the present. In addition to the work of Hemingway, Faulkner, Dos Passos, Wolfe, and Nabokov.

390 American Drama of the Twentieth Century (3:3:0) American drama from the twenties through the sixties. Emphasis on the plays of Eugene O'Neill, Thornton Wilder, Arthur Miller, Tennessee Williams, and Edward Albee.

391 General Linguistics (3:3:0) Intro to general linguistics: phonology, morphology, syntax, semantics.

392 Survey of English Literature (3:3:0) Survey of English literature covering the Middle Ages through to the present, with emphasis on the work of Shakespeare, Tennyson, Yeats, Lawrence, Graves, Auden, Thomas, and Hughes. A work of fiction which employs poetic techniques, such as Pound's The Waste Land, may be repeated with PoD.

393 Selections from the Literature of the Indian Subcontinent (3:3:0) Selected literary masterpieces in translation from the rich traditions of the Indian continent, inc. romances, and plays, from Sanskrit, Hindi, Tamil, Urdu, and other literatures. (Course is accepted for the BA non-maj, but may not be counted toward the reqs for the English major.)
467 Advanced Expository Writing (3:3:0) Theory and practice of advanced expository writing; practice in analyzing and constructing expository paragraphs. May be repeated for credit with approval of the instructor.

469 Seminar in Creative Writing (3:3:0) Prose or poetry; the course is offered in a variety of literary genres, selected by the instructor. Open only to English majors with 84 hr and 15 hr in the English major. May not be counted toward the major for English majors.

470 Internship in Creative Writing (3:3:0) Prose or poetry; the course is offered in a variety of literary genres, selected by the instructor. Open only to English majors with 84 hr and 15 hr in the English major. May not be counted toward the major for English majors.

471 Theory and Practice of Editing (3:3:0) Prose or poetry; the course is offered in a variety of literary genres, selected by the instructor. Open only to English majors with 84 hr and 15 hr in the English major. May not be counted toward the major for English majors.

504 Internship in Writing and Editing (3:3:0) Open only to English majors with 84 hr and 15 hr in the English major. May not be counted toward the major for English majors.

511 Styles and Modes in Literary History (3:3:0) An historical consideration (not a survey) of some of the principal modes, in prose and poetry, of English and American Literature.

522 Modern English Grammar (3:3:0) Prereq A or B in ENGL 391, 485, or 620 or equiv. Overview of the structure of Modern English with words and phrases, and examination of formal changes. Includes an introduction to the rules of grammar, sentence patterns, and the role of syntax in language change. May be repeated for credit with approval of the instructor.

531 (530) Generative Phonology (3:3:0) Prereq A or B in ENGL 391, 485 or 620 or Sound Systems of English and other languages. A study of the phonological system as an underlying linguistic theory. Topics include phonological processes, distinctive features of phonology, and the role of phonetics in language development. May be repeated for credit with approval of the instructor.

536 (535) Theories of Language (3:3:0) Prereq A or B in ENGL 391, 485, or 620 or Sound Systems of English and other languages. A study of the nature and role of language and its underlying principles. Topics include the structure of language, language development, language change, and the role of language in society. May be repeated for credit with approval of the instructor.

551 Literary Criticism (3:3:0) Study of major critical theories and their influence on the development of literary criticism. Topics include the relationship between literary theory and literary practice, the role of the critic in the literary process, and the impact of literary theory on the study of literature. May be repeated for credit with approval of the instructor.

564 Form and Style in English (3:3:0) Prereq ENGL 464 or equiv. Major and advanced topics in the history and development of English writing. Topics include the history and development of English writing, the evolution of English writing conventions, and the relationship between English writing and society. May be repeated for credit with approval of the instructor.

565 (566) Form and Style in Fiction (3:3:0) Prereq ENGL 465 or equiv. Major and advanced topics in the history and development of English writing. Topics include the history and development of English writing, the evolution of English writing conventions, and the relationship between English writing and society. May be repeated for credit with approval of the instructor.

582 (580) Applied Linguistics (3:3:0) Prereq A or B in ENGL 391, 485, or 620 or Sound Systems of English and other languages. A study of the relationship between language and society, including topics such as language change, language acquisition, language planning, and language policy. May be repeated for credit with approval of the instructor.

591 Psychology of Language (3:3:0) Prereq ENGL 391, 485, or 620 or Sound Systems of English and other languages. A study of the relationship between language and the mind, including topics such as language acquisition, language processing, and language production. May be repeated for credit with approval of the instructor.

618 The Writing of Nonfiction (3:3:0) Writing of essays, articles, and other nonfiction genres. Focus on the development of argumentation, evidence, and style.

619 Poetry Writing Workshop (3:3:0) Prereq ENGL 564 or equiv. Open only to students already writing original poetry. May not be counted toward the major for English majors.

620 Descriptive Linguistics (3:3:0) Introduction to the terminology and methodology of modern linguistic science. Emphasis on phonetics, phonology, morphology, syntax, semantics, and stylistics.

621 Teaching English as Foreign Language (3:3:0) Prereq ENGL 620 or Sound Systems of English and other languages. A study of the methods and techniques of teaching English as a second language. Topics include the role of language in society, the relationship between language and culture, and the development of pedagogical materials.

622 Formal Linguistics: Teaching English as Foreign Language (3:3:0) Prereq ENGL 620 or Sound Systems of English and other languages. A study of the methods and techniques of teaching English as a second language. Topics include the role of language in society, the relationship between language and culture, and the development of pedagogical materials.

623 Language and Culture (3:3:0) Prereq ENGL 620 or Sound Systems of English and other languages. A study of the role of language in society, the relationship between language and culture, and the development of pedagogical materials.

624 Language and Society (3:3:0) Prereq ENGL 620 or Sound Systems of English and other languages. A study of the role of language in society, the relationship between language and culture, and the development of pedagogical materials.
Chaucer, from between 1300 and 1500, studied in Middle English. Content varies. May be repeated for cr with PoD.

630 Studies in English Renaissance Literature (3:3:0) Selected literary authors, works, or movements excluding Shakespeare and Milton, of the English Renaissance. Content varies. Recent offerings include: Johnson, and his circle, Sympathy, Selfishness, and C. G. Jung, The Sexual Mollis in 18th century, Prose, and Drama. May be repeated for cr with PoD.

635 Studies in Eighteenth-Century English Literature (3:3:0) Selected literary authors, works, or movements of the eighteenth century. Content varies. Recent offerings include: Johnson and his circle, Synthesis, Selfishness, and C. G. Jung, The Sexual Mollis in 18th century, Prose, and Drama. May be repeated for cr with PoD.

640 Studies in Nineteenth-Century English Literature (3:3:0) Selected English literary authors, works, or movements of the nineteenth century. Content varies. Recent offerings include: Studies in English Literature: Victorian Poetry, Self-Identity, Romantic Self-consciousness, and Jane Austen, Charlotte Bronte, George Eliot. May be repeated for cr with PoD.

645 Studies in Twentieth-Century English Literature (3:3:0) Selected English literary authors, works, or movements of the twentieth century. Content varies. Recent offerings include developments since WWII; Contemporary British Drama; British Novel to WW II. May be repeated for cr with PoD.

650 Studies in Seventeenth-and Eighteenth-Century American Literature (3:3:0) Selected literary authors, works, or movements of the seventeenth-and eighteenth century. Content varies. May be repeated for cr with PoD.

655 Studies in Nineteenth-Century American Literature (3:3:0) Selected literary authors, works, or movements of the nineteenth century. Content varies. Recent offerings include: The American Renaissance and The American Civil War. May be repeated for cr with PoD.

660 Studies in Twentieth-Century American Literature (3:3:0) Selected literary authors, works, or movements of the twentieth century. Content varies. Recent offerings include: The Federal Theatre Project; Gothicism in Southern Literature; Physics & Metaphysics in the Modern Novel; and The Wasteland Theme. May be repeated for cr with PoD.

670 History and Theory (3:3:0) Prereq Intro film course or Pol Advanced study of the history of film art and major theories concerning the nature of film. Subjective topics may be repeated for cr with PoD.

675 Feminist Criticism and Theory (3:3:0) Seminar designed for students who desire an introduction to criticism and theory which studies the role of gender in literature and in the practice of interpretation.

685 Selected Topics, Movements, or Genres of Literature in English (1-3 cr). May repeat for cr with PoD.

695/EDUC 695 Northern Virginia Writing Project Inservice (1,2,3:0:0) Prereq Admission to the grad prog or PoD. Offered at the request of a school division or other educational institution. May be repeated for cr with PoD, but no more than 6 sem hr of cr in ENGL 695/ EDUC 695 and/or ENGL 699 may be applied toward a master's degree in English. May be repeated for cr with PoD.

696/EDUC 696 Northern Virginia Writing Project Teacher/Research Seminar (3:3:0) Prereq ENGL 695/EDUC 695 or permission of instructor. Designed to acquaint room teachers with current findings related to the composing process and methods of studying writing in a school setting. Focus is on the development of proposal investigations on some aspect of the composing process. Teachers who have developed a proposal prior to enrolling will conduct the research during the course.

697/EDUC 697 Northern Virginia Writing Project Theory of Composition (3:3:0) Prereq ENGL/EDUC 695 or NVPWP Summer Institute Designed to acquaint classroom teachers with current theory relating to writing and the teaching of composition. Focus is on making explicit the theories of the participants, on reading the works of leading theorists, and on developing a statement describing the implications of theo­retical ideas for effective classroom instruction.

699 Workshop in English (1-3:0) Prereq Admission to the grad prog or PoD. Concentrated workshops, educational tours, and special assignments dealing with written, language, film, the electronic media and literature written in English. All tours are optional and may be replaced by specified work conducted on campus. May be repeated for cr with PoD, but no more than 6 sem hr of cr in ENGL 699 may be applied toward a master's degree in English.

701 Methods and Processes of literary research, study of library methodology, use of critical bibliographies, techniques of textual criticism, and evaluation of scholarly work in literary English. May be repeated for cr with PoD.

705 Literary Theory and Criticism (3:3:0) Major theories of literature and methods of analyzing and evaluating literary works. Recent offerings include: Realism and Modernism in Critical Theory, American, New Criticism and Marxist Criticism. May be repeated for cr with PoD.

765 Seminar in Shakespeare (3:3:0) Intensive study of the achievement of Shakespeare and major critical approaches to his work. Usually Comedies & Histories taught one term, Tragedies & Romances the other. May be repeated for cr with PoD.

770 Seminar in Major Figures of English Literature before 1800 (3:3:0) Intensive study of the work of one or two major figures of English literature before 1800. Content varies. Recent offerings include: Shakespeare/Milton/Blake; Fielding & Sterne. May be repeated for cr with PoD.

775 Seminar in Major Figures of English Literature after 1800 (3:3:0) Intensive study of the work of one or two major figures of English literature after 1800. Content varies. Recent offerings include: Yeats, V. Woolf, Dickenses & Gissing, Joyce, Elizabeth Gaskell & Ed. Bronte. May be repeated for cr with PoD.

780 Seminar in Major Figures of American Literature (3:3:0) Intensive study of the work of one or two major figures of American literature. Content varies. Recent offerings include: Stevens, Hemingway, Steinbeck, Whitman, You­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­…
392 French for the Business World II (3:3:0) Prereq FREN 391 or Pol Continuing study of terminology used in business affairs, with attention to form and style of business documents. Oral and written practice of French used in everyday business situations. May be taken in conjunction with FREN 201 and 202. Lab work req.

202 Intermediate French II (3:3:0) Prereq FREN 201, or appropriate placement score, or PoD Application of language skills to reading, composition and class discussion. Lab work req.

209 Intensive Intermediate French (6:6:2) Prereq FREN 202 or 102 or 105, or appropriate placement score, or PoD Equiv to FREN 201 and 202, taught in a single semester. May not be taken for cr in combination with FREN 201 or 202. Lab work req.

252 French Conversation (3:3:0) Prereq FREN 202 (25t) or equiv Development of oral proficiency in French. Discussion of social and practical aspects of everyday life. Enrollment limited to 15.

255 French Literary Masterpieces (3:3:0) Prereq FREN 202 (25t) Reading and analysis of representative texts of the major authors. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

414 French Literature of the Seventeenth Century: Prose and Poetry (3:3:0) Prereq 15 sem hr of French or Pol Study of the dramatic literature of the 17th century. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

222 French Literature of the Eighteenth Century: Classical Drama (3:3:0) Prereq 15 sem hr of French or Pol Study of the dramatic literature of the 17th century. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

223 French Literature of the Eighteenth Century: Eighteenth-century Literature (3:3:0) Prereq ENGL 202 or equiv or Pol Basic philosophical, moral, social, and political dilemmas reflected in the literature of major French writers. Coursework in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with Pol.

351 Advanced French Grammar (3:3:0) Prereq FREN 202 (25t) or equiv Systematic review of French grammar with emphasis on syntax, idiomatic construction, vocabulary building, and literary style. Written and oral exercises.

353 Advanced Composition and Conversation (3:3:0) Prereq FREN 202 or 351 or Pol Development of speaking and writing skills. Oral and written reports on current events.

355 Phonetics and Oral Expression (3:3:2) Prereq FREN 202 (25t) or Pol Intensive study of French pronunciation and diction. Practice in discriminating French phonemes and allophones and in transcribing in phonetic symbols. Recitation of poems and rhythmic prose. Enrollment limited to 15.

401 French Civilization: From the Middle Ages to the Modern Era (3:3:0) Prereq FREN 202 (25t) or Pol French literature through the centuries, with reading and analysis of the novel from Proust and Beckett to the "Nouveau Roman." May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

411 Twentieth-Century Prose Fiction (3:3:0) Prereq 15 sem hr of French or Pol Principal literary trends in contemporary French literature, with exploration of the novel from Proust and Beckett to the "Nouveau Roman." May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

412 Twentieth-Century Drama and Poetry (3:3:0) Prereq 15 sem hours of French or Pol French drama from Sermes and the "Nouveau Theatre." French poetry from Symbolism to contemporary poets. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

415 Writers of French-Speaking Africa and the Caribbean (3:3:0) Prereq 15 sem hr of French or Pol Study of selected poets, tales, and novels expressing the culture and aspirations of the peoples of Africa and the Caribbean. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

461 Linguistic Structure of Modern French (3:3:0) Prereq 15 sem hr of French or Pol A descriptive analysis of the phonology, morphology, and syntax of modern standard French. Optional lab work.

480, 481 Special Topics (2:0:0) Prereq 15 sem hr of French or Pol in depth of a selected literary theme, topic, period, or genre. May be repeated for cr with Pol.

496, 498 Independent Study (1-3:0:0) Prereq 15 sem hr of French or Pol Study in depth of a selected literary theme, topic, period, or genre. May be repeated for cr with Pol.

497, 498 Senior Honors Tutorial (3:0:0), (3:0:0) Prereq 84 hr as a major in French and PoD Research and analysis of a selected problem in literature or linguistics in consultation with a member of the department. Only 6 hr of independent study may be applied to fulfillment of req in major.

500, 501 Special Topics (1-9:0:0) Prereq 15 sem hr of French or Pol Independent study under the supervision of a member of the department. May be repeated for cr with Pol.

515 Medieval French Literature (3:3:0) Intensive study of the outstanding literary works of the Middle Ages. Coursework in French. May be repeated for cr with Pol.

518 Studies in Eighteenth-Century Literature (3:3:0) Prereq Selected writers, works, themes, or trends of French literature in the classical era. Specific topic varies. Coursework in French. May be repeated for cr with Pol.

519 Studies in Nineteenth-Century Literature (3:3:0) Selected works, themes, genres, and authors of 19th century French literature. Content varies. Coursework in French. May be repeated for cr with Pol.

525 Studies in Modern French Literature (3:3:0) Select­ed writers, works, themes, or trends of French literature in the modern era. Content varies. May be repeated for cr with the PoD. May be repeated for cr with the PoD. May be repeated for cr with the PoD.

550, 551 Special Topics (3:3:0), (3:3:0) Special topic related to French literature and culture. Content varies. Coursework in French.


575 Grammatical Analysis (3:3:0) Study of characteristic features of contemporary French sentence structure and written French, incl systematic analysis, distributional analysis, and generative/transformational grammar. Empha­sis on problem areas for the American learner.

576 Advanced Translation (3:3:0) Advanced work in translation of topics selected from the humanities, the social and political sciences. Comparative terminology, sight trans­lation and precis writing. The importance and techniques of documentation in translation. Translations from French to English and from English to French.

798 Directed Reading and Research (3:0:0) Prereq Open only to degree students who have completed at least 18 hr of French or Research and writing on a specific project under the direction of a department member. Oral or written report req.

799 Thesis (3:6:0) Students who take FREN 798 and then elect the thesis option receive 3 cr for FREN 799 upon completion of the thesis. Students who do not take FREN 798 receive 6 cr for FREN 799 upon completion of the thesis.

800 Studies for the Doctor of Arts in Education (var cr) Prereq: DA Ed admission to study in French. Program of studies designed by the student's discipline director and approved by the student's doctoral committee which prepares the student to do research and writing in the current area of interest of the discipline director. The student presents a research paper in a subsequent DA Ed summer seminar. May be repeated as req.

Geography Courses (EGEO)

Public Affairs

101 Major World Regions (3:3:0) Patterns, problems, and processes of the world's principal human-geographic regions. Emphasis on the causal factors of areal differentiation and the role geographic differences play in the interpretation of the current world scene.

122 Physical Geography (3:3:0) Interrelated processes affecting the global distribution and character of climate, soils, vegetation, hydrography, and landforms; elements of mapping.

125 Cultural Geography (3:3:0) Study of relationships between geography and human population dispersion, cultural patterns, and economic development.

110 Maps and Map Reading (3:3:0) Concepts and techniques of map reading, map interpretation, map analysis, and orientation.

199 America Before Columbus (1-1:0:0) North and South American geography before the landing of Columbus; region-
406 Suburban Geography (3:3:0) Prereq 24 hr Analysis of the spatial aspects of man's social, economic, and political activities within suburbia. Suburbanization viewed both as an independent force and as a component of the larger urbanization process. Northern Virginia is utilized as a lab for suburban geographical and student-initiated fieldwork projects.

411 Introduction to Computer Cartography (3:3:0) Prereq 54 hr of computer experience involved with production and utilization of computer-generated cartography. Need for graphic representations of manipulated data when volume of data necessitates use of the computer.

412 Aerial Photography Interpretation (3:3:0) Prereq 54 hr intro to technology of gathering and managing information through airborne sensing equipment. Methods and techniques of interpreting and using information contained in aerial photographs and maps. Aerial-photograph analysis.

413 Photogrammetry (3:3:0) Prereq 54 hr, course in mathematics or physics, or Pol Theories and processes involved in terrestrial measurement and mapping with remotely sensed imagery. Particular emphasis to current techniques and applications of topographic and thematic mapping.

414 Photogrammetry II (3:3:0) Prereq GEOG 413, course in statistics, or Pol Theory and methods of stereoscopic plottings and adjust climbing and interpretation.

415 Seminar in Geography (3:3:0) Prereq Open to geography majors with 54 hr Opportunity to integrate previous coursework into a comprehensive disciplinary framework and to develop an individual aspect of geography. The format varies but stresses field work and readings in the current literature, history, and research techniques of the discipline.

420 Physiology of North America (3:3:0) Prereq GEOG 102, 3 additional hr of geography or Pol Physiographic features of the North American continent, their spatial distribution and their influence on the cultural, demographic, and economic development of the U. S. and Canada.

480 Internship (2-5:0:0) Prereq Open to authorized senior majors only Internships are approved work-study programs with specific employers. Or is determined by department. Contact department one sem prior to enrollment.

499 Independent Study in Geography (1-3:0:0) Prereq Open only to geography majors with 54 hr and Pol. Individual study of a selected area of geography. Directed research paper is req.

520 Geography for Teachers (3:3:0) Prereq Grad stdg or Pol Emphasis on problems and techniques in teaching geography and current developments in research, methodology, and governmental policies in geography.

583 Spatial Dynamics of Political Systems (3:3:0) Prereq Grad stdg or Pol Topics incl territoriality, reapportionment, spatial allocation of public facilities, perception of boundaries, and the spatial impact of political process upon land use.

621 Human Ecology and the City (Same as SOCI 621) (3:3:0) Prereq Grad stdg or Pol Emphasis on social, economic, and environmental factors influencing the urban situation of the Soviet Union.

670 Applied Climatology (3:3:0) Prereq Course in weather and climate, and grad stdg or Pol Application of climatic concepts to natural and man-modified environments. Analysis of climatic change.

671 Applied Geomorphology (3:3:0) Prereq Grad stdg and course in climatology, geomorphology, or structural geology In-depth examination of interaction among land forming processes, settlement, and land-use patterns. Emphasis on planning and problem solving.


680 Seminar in Geographic Thought and Methodology (3:3:0) Prereq Grad stdg or Pol Historical development of geography as a science. Emphasis on the role of current thought in geography.

701 Mineralogy (4:2:3) Prereq GEOG 101, 102 Classification, evolutionary trends, and distribution of the common invertebrate fossils. Lab incl field collection of fossils, their preparation and identification.

704 Geomorphology (3:2:3) Prereq GEOG 101 or GEOG 102 Study of processes that occur at the earth's surface and the landforms that result. Lab stresses the recognition, description, and analysis of landforms from pictures, maps, and digital photos. Lab may be repeated.

801 World Food and Population in Geographical Perspective (3:3:3) Prereq Grad stdg or Pol Topics incl distribution of population, regional disparities in growth rates and income distribution, food production and world hunger, areal concentrations of ethnic minorities. Discussion of population policies, with emphasis on Third World countries.

864 Applied Economic Geography (3:3:0) Prereq Baccalaureate degree or Pol Analysis of factors and patterns of location of economic activity, its theories and regional systems. Emphasis on case studies.

960 Selected Topics in Geography (3:3:0) Prereq Baccalaureate degree or Pol Content varies, determined by student's and instructor's interests and expertise. May be repeated for credit.

969 Directed Readings and Research (1-3:0:0) Prereq Po prog director and Pol Reading and Research on a specific topic, under the direction of a faculty member. Written report is req, oral exam and report may be req. May be repeated.

785 Geographic Fieldwork and Quantitative Methods (3:3:0) Prereq Baccalaureate degree or Pol Intro to the nature, scope, and objectives of geographic field methods and techniques, incl use of base maps, acquisition of data, field research design. Survey of quantitative methods in geographic data, correlation of geographical distributions, network analysis, and spatial transformations.

785 Seminar in Regional Analysis (3:3:0) Prereq Baccalaureate degree or Pol Analysis and synthesis of physical and cultural elements of a selected region. 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.

799 Thesis (3-6:0:0) Prereq Degree candidacy and department approval of thesis proposal

Geology Courses (GEOL)

101 Physical Geology (4:3:3) Survey of the geologic features of the earth as revealed through a sequence of geologic events and processes. Subjects incl geologic origin of the earth, succession of life forms, geologic ages and time. May lab incl one field trip.

102 Historical Geology (4:3:3) Prereq GEOL 101 or Pol History and development of the earth as revealed through geologic events and processes. Subjects incl physical origin of the earth, succession of life forms, geologic ages and time. May lab incl one field trip.

103 Geology of National Parks (2:2:0) Geologic evolution and features of national parks.

104 Introduction to Field Geology (2:0:0) Prereq GEOG 101 4 weekend trips to selected locations in VA and adjacent states. Topics to be determined by student and instructor. Reports, and preceded by a Friday evening lecture. Students must pay costs (incl transportation fee).

105 Geology of Virginia (2:2:0) Prereq GEOL 101 Geologic history and development of the state and adjacent areas of the eastern seaboard. May be repeated for credit.

106 Environmental Geology (3:3:0) Prereq GEOL 101 Investigation of geological principles directly related to environmental problems and geological causes and effects of natural disasters, geology of natural resources, geology of land use planning, and geology as related to health problems.

107 Gemstones (2:2:0) Techniques used in the identification and preparation of gemstones, as well as the geological processes by which they are formed.

114 Map and Charting Techniques in Geology (1:0:2) Prereq GEOL 101, or Pol An out-of-doors course in instruc- tion in the use of topographic maps and compass. Boots, outdoor clothing, compass and maps to be furnished by the student. 1-4 one-day field trips.

201 Mineralogy (4:3:3) Prereq GEOL 101, 102. Crystallographic, chemical, and physical properties of minerals and their optical properties. One optional field trip.

202 Geomorphology (3:3:3) Prereq GEOL 101, 102 Classification, evolutionary trends, and distribution of the common invertebrate fossils. Lab incl field collection of fossils, their preparation and identification.

204 Topography (3:3:3) Prereq GEOL 101 or GEOG 102 Study of processes that occur at the earth's surface and the landforms that result. Lab stresses the recognition, description, and analysis of landforms from pictures, maps, and digital photos. Lab may be repeated.

205 Introduction to Oceanography (3:3:3) Prereq 6 hr of biology, chemistry, geology or physics, or Pol Geologicai,
410, 411 Special Projects in Geology (2:5:5), (2:5) Prereq Geology majors with 84 hr and Po department research committee. Intro to geological research. Incl a literature search, computer work, and lab work. Written and oral report req.

417 Geophysics (3:3:3) Prereq Geol 101, 102, 201, 301; Math 113, 114, Phys 250 Seismological and gravitational theory and application to understanding the earth's interior.

500, 501 Selected Topics in Modern Geology (3:3:3), (3:3:3) Prereq Baccalaureate degree and Po Lec. Topic varies, announced before reqs. Rec for teachers of general science and earth science.

800 Studies for the Doctor of Arts in Education (var cr) Prereq DA Ed admission to study in geology. Program of studies designed by student's discipline director and approved by 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 may be repeated.

German Courses (GERM)

Foreign Languages and Literatures Placement: See Academic Policies and Procedures.

101 Elementary German I (3:3:1) Designed for students with no knowledge of the language. Incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary German II (3:3:1) Prereq GERM 101 or PoD Continuation of GERM 101. Lab work req.

105 Review of Elementary German (3:3:1) Prereq 15 hr of German or Pol Elementary German (GERM) 101. Lab work req.

109 Intensive Elementary German (6:6:2) Equiv to GERM 101, 102, taught in single sem. Rec for students who desire an intensive intro to German. May not be taken for cr in combination with GERM 101, 102, or 109. Lab work req.

101 Intermediate German I (3:3:1) Prereq GERM 102 or 105 or 109, or appropriate placement score, or PoD Further development of skills in listening, speaking, reading, and writing. GERM 201 and 202 must be taken in sequence. Lab work req.

102 Intermediate German II (3:3:1) Prereq GERM 201, or appropriate placement score, or PoD Application of skills to reading, composition and discussion. Lab work req.

109 Intermediate German II (6:6:2) Prereq GERM 102 or 105 or 109, or appropriate placement score, or PoD Equiv to GERM 201 and 202, taught in a single sem. May not be taken for cr in combination with GERM 201 or 202. Lab work req.

125 German Conversation and Composition (3:3:3) Prereq GERM 202 or equiv Development of oral proficiency and writing skills through discussions, reports, and compositions on contemporary German events and culture.

263 Scientific German (3:3:3) Prereq GERM 202 or equiv Specific terminology and structure of scientific texts through supervised readings and translation of materials from the scientific fields.

254 Readings in German Literature (3:3:3) Prereq GERM 202 (251) or equiv Intro to German literature through a study of poetry, prose, and drama, by major authors of the modern era. Preparation for the analysis of literature in German, incl familiarization with the tools of German literary criticism.

301 German Culture and Civilization (3:3:3) Prereq 54 hr or PoD German civilization from eighteenth century to the present. German cultural contributions to world civilization.

302 German Today (3:3:3) Prereq 54 hr or PoD Contemporary German life, contemporary events, and goals, seen from the West German perspective.

305 Field Study in German Culture (1:1:0) Prereq or coreq GERM 301 or 302, or PoD Tour of cultural centers of West Germany and the German-speaking areas of Europe. In consultation with a designated faculty member, students undertake a research project on a previously chosen topic in German culture and present their findings in a substantial paper.

311 German Conversation and Composition (3:3:3) Prereq GERM 202 or equiv Development of fluency in speaking and proficiency in writing German through discussion, reports, and compositions based on texts dealing with contemporary cultural events and issues.

312 Practical Strategies (3:3:0) Prereq 15 hr of German or Pol Presentation of the main stylistic and didactic features of German. Practice of these features (syntonyms, idiomatic expressions, different learning contexts) in different learning situations. May be repeated for cr with PrD.

325 Major German Writers (3:3:0) Prereq ENGL 101, 102 or equiv or Pol Works of major German writers in translation. Writers to be studied vary. Coursework in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with PrD.

340 Survey of German Literature (3:3:0) Prereq GERM 202 or equiv Major works from the history of German literature from its beginnings to 1860. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

350 Early German Literature (3:3:0) Prereq 15 hr of German or Pol German literature from the heroic saga to the advent of the Enlightenment, with primary emphasis upon the medieval epic and Minnesang, and the drama and picaresque novel of the Baroque age. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

360 The Literature of German Romanticism (3:3:0) Prereq 15 hr of German or Pol Background and some theory of German Romanticism, selected poetry and prose. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

370 German Literature: 1830-1880 (3:3:0) Prereq 15 hr of German or Pol Study of the literature of Young Germany, Biedermier and Poetic Realism, prose, drama, and lyric poetry. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

415 Advanced German Grammar (3:3:0) Prereq 18 hr of German or Pol Systematic approach to the grammar of modern German. Application of theoretical knowledge in closely guided and supervised written and oral exercise.

420 Linguistics of Modern German (3:3:0) Prereq 18 hr of German or Pol Study of the German language introducing the principles of modern linguistics. Analysis of German phonology, morphology, and syntax. Particularly valuable to the student who intends to teach or undertake study in Graduate German Linguistics.

440 German Drama in the Age of Classicism (3:3:0) Prereq 15 hr of German or Pol Dramatic literature of the Enlightenment, Sturm and Drang, Classicism and early Romanticism. Some theory and selected plays. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

441 Gotthold Lessing (3:3:0) Prereq 15 hr of German or Pol Poetry, drama (Faust), and some prose, in the context of Goethe's life and thought. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

445 German and Comparative Literature (3:3:0) Prereq 15 hr of German or Pol Naturalism, impressionism, the works of fin de siecle writers, and Expressionism. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

451 Modern German Literature: 1925 to the Present (3:3:0) Prereq 15 hr of German or Pol Literary trends since 1925. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

480 (30) Special Topics in German Literature (3:3:0) Prereq 15 hr of German or Pol German literature by topics or genres, such as literature of revolt, literature in leader and opera, major types of poetry, the novella. Topic varies. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

489 Independent Study (1-3:0:0), (1-3:0:0) Prereq German majors with 84 hr and PoD Research and analysis of a selected problem in literature or linguistics in consultation with a department member. Maximum of 6 hr of independent study and 3 hr for final project. In consultation with a department member. Prereq permission of the instructor and of the department. May be repeated for cr with different problems.

497, 498 Senior Honors Tutorial (3:0:0), (3:0:0) Prereq German majors with 84 hr, and a GPA of 3.000 and 3.000 in the major. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with different problems.

499 Independent Study (1-3:0:0), (1-3:0:0) Prereq permission of a faculty member. May be taken toward candidacy upon submission of a letter of application to the departmental Honors Committee in the second half of the junior year, supported by a faculty rec and an interview by the faculty member. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

COURSE DICTIONARY
American constitutional principles. U.S. Courts' interpretation and clarification of rights and obligations in such areas as First Amendment freedoms, equal protection of the laws; state and national interrelations within the federal system; and social and economic protection and regulation.

365 Contemporary American Federalism (3:3:0) Prereq: GOVT 103, 204 Legal, administrative, fiscal, and political dimensions of evolving American federalism.

370 Legislative Behavior (3:3:0) Prereq: GOVT 103 Organization, processes, functions, and roles of the legislature and its members, the U.S. Congress. Incl state legislatures and cross-national comparisons as time and resources permit.

379 Government and Politics of Metropolitan Areas (3:3:0) Prereq: GOVT 204, 54 hr Government, politics, and problems of metropolitan centers and surrounding areas.

381 Politics of Social Opinion (3:3:0) Prereq: GOVT 103 Nature, sources, structure, expression, transmission, change, and measurement of politically relevant public opinion in a democratic system of government.

399 Black Politics (3:3:0) Prereq: 54 hr Black political behavior, with special emphasis on political characteristics of blacks, incl attitudes, political thought, participation, and organizational activity.

400 Political Issues (3:3:0) Prereq: 54 hr Nature of man, origin and nature of the state, bases of political obligation, problems of consent, concepts of power, and sources of political authority as presented in the works of major writers.

421 Contemporary Comparative Federalism (3:3:0) Study of political ideologies which shape the values, beliefs, and actions of contemporary regimes and political movements. Liberalism, conservatism, socialism, communism, and fascism in their historical, social, and political contexts. Problem of totalitarianism and nationalism in post-industrial and developing societies.

431 Government and Politics of Latin America (3:3:0) Prereq 54 hr Contemporary political systems of Latin America, with emphasis on institutions, political processes, political behavior. Case studies of several key Latin American political problems.

432 Government and Politics of the Middle East and North Africa (3:3:0) Prereq GOVT 132 and 54 hr Societies of the Middle East and North Africa and their response to the impact of internal sociocultural, international, and external forces. Focus on their contemporary politics—ideologies, popular manifestations, institutions, and operations.

446 International Law (3:3:0) Prereq: GOVT 103 54 hr Process of political development and change in the context of modernization and industrialization. Patterns of political development, with emphasis on the Third World.

460 Advanced International Relations (3:3:0) Prereq: GOVT 132 and 54 hr Advanced inquiry into international relations. Theories and concepts of international relations. Major political issues in international politics.


490 American Foreign Policy (3:3:0) Prereq GOVT 132, HIST 122 The central issues surrounding the conduct of America's foreign relations, with special emphasis on structural and normative aspects of policy objectives abroad, and the conduct of foreign policy in a democracy.

555 Public Personnel Administration (3:3:0) Prereq GOVT 241 and 54 hr or Poli Techniques and tools employed in the management and administration of government organizations, incl the merit system, recruiting, placement, career systems, public pay systems, employee motivation, public employee labor relations, employee appraisals, manpower planning, personnel systems, and systems analysis.

556 Public Budgeting and Finance (3:3:0) Prereq: GOVT 241 and 54 hr or Poli Tools and techniques employed in budgeting and financial management in governments in the U.S. and concerning the management of federal, state, and local governments, the budgetary process, budgetary reform, and the relationship of public budgeting to national economic policy.

357 Introduction to Public Planning (3:3:0) Prereq 54 hr or Poli Methods of public policy analysis, evaluation, and recommendation. Design and development of alternative courses of government action and evaluation of results. Problems in applying systematic analysis to public issues.

371 Police Administration (3:3:0) Prereq Open to pre- and in-service law enforcement students and by Pol Police supervision as related to organizational environments and goals to include law enforcement, morale, safety, training and career development, cooperation and behavior.

372 Police Supervision (3:3:0) Prereq Open to pre and in-service public, law enforcement, and government officials and employees.

377 Public Safety Officers and the Law (3:3:0) Law applicable to fire and police protection, firefighters and police officers and their relationship to the public, their employers, the courts and other societal institutions. Rights and obligations of the uniformed services in tort and criminal law, historical development of each, Virginia law, and other local topics.

384 Comparative Political Leadership (3:3:0) Prereq 54 hr Comparative political leadership; relationships between political cultures and types of leadership, patterns of leadership recruitment, and linkages between political elites and citizens.


446 International Law (3:3:0) Prereq GOVT 132 and 54 hr Nature, sources, and subjects of the law of nations; the law and the individual; territorial questions; international transactions and treaties; and the present and future status of international law.

447 Foreign Policy and Analysis (3:3:0) Prereq GOVT 132 and 54 hr Foreign policies and decision making of major world powers.

449 Senior Seminar in International Studies (3:3:0) Prereq Open only to senior majors in International Studies. An integrative seminar that draws together previous course materials and structures students for independent study, analysis, and research. May be repeated for credit with a change in the specific topic of study. Credit in this seminar will be given with the approval of the departmental advisor. This is an opportunity for in-depth study of some aspect of international studies. Format varies, but involves the student in the current
literature, research techniques, and major issues of the field of international studies.

451 Administrative Management and Behavior (3:3:0) Prereq: GOVT 241 and 54 hr American governmental administration: organizational theory and behavior, administrative responsibility, management systems, roles of the bureaucracy, and relationships between individual and organization.

452 Administrative Law and Procedures Prereq GOVT 241 and 54 hr Law of public office; procedures followed by, and the roles of, administrative agencies and their officers and employees.

461 Citizen Participation in the Policy Process (3:3:0) Prereq GOVT 204 The ways in which citizens participate in the policy process with an emphasis on recent innovations. Research skills to study participation in the local community, and experience in group process skills.

462 Political Campaign Organization (3:3:0) Prereq GOVT 103 and 54 hr or Pol Campaign practices and techniques, incl candidate recruitment and selection, campaign organization, utilization of volunteers, financing, polls, and media techniques. Implications of various campaign practices for the American political system.

463 Lobbying and the Policy Process (3:3:0) Prereq GOVT 103 and 54 hr or Lobbying techniques, activities, and characteristics of interest groups and the implications of their political behavior for the American political system.

471 Prevention and Deterrence of Crime (Same as SOCI 471) (3:3:0) Prereq 54 hr, in-service status or Pol Theor or Prac Emphasis on public policy for crime prevention and deterrence. Social, environmental, and mechanical developments. The police, courts, and correctional elements of law enforcement in terms of current effectiveness and future potential for crime prevention.

480 Internship (2:3:0) Prereq Open to junior and senior majors only. Contact the department in person before enrollment. Internships are approved work-study programs with specific employers. Cr is determined by the department.

490 Seminar (3:3:0) Prereq Open to Public Affairs junior and senior majors, and by PoD to other seniors who have completed at least 12 hr of work in government. May be repeated for credit. Subject varies according to specialization of the faculty member in charge. Readings, individual research projects, and discussions of seminar papers comprise the content and format. Only 3 cr may be counted in the major program.

536 The Context of Development (3:3:0) Prereq Grad stdg or PoD Factors and forces—both internal and external—that affect the political development of Third World countries, inc North-South relations, dependency theory, and development strategy within the context of resource scarcity.

537 Selected Problems of Third World Development (3:3:0) Prereq Grad stdg or PoD Third world development problems and ideologies. Emphasis on economic, political, and social problems in development, a comparative analysis of countries, and an interplay of economic forces, domestic politics, and international factors. May be repeated with permission of the department.

Greek Courses (GREE)


201, 202 Intermediate Greek: Readings in Classical Literature (3:3:1), (3:3:1) Prereq: GREE 102 or equiv. Review of grammar. Development of proficiency in reading, with emphasis on traits of syntax, vocabulary, dialect or style that will be seen in authors to be read. Must be taken in sequence.

Health Education Courses (HEAL)

Health and Physical Education

110 Personal Health (3:3:0) Individual and family well-being through the integration of such topics as: fitness, nutrition, health behavior, safety, drug education, and mental health.

111 Advanced First Aid & Emergency Care (2:1:2) Identification, care, and treatment of various medical emergencies.

120 Community Health (2:3:0) Organization of community health programs of official and voluntary local, state, and national health programs. Field observation req.

205 Principles of Accident Causation and Prevention (3:3:0) Investigation of safety-related problems; emphasis on fire, home, occupational, and vehicle safety; violent and property crime prevention.

220 Dimensions of Mental Health (3:3:0) Integration of behavioral and sociocultural factors in the study of mental health.

305 Health Education in the Elementary School (3:3:0) Designed for Elementary Education students with emphasis on content, methodology, and resource materials in health teaching.

310 Drugs and Health (3:3:0) Prereq HEAL 110 Analysis of drug use, with emphasis on positive aspects of drug use, alternatives to drug misuse and abuse.

315 Foundations of Health Education (3:3:0) Prereq HEAL 110 and 120 Historical and philosophical foundations of health education with emphasis on principles and theories governing contemporary programs.

323 Community Health Education Programs (3:3:0) Prereq HEAL 120 or Pol Organization and principles in planning, developing, implementing, and evaluating community health education programs.

325 Health Aspects of Human Sexuality (3:3:0) Prereq HEAL 110 Biological, behavioral, and sociocultural factors in human sexual behavior which appear to be related to sexual problems.


402 Introduction to Driver Education: Driver Task Analysis (3:2:3) Prereq HEAL 205 Vehicle operator's task incl lab experiences in the use of psycho-physical and psychological tests.

420 Organization of the School Health Program (3:3:0) Prereq Admission to the Teacher Education Program and PoD School health program, health services, healthy school environment, and health education as interrelated responsibilities of the school and the community.

430 Seminar on Contemporary Health Problems (3:3:0) Prereq Admission to Teacher Education Program or PoD Overview of contemporary and often controversial health issues with analysis of selected problems of current concern to society.

440 Health Education Methods (3:3:0) Prereq Admission to the teacher education program or PoD Instructional strategies, lesson and unit planning, teaching aids and resources, and evaluation techniques for secondary school health instruction.

450 Epidemiology (3:3:0) Incidence, distribution, causation, and control of diseases and injuries in populations at risk.

460 Internship in Community Health Education (6- 12:0) Prereq PoD Directed experience to observe and participate in the health education activities of a community health agency. Experience in health organization in cooperation with approved agency.

480 Special Topics (1-3:3:0) Selected health issues and/or programs are presented for each specific "Special Topics" course. Applications of information in education programs receive special attention.

499 Independent Study in Health Education (1-3:0) Prereq 84 hr and PoD Study of a problem area in health education research, theory, or practice under faculty direction.

500 Workshop in Health Education (1,2,3:0) Analysis of selected health problems and issues involving readings, research, and group studies. Field and/or laboratory work 5-6 hr of HEAL 500 may be applied to degree cr.

511 History and Philosophy of Health Education (3:3:0) Focus on evolution of significant historical events that affected and contributed to health education development. Emphasis on personalities, institutions, and philosophical ideas of each area.

515 Community Health Education Planning and Delivery (3:3:0) In-depth study of the processes of planning, delivering, and evaluating community health education programs.

516 Curriculum Development and Resources in Health Education (3:3:0) Prereq Baccalaureate degree in health education or related field, or PoD Procedures used in planning, development, and organization of health instruction in secondary schools.

517 Health Education Process: School and Community (3:3:0) Prereq Baccalaureate degree in health education or related field, or PoD Examination of the health education process in a variety of health promotion, disease prevention and rehabilitating settings.

540 Advanced Driver and Traffic Safety Education (3:3:0) 3 hr basic course in driver education course in general safety education on college level; valid operator's license. Advanced course in driver education for teachers, supervisors, and administrators of driver education and traffic safety programs.

History Courses (HIST)

100 The Uses of History (3:3:0) Primarily for non-majors; may be taken by majors only as elective credit. Intro to nature of history and the historical method. Emphasis on distinguishing fact from interpretation, synthesis of historical information, and critical analysis of historical writings.

101 Foundations of Western Civilization (3:3:0) Evolution of Western culture from the ancient Mediterranean world to the formation of modern Europe in the seventeenth century.

102 Development of Western Civilization (3:3:0) History of Western institutions and ideas from the seventeenth century to present.

121 Formation of the American Republic (3:3:0) Social, political, economic, and intellectual growth of American institutions from colonization through the Civil War.

122 Development of Modern America (3:3:0) History of the U.S. from 1865 to present.

251, 252 A Survey of East Asian Civilization (3:3:0), (3:3:0) Survey of the history of China, Japan, Korea, and Vietnam from the prehistoric period to present.

261, 262 Survey of African Civilization (3:3:0), (3:3:0) Survey of the history and cultural development of Africa and African peoples from earliest times to emergence of new African states from colonial domination.


281, 282 Survey of Middle Eastern Civilization (3:3:0), (3:3:0) Survey of the history of major civilizations of Middle East with attention to cultural, intellectual, social, and political developments.

300 Interpretations of History (3:3:0) (Reg of history majors. To be taken in the junior year) Study of development of historical writings in the West from ancient to modern times. Introduction to historical methodology.

301 Classical Greece (3:3:0) Prereq 6 hr of history or Pol Political, social, economic, and cultural history of classical Greece from development of the city-state through the Hellenistic monarchies.

302 Classical Rome (3:3:0) Prereq 6 hr of history or Pol Political, social, economic, and cultural history of classical Rome from founding of the city through fall of the Roman empire.

303 Western Europe in the Middle Ages (3:3:0) Prereq 6 hr of history or Pol Survey of development of European society from the impact of the reforms of Diocletian and Constantine to the end of the 15th century. Emphasis on political, institutional, economic, and social developments, incl influence of the church.

305 The Renaissance (3:3:0) Prereq 6 hr of history or Pol Survey of the Renaissance as a phenomenon rather than a chronological period. Emphasis on growth of Humanism in Italy in the 14th and 15th centuries, development of new political concepts, and laicization of society. Transmission of these developments to transalpine Europe in the late 15th and 16th centuries is incl.

306 The Reformation (3:3:0) Prereq 6 hr of history or Pol Late medieval ecclesiastical reform and religious movements; late scholasticism; Protestant Reformation; Catholic Reformation, dynastic rivalries, and religious wars. Concludes with the Peace of Westphalia (1648).

309 Nineteenth-Century Europe (3:3:0) Prereq 6 hr of history or Pol History of Europe from Congress of Vienna to outbreak of World War I.

309 Contemporary Europe (3:3:0) Prereq 6 hr of history or Pol Survey of major political changes in Europe since 1945 with emphasis on broad patterns of ideological conflict.
314 History of Germany (3:3:0) Prereq 6 hr of history or Pol History of the German-speaking countries from the Reformation to 1850, emphasizing social, cultural, and political development of Germany from the dissolution of Holy Roman Empire to present.

320 Anglo-Saxon and Medieval England (3:3:0) Prereq 6 hr of history or Pol Intro to History of England from the reign of Eadred to 1558, emphasizing social, cultural, and political development of England.

321 Tudor and Stuart England (3:3:0) Prereq 6 hr of history or Pol History of England from 1558 to 1660, emphasizing political, social, and cultural developments.

379 History of Canada (3:3:0) Prereq 6 hr of history or Pol Historical development of Canada from French and Indian Wars to the present.

380 The Ancient Near and Middle East (3:3:0) Prereq 6 hr of history or Pol Development of civilizations in the Near East and Middle East from prehistoric times to the fall of the Roman Empire.

390 Topics in History (3:3:0) Prereq 6 hr of history or Pol Development of specific topics in history.

352 The History of the South during Reconstruction, the Civil War, and the War Between the States (3:3:0) Prereq 6 hr of history or Pol Reconstruction of the Southern states, the Civil War, and the War Between the States.

381 History of the South during Reconstruction and the Civil War (3:3:0) Prereq 6 hr of history or Pol Reconstruction and the Civil War.

382 History of the South during Reconstruction, the Civil War, and the War Between the States (3:3:0) Prereq 6 hr of history or Pol Reconstruction and the Civil War.

383 The History of Argentina, Brazil, and Chile (3:3:0) Prereq 6 hr of history or Pol History of Argentina, Brazil, and Chile from colonial times to the present.

384 The History of Mexico (3:3:0) Prereq 6 hr of history or Pol History of Mexico from pre-Columbian times to the present.

385 The History of the Ottoman Empire (3:3:0) Prereq 6 hr of history or Pol History of the Ottoman Empire from its rise to its fall.

386 The History of the Mediterranean World (3:3:0) Prereq 6 hr of history or Pol History of the Mediterranean world from prehistoric times to the present.

387 The History of the Middle East (3:3:0) Prereq 6 hr of history or Pol History of the Middle East from prehistoric times to the present.

388 The History of the Soviet Union (3:3:0) Prereq 6 hr of history or Pol History of the Soviet Union from its rise to its fall.

389 The History of the United States (3:3:0) Prereq 6 hr of history or Pol History of the United States from prehistoric times to the present.

391 Colonial America (3:3:0) Prereq 6 hr of history or Pol History of colonial America from its origins to the American Revolution.

392 History of the United States (3:3:0) Prereq 6 hr of history or Pol Development of the United States from its origins to the present.

393 History Through Film (3:3:0) Prereq 6 hr of history or Pol Development of history through the medium of film.

394 History of the Family in the United States and Europe, 1750-1900 (3:3:0) Prereq 6 hr of history or Pol History of the family in the United States and Europe from 1750 to 1900.

395 History of the United States Since 1865 (3:3:0) Prereq 6 hr of history or Pol History of the United States since 1865.

396 History of the United States Since 1865 (3:3:0) Prereq 6 hr of history or Pol History of the United States since 1865.

397 History of the United States Since 1865 (3:3:0) Prereq 6 hr of history or Pol History of the United States since 1865.

398 History of the United States Since 1865 (3:3:0) Prereq 6 hr of history or Pol History of the United States since 1865.

399 History of the United States Since 1865 (3:3:0) Prereq 6 hr of history or Pol History of the United States since 1865.

400 France, 1610-1789: Absolutism and Revolution (3:3:0) Prereq 6 hr of history or Pol Development of French history from 1610 to 1789.

401 Colonial America (3:3:0) Prereq 6 hr of history or Pol History of colonial America from its origins to the American Revolution.

402 Early National Period in American History, 1783-1820 (3:3:0) Prereq 6 hr of history or Pol Development of American history from the end of the Revolutionary War to 1820.

403 National Security (3:3:0) Prereq 6 hr of history or Pol Development of national security policy.

404 Jacksonian Democracy, 1820-1848 (3:3:0) Prereq 6 hr of history or Pol History of American history from 1820 to 1848.

405 New Deal (3:3:0) Prereq 6 hr of history or Pol Development of the New Deal.

406 Civil War and Reconstruction (3:3:0) Prereq 6 hr of history or Pol Development of the American Civil War and Reconstruction.

407 Great Depression and World War II (3:3:0) Prereq 6 hr of history or Pol Development of the Great Depression and World War II.

408 World War I and the Role of the United States in World War I (3:3:0) Prereq 6 hr of history or Pol Development of the role of the United States in World War I.

409 World War II (3:3:0) Prereq 6 hr of history or Pol Development of World War II.

410 World War II (3:3:0) Prereq 6 hr of history or Pol Development of World War II.

411 Cultural and Intellectual History of the United States (3:3:0) Prereq 6 hr of history or Pol Development of cultural and intellectual history of the United States.

412 Cultural and Intellectual History of the United States (3:3:0) Prereq 6 hr of history or Pol Development of cultural and intellectual history of the United States.

413 Cultural and Intellectual History of the United States (3:3:0) Prereq 6 hr of history or Pol Development of cultural and intellectual history of the United States.

414 Cultural and Intellectual History of the United States (3:3:0) Prereq 6 hr of history or Pol Development of cultural and intellectual history of the United States.

415 United States Urban History: Colonial Origins to Civil War (3:3:0) Prereq 6 hr of history or Pol Development of United States urban history from colonial times to the Civil War.

416 United States Urban History: Colonial Origins to Civil War (3:3:0) Prereq 6 hr of history or Pol Development of United States urban history from colonial times to the Civil War.

417 United States Urban History: Colonial Origins to Civil War (3:3:0) Prereq 6 hr of history or Pol Development of United States urban history from colonial times to the Civil War.

418 United States Urban History: Colonial Origins to Civil War (3:3:0) Prereq 6 hr of history or Pol Development of United States urban history from colonial times to the Civil War.
713 Topics in Twentieth-Century European History (3:3:0) Joint project of instructor and student, into the various aspects of a common topic in the Civil War era with emphasis on historiography and historical method.

715 Problems in American History (3:3:0) Readings and discussions of selected topics in American history. Analysis of trends in topics selected by instructor. Maximum of 6 hr may be earned.

717 Topics in Recent U.S. History, 1845 to Present (3:3:0) Political, social, economic and cultural forces which shaped the post-World War II American experience. Consideration of interaction between foreign affairs and domestic politics and institutions and alternative interpretations.

719 Seminar in American History (3:3:0) Prereq. HIST 700 or PoD Research seminar on geographic, political, economic, military, and other forces that have influenced American relations. Study of the special relationship between U.S. and Latin America. May be applied toward the major or minor concentration in either U.S. or Latin American history.

720 Social Revolution in Latin America (3:3:0) Analysis of revolutionary forces that are challenging traditional institutions and transforming all aspects of society in contemporary Latin America. Selected countries are studied in depth.

721 Research Seminar in European History (3:3:0) Prereq. HIST 700 or PoD Research in specialized topics using primary sources. Maximum of 6 hr may be earned.

725 Problems in Latin American History (3:3:0) Analysis of selected problems in Latin American history. Emphasis on reading and discussion of historical interpretations and development of bibliography. Maximum of 6 hr may be earned.

728 Latin American Cultural and Intellectual History, Nineteenth Century (3:3:0) Iberian background and other foreign influences; ideas of independence leaders; mid-century Romanticism, Liberalism, and Traditionalism; secular and religious Positivism, and Marxism socialism. Intellectual developments traced in major Latin American thinkers, writers, and artists.

731 Research Seminar in European History (3:3:0) Prereq. HIST 700 or PoD Research in specialized topics using primary sources. Maximum of 6 hr may be earned.

735 Problems in European History (3:3:0) Investigation of selected problems in the history of Europe. Readings, discussions, development of bibliographies. Where possible, primary sources are utilized. Maximum of 6 hr may be earned.

737 Great Britain: Empire to Commonwealth, 1870-1970 (3:3:0) Examination of the rise of the "new imperialism" in Great Britain from 1870 to end of the empire and formalization of the Commonwealth.

739 Society and Politics in Western Europe, 1750-1914 (3:3:0) Focus on changes in social conditions and their ramifications in political life. Attention to urbanization of workers, changes in the major class structures, middle-class decline of nobility, as well as major political developments and expansion of liberal reforms.

745 The Russian Revolution and the Origins of the Soviet State (3:3:0) Focus on the revolution of 1904-1905 with concentration of the sources of Bolshevism, problems of the old regime as they led up to the revolutions of 1905 and 1917, establishment of the new regime and its survival in an environment of foreign and civil war.

755 Problems in Asian History (3:3:0) Announced by instructor. Discussion of readings and historical interpretations and compilation of a comprehensive bibliography and essay for review by instructor.

783 The Cultural History of the Islamic World (3:3:0) Government, science, philosophy, religion, literature, arts, and architecture of the Arabs of the Umayyad and Abbasid period, Persians and Almoravids of Al-Andalus, grand Mughals of India and Pakistan, Timurids of Central Asia, Fatamids of Egypt, Moors of Spain, and the Turks. Important political and cultural movements in different parts of Islamic civilization.

790 Specialized Readings in United States History (3:3:0) (To be taken in the final sem. of the program.) Designed to integrate the students' past work in the major field and to fill gaps in this area prior to comprehensive exam. After review of grad experience, student and instructor design a reading list to round out preparation for the exam.

791 Specialized Readings in Latin American History (3:3:0) (To be taken in the final sem. of the program.) Designed to integrate the students' past work in the major field and to fill gaps in this area prior to comprehensive exam. After review of grad experience, student and instructor design a reading list to round out preparation for the exam.

792 Specialized Readings in European History Since 1500 (3:3:0) (To be taken in the final sem of the program.) Designed to integrate the students' past work in the major field and to fill gaps in this area prior to comprehensive exam. After review of grad experience, student and instructor design a reading list to round out preparation for the exam.

795 History Symposium (3:3:0) Subject of academic and community interest pursued through discussions and lectures by distinguished guest instructors. Maximum of 6 hr may be applied toward the MA and, maximum of 3 hr toward the MA degree.

796 Directed Readings (3:6:0) Independent reading on a topic agreed to by student and faculty member. Maximum of 6 hr may be earned.

799 Thesis (6:0:0) 800 Studies for the Doctor of Arts in Education (var cr) Prereq. DA Ed admission to study in History Program of students designed by student's discipline director and approved by student's doctoral committee, which brings the student to participate in research, dissertation, analysis, design, and implementation of MIS software, using the BASIC programming language. Computing lab.

310 Program Structure and Design Using COBOL (3:3:0) Prereq. INFS 201 This course is designed to offer major in MIS an in-depth study of the basic concepts of COBOL and its use in software structure and design. Development of software, including the use of basic techniques, including the use of data structures, and algorithms. Computing lab. (Fall, Spring)

317 Computer Hardware and Operations (3:3:0) Prereq. INFS 101 This course is designed to offer an in-depth study of the major concepts of computer hardware and software design. Development of software, including the use of algorithms and data structures, and the use of both languages. Special problems of real-time programming environments. Computing lab. (Spring)

318 Programming Languages I (3:3:0) Prereq. INFS 312 or MIS 310 This course is designed to offer an in-depth study of the major concepts of computer hardware and software design. Development of software, including the use of algorithms and data structures, and the use of both languages. Special problems of real-time programming environments. Computing lab. (Fall, Spring)

319 Programming Languages II (3:3:0) Prereq. INFS 312, 314 and a prior course in programming languages. Focus on algorithm and data structures and their applications in both languages. Special problems of real-time programming environments. Computing lab. (Spring)

403 May 14 System Analysis and Design (3:3:0) Prereq. INFS 312 Treatment of the life cycle of a computer information system as background knowledge. Focus on the system implementation and data structures, and the use of both languages. Special problems of real-time programming environments. Computing lab and project. (Fall, Spring)

404 May 15 System Analysis and Design (3:3:0) Prereq. INFS 312 Treatment of the life cycle of a computer information system as background knowledge. Focus on the system implementation, design, and data structures and their applications in both languages. Special problems of real-time programming environments. Computing lab and project. (Fall, Spring)

433 May 16 System Analysis and Design (3:3:0) Prereq. ACCT 202, INFS 201, DESC 202 Capstone course in MIS for all SBA disciplines. Integration of prior learning on computation and management information needs in different disciplines. Computing lab and project. (Fall, Spring)
491 Seminar in Decision Sciences (3:3:0) Prereq completion of all other required courses for a major in Decision Sciences, or Pol. In-depth analysis of selected topics which highlight the latest developments in the decision sciences field, incl contemporary research findings and case studies of decision sciences in business and other organizations. Case studies.

600 Program Design and Data Structures (2:3:0) Prereq acceptance into MSIS Program Foundation course. The fundamental processes of problem structure and analysis and of the design and implementation of algorithms and data structures in software development. Computing lab. (Fall, Spring)


711 Comparative Programming Languages for Business Applications (3:3:0) Prereq INFS 710 Investigation of the variety of environments for computer applications to organizational and scientific problems. Selection of the appropriate computing language for a specific application is demonstrated through case studies. Examples of languages are PASCAL, COBOL, PL/I, FORTRAN, RPG, ADA. Computing lab.

712 Data Communications and Distributed Processing (3:3:0) Prereq INFS 710 Concepts and applications of technologies of telecommunications, networks, and distributed information systems, incl regulatory issues, network pricing, and management. Case studies and computing lab.

714 Database Management (3:3:0) Prereq INFS 712 Treatment of data as an organizational resource to be managed effectively to efficiently support management information systems. Emphasis on logical and physical implementation of data base management systems. Computing lab.

720 Systems and Information Analysis in Organizational (3:3:0) Prereq INFS 600 Analysis of information in organizations and examination of the information context of the various functions subsystems of an organization. Fundamental concepts of systems and information are integrated with those of organizational structure and management. Cases and computing lab.

722 Information Systems Analysis and Design (3:3:0) Prereq INFS 714, 720 Integration of computing technologies, systems analysis, systems design, and organizational behavior in the design of large scale information management and decision support systems. Cases and computing lab.

790 Information Systems Policy and Administration (3:3:0) Prereq Completion of all coursework for the MS in Information Systems Capstone course. Integrates the technical and executive policy issues of information systems. Critical executive issues are examined through case studies and comprehensive individual project. Computing lab.

Italian Courses (ITAL)

Foreign Languages and Literatures
100 Italian for Travel (3:3:0) Not part of a sequence that fulfills the foreign language requirement. Development of Italian communicative skills stressing vocabulary, pronunciation, and idiomatic expressions.

Japanese Courses (JAPA)

Foreign Languages and Literatures
101, 102 Introduction to the Japanese Language (3:3:1), (3:3:1) Must be taken in sequence) Intro to Japanese, incl basic grammar, oral expression, listening comprehension, and reading and writing. Lab work req.

105 Comparative Civilization (3:3:0) Prereq 54 hr or Pol Focus on Japanese behavior in cultural context. Problems of cross-cultural understanding in a multicultural society. Coursework in English.

Korean Courses (KORE)

Foreign Languages and Literatures

451, 452 Korean Culture and Civilization (3:3:0) Prereq 54 hr or Pol Korean culture and civilization, incl language, philosophy, religion, education, and family life, and discussion of problems of cross-cultural understanding. Coursework in English. For NonW cr.

Language Arts and Cultures Courses (LAC)

See "Regional Cultures."

Latin Courses (LATN)

Foreign Languages and Literatures

101, 102 Elementary Latin (3:3:1), (3:3:1) (Must be taken in sequence) Intro to Latin, incl basic grammar and development of reading skills; intro to Latin literature and Roman civilization.

201 Intermediate Latin: Prose and Poetry (3:3:1) Prereq LATN 102 or equiv Intensive review of elementary grammar, intro to more advanced grammatical constructions and patterns of usage; continued development of reading proficiency; study of origin and development of Latin literature.

202 Intermediate Latin: The Golden and Silver Ages (3:3:1) Prereq LATN 201 or equiv Study of advanced grammatical constructions and patterns of usage; reading selection from various Latin authors who flourished during the late Republic and early Empire of Rome; study of the cultural and political background of classical Latin authors.

322, 321 Latin Tutor (1-3:0:0), (1-3:0:0) Prereq LATN 202 or equiv and PoD Readings in Latin, drawn from classical or postclassical literature. Selection of authors or genres by the instructor in consultation with the student. Meetings on a tutorial basis. May be repeated once under each number to a maximum of 4 separate topics and 12 sem hr of cr.

Latin American Studies Course (LAS)

491 Contemporary Latin America (3:3:0) Req of senior LAS majors or Pol Interrelationship of economic, political, social, and cultural factors in explaining current Latin American reality.

Library Science Courses (LSCL)

Education
401 Adolescent and Adult Literacy (3:3:0) Selection of classics and contemporary-inter disciplinary reading materials in relation to the needs, abilities, and interest of adolescents. Attention to the gifted student, reluctant reader, and slow reader.

402 Information Services (3:3:0) Designed for all students incl library science majors. Use of basic library materials plus emphasis on elementary and secondary school library media. Provides experience in evaluation of reference books, skills involved in answering fact-finding and material gathering questions.


404 Administration of School Library Media Centers (3:3:0) Prereq LSCI 401, 402, and 403 Focus on understanding, attitudes, and procedures necessary to develop a student-oriented library media center that will contribute to the school’s educational objectives. Incl field visits.

405 Practicum in the School Library Media Center (3 cr) Prereq LSCI 401, 402, 403, 404 Completion of a program or possession of a Collegiate Professional Certificate or equiv and Pol involves 120 hr 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
After Fall Semester 1981, non-core, upper-level (300-400 series) costs courses offered by the School of Business Administra tion 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 of Junior standing.

301 Management of Organizations (3:3:0) Prereq COM M 100 or 100, and 60 hr or Pol Principles of management, emphasizing managerial functions. Fundamentals of organizational theory and structure and how they impact on the management of organizations, domestic and international.

311 Organizational Behavior and Administration (3:3:0) Prereq MGMT 301 or equiv and application of major theoretical issues in organization behavior. Analysis and critique of research methods used in the field. Particular emphasis on micro factors and their application to development of effective managerial styles.

321 Personnel Administration (3:3:0) Principles and procedures related to recruitment and selection of a labor force, grievance and discipline procedures, problems involved in collective bargaining, pay policies, merit rating, promotion, and training, with emphasis on their relationship to management.

331 Labor-Management Relations (3:3:0) Examination of American trade unions, their role in labor contract, the bargaining processes; the philosophy of unionism, the use of bargaining techniques for non-wage issues; the legal context of labor-management relations; the responsibilities of labor unions; the political and socioeconomic impact of unionism.

341 Business Communication (3:3:0) Intro to theory and practice of effective business communication. Includes intro to principles of business writing, communicating through correspondence and reports, and business research methods.

371 Government and Business (3:3:0) Prereq ECON 103 and POL Considers how public policies intended to resolve or mitigate problems caused by industrial and other combinations, by public utility industries, by government enterprises, and by labor-management relations.

381 Management Problem Solving and Decision Making (3:3:0) Prereq MGMT 301 Application of principles and techniques of management to cases drawn from business, public and non-profit organizations. Emphasis on internal management of organizations, applications of systems theory, and methodology and techniques used to analyze problems effectively.

411 Organization Theory and Development (3:3:0) Prereq MGMT 311 Study of complex organizations from the perspective of developing theoretical models and applied research designs. Emphasis on systems approach as an integrative framework. Organization development techniques for effective management of change through analytical and experimental exercises.

421 Advanced Personnel Administration (3:3:0) Prereq DESC 202 and MGMT 321 In-depth, experience-based examination of the more complex areas of personnel administration: job and task analysis, performance appraisal, selection and placement, wage and salary field of personnel administration.

431 Labor Legislation and Collective Bargaining (3:3:0) Prereq MGMT 331 Study of the institutional framework of collective bargaining, with two distinct focuses. The first is on major pieces of legislation from English Common Law through the present day, while the second includes an in-depth analysis of collective bargaining—its participants, techniques, issues, legal environment, and evaluation of the collective bargaining process.

451(351) Small Business Management (3:3:0) Prereq ACCT 201, 202, and MGMT 301, or Pol Study of the entrepreneur and entrepreneurial organizations. Emphasis on personal financial and social, economic, and cultural factors affecting the entrepreneur. Problems facing today’s small businessman in a variety of high-technology and service-related businesses.

461 Operations Management (3:3:0) Prereq ACCT 202, DESC 301, and MGMT 301 Intro to operations (production) management in manufacturing and service industries. Study of aspects of productivity, technology, new processes, materials, products, equipment, and facilities. Implications of new technology.
Mathematics Courses (MATH)

In exceptional cases the prerequisites 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 are outside the purview of this catalog. Mathematical Sciences are listed separately under the prefixes CS, OR, STAT respectively.

100 Algebra (0:3:0) Two-thirds of the sem. Tuition and fees charged for 3 hr. Basic algebraic manipulations, linear equations and graphing. Properties of polynomial, logarithmic, and exponential functions.

101 Algebra and Elementary Functions (0:3:0) Tuition and fees charged for 3 hr. Basic algebraic manipulations, linear equations and graphing. Properties of polynomial, logarithmic, exponential, and trigonometric functions.

102 Trigonometry (0:3:0) One-third of the sem. Tuition and fees charged for 3 hr. Basic trigonometry. Properties of trigonometric functions.

106 Concepts of Mathematics (3:3:0) Important ideas in mathematics and their development.

108 Introductory Calculus with Business Applications (3:3:3) Prereq Knowledge of high school algebra functions, limits, the derivative, the integral. Applications of differentiation and integration. Students who have received cr for MATH 113 or 115 may not receive cr.

109 Introductory Statistics with Business Applications (3:3:3) MATH 108 is rec Frequency distributions, probability, probability distributions, sampling distributions, estimation. Students who have received cr for MATH 250 or 256 may not receive cr.

110 Finite Mathematics (3:3:0) Elementary set theory, probability, and statistics.

111 Finite Mathematics (3:3:0) Matrix algebra, linear programming, Markov chains and game theory applications. Topics include descriptive statistics, special descriptive statistics used by geographers, sampling and sampling distributions, inference, correlation and regression, and survey sampling methods.


213 Analytic Geometry and Calculus II (4:4:0) Prereq MATH 113 and knowledge of high school trigonometry. Transcendental functions, methods of integration, applications of the integral, analytic geometry.

115, 116, 215 Analysis I, II, III (4:0,4:0,4:0) (4:0,4:0,4:0) Must be taken in sequence. Prereq Thorough understanding of high school algebra and trigonometry is assumed. The derivative, the integral, transcendental functions, applications, vectors and analytic geometry, vector differential calculus, multiple integrals, infinite series. Designed primarily for mathematics majors.


213 Analytic Geometry and Calculus II (3:3:0) Prereq MATH 114. Infinite series, partial differentiation, multiple integrals, line and surface integrals.

250 Introductory Calculus with Analytic Geometry (3:3:0) Prereq MATH 115. High School Algebra Elementary intro to statistics with emphasis on applications and model formulation. Topics include descriptive statistics, sampling and sampling distributions, inference, correlation and regression, and survey sampling methods.

256 Introductory Statistics for Students in Geography (3:3:0) Prereq High school algebra Elementary intro to statistics and applications of statistics to geography. Topics include descriptive statistics, special descriptive statistics used by geographers, sampling and sampling distributions, methods of statistical inference, correlation, regression and survey sampling methods. Students who have received cr for MATH 250 may not receive cr.

301 Number Theory (3:3:0) Prereq 6 hr of Math Primes factors, factorization, congruences, Diophantine equations.

302 Geometry (3:3:0) Prereq 6 hr of mathematics fundamentals of Euclidean geometry. Axioms of Euclidean geometry and the resulting theory, axioms, and development of non-Euclidean and projective geometry.

303 Matrix not. (3:3:0) MATH 114 or Pol Matrix operations, vector spaces, rank of a matrix, determinants, eigenvalues and eigenvectors.

304 Elementary Differential Equations (3:3:0) Prereq MATH 213 or equivalent. First and second order linear differential equations, systems of linear differential equations.

305 Discrete Mathematical Structures (3:3:0) Prereq MATH 115. Introduction to combinatorial reasoning, mathematical induction, and graph theory. Basic structures essential to the study of computer science. Topics include a discussion of numeration schemes, lattices, Boolean algebras, and directed graphs, combinatorics, and elementary set theory. Introduction to techniques of proof and finite, and infinite state machines.


313, 314 Introduction to Applied Mathematics (3:3:0), (3:3:0) Prereq MATH 304 or 306 Vector fields and integration, complex analysis, Fourier and orthogonal series, Laplace and Fourier transforms, Green's functions, partial differential equations, boundary value problems, special functions, and other topics arising in mathematical physics.

316 Advanced Calculus (3:3:0) Prereq MATH 200 and 215 Elementary topology, limits, continuity, differentiation, integration, and series. Functions of several variables. 

321 Abstract Algebra (3:3:0) Prereq MATH 215 Theory of groups, rings, fields.

322 Linear Algebra (3:3:0) Prereq MATH 303 Vector spaces, linear independence, bases, linear transformations, matrix operations, special topics.

350 Introductory Statistics II (3:3:0) Prereq MATH 250 Emphasis on applications in social sciences. Topics include analysis of variance, multiple regression, nonparametric inference. Statistical computer package used for data analysis. Does not satisfy req toward a major in mathematics.

351 Probability (3:3:0) Prereq MATH 213 or 215 Random variables, probability functions, special distributions, limit theorems.

352 Statistics (3:3:0) Prereq MATH 351 Estimation, decision theory, testing hypothesis, correlation, linear models, and design.

371 Mathematics for the Elementary School I (3:3:0) Concepts and theories underlying elementary school mathematics, inculc sets, logic, systems of numberation, whole numbers and integers, operations with integers, equations and inequalities. Intended for elementary education majors only; does not count toward a major in mathematics.

372 Mathematics for the Elementary School II (3:3:0) Continuation of MATH 371. Topics relevant to students enrolling in MATH 372. Topics include elementary number theory, rational and real numbers, intuitive geometry and measurement including the metric system. Intended for elementary education majors only; does not count toward a major in mathematics.

373 Mathematics for the Elementary School III (3:3:0) Prereq 3 sem in mathematics Topics incl algorithm design for computers and hand-held calculators, ratio and proportion, graphing, descriptive statistics, and probability through consumer-related problems. Partially satisfies VA state teacher certification req in mathematics. Does not count toward a major in mathematics.

382 Intro to Stochastic Processes (3:3:0) Prereq MATH 351 General notion of stochastic processes, finite and infinite Markov chains, continuous time Markov processes, stationary processes, random walk problems, birth and death processes, waiting line and serving problems.

Brownian motion.

411 Functions of a Complex Variable (3:3:0) Prereq MATH 304 or 306 Analytic functions, contour integration, residues, and applications to such topics as integral transforms, generalized functions, and boundary value problems.

431 Topology (3:3:0) Prereq MATH 315 Metric spaces, topological spaces, compactness, connectedness.

441 Operations Research I (3:3:0) Prereq MATH 303 or Pol Survey of deterministic methods for solving "real-world" decision problems. The linear programming simplex method of solution, duality and sensitivity analysis, transportation and assignment problems, shortest path and maximum flow problems, project networks including PERT and CPM, integer and non-integer programming, dynamic programming, and game theory. Emphasis on modeling and problem solving. Students who have received cr or prereq MATH 304 may not receive cr.


446 Numerical Analysis I (3:3:0) Prereq MATH 303 and a knowledge of a scientific programming language. Significant figures, round off errors, iterative methods of solution of nonlinear equations of a single variable, solutions of linear equations of a single variable, special topics in numerical analysis.
systems, iterative techniques in matrix algebra, interpolation and polynomial approximation.

447 Numerical Analysis I (3:3:0) Prereq MATH 304 or 306 and 446 Numerical differentiation and integration, initial-value and boundary-value problems. Topics that differ from the analytical methods of solution of partial differential equations, iterative methods of solution of nonlinear systems, approximation theory.

448 Problem Solving and Proofs (1-2:3:0) (1-3:0:0) For mathematical sciences majors only. Independent study in math. Must be arranged with instructor before reg.

493 Topics in Applied Mathematics (3:3:0) Prereq 6 of 8 courses (or 9 or more for special topics) in the required graduate major that have not been successfully used in applications of mathematics.

494 Topics in Pure Mathematics (3:3:0) Prereq 6 hr of math at or above the 310 level Topics of pure math not covered in other courses. Topics include cardinal and ordinal arithmetic, measure theory, mathematical logic, and differential geometry. Subject determined by instructor.

A double number separated by a comma (MATH 771, 772) indicates that both grad courses normally constitute a sequence and that the first semester is prereq to the second. They may not count as duplicate credits.

600 Special Project for Cooperative Education Students (1-0:0) Prereq Enrollment in the Cooperative Education Program and 9 hr of grad cr in math towards the degree Topic determined by student and instructor. In order to obtain cr the student must be enrolled in the Cooperative Education Program and the topic must be related to the on-site work experience of the student. Cr for this course satisfies the Cooperative Education Project contract which req that a student receive grad cr for the work assignment of the program. However, cr may not be applied toward the 30 hr req for the MS in mathematics. To be taken no later than completion of 15 hr of grad cr in mathematics toward the MS.

611 Intermediate Analysis (3:3:0) Development of the number system, review of the highlights of calculus, sequences and series of functions, power series, linear independence, linear transformations, and matrix operations. Cr not applicable toward the 30 cr req for the MS in mathematics, but can be counted toward the Master of Education.

612 Intermediate Algebra (3:3:0) Linear algebra, vector spaces, linear independence, linear transformations, and matrix operations. Cr not applicable toward the 30 cr req for the MS in mathematics, but can be counted toward the Master of Education.

620 Applied Matrix Analysis (3:3:0) Prereq MATH 612, 303, or 322 Review of vector and matrix arithmetic, Gaussian elimination, linear programming, eigenvalues, the Jordan form. Topics may include posiform definite matrices, Markov processes, game theory, applications to numerical analysis, optimization, economic and ecological systems. Emphasis on modeling using matrix algebra to give full view to its application.

621, 722 Algebra (3:3:0), (3:3:0) Groups, rings, fields, category theory, Galois theory.

629 Topics in Algebra (3:3:0) Prereq Pol Special topics in pure math that are usually not covered in the regular algebra sequence. May be repeated for cr.


637, 638 Non-Euclidean Geometry (3:3:0), (3:3:0) Prereq Pol Affine, projective, hyperbolic, elliptical, differential geometry.

639 Topics in Topology and Geometry (3:3:0) Prereq Pol Special topics in topology and geometry not covered in the regular topology and geometry sequence. May be repeated for cr.

651 Probability Theory (3:3:0) Axioms for a probability space, conditional probability, random variables, distribution functions, moments, characteristic functions, modes of convergence, limit theorems.

675, 676 Analysis I, II (3:3:0), (3:3:0) Real and complex number systems, topology of euclidean space, continuity and differentiability of functions, Riemann-Stieltjes integration, metric spaces, sequences of functions, power series, complex analytic functions, Cauchy's theorem, contour integration, normed linear spaces, contraction mapping theorem, Banach and related theorems, Arzela-Ascoli theorem, differential manifolds in euclidean space, inverse and implicit function theorems, Liebseque integration, dominated convergence theorem, measurable sets and functions.


679 Topics in Analysis (3:3:0) Prereq Pol Special topics in analysis not covered in the regular analysis sequence. May be repeated for cr.

681, 682 System Optimization and Control (3:3:0), (3:3:0) Prereq MATH 651 or equiv and MATH 675 or Pol Systems of linear differential equations, optimization of linear dynamical systems, design and optimal control of linear systems, Gauss-Markov Processes, Kalman filtering, Applications to networks, aerospace, information processing.

689 Topics in Applied Mathematics (3:3:0) Prereq Pol Special topics in applied mathematics not covered in the regular applied math sequence. May be repeated for cr.

733 Homotopy Theory (3:3:0) Homotopy theory includes the fundamental group, higher groups and exact sequences.

734 Homology Theory (3:3:0) Homology theory includes simplicial homotopy theory, exact sequences, fixed point theorems.

771, 772 Complex Analysis (3:3:0), (3:3:0) Topology of complex numbers. Holomorphic functions. Series. Complex integration. MORomorphic, multivalued and elliptic functions. 795, 796 Seminar (3:3:0), (3:3:0) 799 Thesis (1-6:0) Original or compilatory work to be evaluated by a committee of 3 faculty members.

800 Studies for the Doctor of Arts in Education (var cr) Prereq DA Ed admission to study in mathematics. Program of study designed for special individual needs. Determined by student and instructor. Cr toward the current research of the discipline. A dissertation in a subject in DA Ed summer seminar. Enrollments may be repeated.

Medical Technology Courses (MITCH)

Biology

200 Introduction to Medical Technology (1:1:0) Intro to profession of medical technology.

401 Orientation to the Problems and Practices of the Clinical Laboratory (1-2:0:0) Prereq Completion of req for BS with a major in medical technology, except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Study in methods for the study of bacterias, rickettsia, fungi, parasites, and viruses of clinical importance and their culture and identification. Not offered on campus.

406 Clinical Chemistry (6-10:0:0) Prereq Completion of req for BS with a major in medical technology except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. The chemical reactions and properties of various substances in clinical technology on blood, urine, and cerebral spinal fluid. Inc manual and automated methods of chemical analyses. Not offered on campus.

409 Nuclear Medicine (1-2:0:0) Prereq Completion of req for BS with a major in medical technology except for the 30 hr of professional study and admission to a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories. Radiation biology, radiologic instrumentation and safety; clinical applications. Not offered on campus.

Music Courses (MUSI)

Performing Arts

100 Fundamentals of Music (3:3:0) Prereq Student must be able to read either treble or bass clef and should have some proficiency on a musical instrument or in voice Study of musical notation, interval and triad construction, the reading of treble and bass clefs, scale construction, rhythm, elementary sight singing and ear training, and application at the piano. Cannot be applied for degree in music.

101 Music Appreciation (3:3:0) For nonmusic majors only Intro to music appreciation through formal and aesthetic principles. The elements of music are examined separately and combined in various presentations.

103 Folk and Traditional Music of the World (3:3:0) For nonmusic majors only Study of musical structure and cultural setting of folk music among diverse people, with an intro to traditional music of various non-Western cultures.

104 Introduction to Twentieth-Century Music (3:3:0) For nonmusic majors only Survey of various styles found in 20th century music.

105 Music in the U.S. (3:3:0) For nonmusic majors only Study of music in the U.S. from colonial times to present. Through interaction with musical examples, the student traces significant African and European influences on emerging style and artistic activity in the U.S.

106 Latin American Music (3:3:0) For nonmusic majors only Survey of folk, popular, and artistic music of Latin American countries in an historical setting. Influences of other cultures on the musical life of representative countries.

107 The Development of Jazz (3:3:0) For nonmusic majors only Historical, analytical, and aural survey of jazz from its inception to present time. Resulting from synthesis of jazz with other musical idioms.

113 Sight Singing and Ear Training I (2:0:3) Prereq Student must be able to read music and must have some proficiency on a musical instrument. The student is taught to sing a line of music without the accompaniment of an instrument. Matching tones, major and minor scales, key signatures, intervals, rhythm, Treble, bass, alto, and tenor clefs. Rhythmic and melodic dictation.

114 Sight Singing and Ear Training II (2:0:3) Prereq MUSI 113 or Pol Continuation of Sight Singing and Ear Training I. Modulation, various modes. Melodic and harmonic dictation.

115 Harmony I (3:3:0) Prereq Student must be able to read music and must have some proficiency on a musical instrument or in voice Music notation, scales, key signatures, intervals, chords, cadences, tonal, modal.

116 Harmony II (3:3:0) Prereq MUSI 115 or Pol First and second-inversion chords, modulation, nonharmonic tones, figured bass, seventh chords. Analysis of Bach chorales; composition of 4-part chorales in 18th century style.

121 Class Strings: Violin and Viola (1:0:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the violin and viola. Survey of instructional materials, and bow and instrument selection.

122 Class Strings: Cello and String Bass (1:0:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the cello and string bass. Survey of instructional materials, and bow and instrument selection.

123 Class Woodwinds: Flute and Clarinet (1:0:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the flute and clarinet. Survey of instructional materials, and mouthpiece and instrument selection.

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154 Class Woodwinds: Oboe and Bassoon (1:2:2) 
Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the oboe and bassoon. Survey of instructional materials, instrument selection, and reed adjustment.

155 Class Brass: (1:2:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the brass instruments. Survey of instructional materials, and mouthpiece and instrument selection.

156 Class Percussion: (1:2:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the percussion instruments. Survey of instructional materials and instrument selection.

157 Class Guitar: (1:2:2) Prereq Nonmusic majors must have Pol Study of techniques of playing and teaching the guitar. Survey of instructional materials and instrument selection.

158 Class Voice I: (1:2:2) Prereq Nonmusic majors must have Pol Study of the human voice in artistic singing. Practical application of basic principles is emphasized.

159 Class Voice II: (1:2:2) Prereq MUSI 158 or Pol Continuation of voice study begun in MUSI 158. Emphasis on artistic singing in several styles.

171 Class Piano I: (1:0:3) Prereq Nonmusic majors must have Pol Study of piano keyboard as it is related to various clefs in music. Emphasis on solution of basic problems of a stylistic and technical nature.

172 Class Piano II: (1:0:3) Prereq MUSI 171 or Pol Study of piano, as it is related to intermediate song and combined in various music forms.

173, etc. Private Music Instruction See descriptions at end of music section.

285 Chamber Ensembles (1:0:3) Prereq Audition Performance of works from the chamber repertoire, to incl one major work each semester. Public concerts are given. 4 cr. are to be earned at the 181 level before proceeding to the 382 level May be taken 8 times.

286 Chamber Ensembles (1:0:3) Prereq MUSI 118 or Pol Study of 4-part chromatic harmony and analysis of 19th century compositions.

287 Chamber Orchestra (1:0:3) Open to students with a reasonable amount of performing ability Performance of works from the chamber orchestra repertoire. Public concerts are given. 4 cr. are to be earned at the 181 level before proceeding to the 382 level May be taken 8 times.

288, 389 Jazz Ensemble (1:0:3) Prereq Audition Ensemble providing practical experience in various aspects of jazz performance—section work within a large aggregation, combo work, and improvisation. Public concerts are given. 4 cr. are to be earned at the 181 level before proceeding to the 382 level May be taken 8 times.

289 Symphonic Winds (1:0:3) Open to students with a reasonable amount of performing ability Performance of works from the band repertoire. Public concerts are given. 4 cr. are to be earned at the 181 level before proceeding to the 382 level May be taken 8 times.

291 Symphony Orchestra (1:0:3) Open to students with a reasonable amount of performing ability Performance of works from the symphony orchestra repertoire. Public concerts are given. 4 cr. are to be earned at the 181 level before proceeding to the 382 level May be taken 8 times.

292 Economic Study of music (1:0:3) Prereq MUSI 118 or Pol Study of major style periods. Emphasis on analytical and historical aspects.

293 Improvisation (1:0:2) Prereq MUSI 116, 216, and 281 or Pol Application of the techniques of improvisation used in the various periods of music history on their major instruments and the piano.

294 Junior Recital (1:0:0) Coreq MUSI 377 or 378 A public recital given by students during their junior year.

295 Piano Ensemble (1:0:3) Prereq Audition and 4 cr. in Private Music Instruction—Piano Study and performance of original 4hand works for 2 and 1 pianos. Public performances. May be taken twice.

296 Gloriasingers (1:0:3) Prereq Audition Discovery, interpretation, and performance of choral music for vocal chamber music ensemble from all historical periods. Emphasis is placed on understanding of music and on bringing to the University and its surrounding community those musical compositions which are not readily accessible in the regular concert repertoire. May be taken 4 times.

297 Laboratory Ensemble (1:0:3) Prereq One sem of class instrumental instruction on a band or orchestral instrument; for music majors only Vocal and instrumental ensemble for music majors seeking state certification as music teachers; designed to provide opportunities for performance on secondary instruments and voice and to serve as a lab for conducting, methods and materials, and composition and arranging classes. May be taken twice.

298 General Conducting (2:0:3) Prereq MUSI 114, 172, 216 and 218, or Pol Study of basic techniques of conducting a musical ensemble.

299 Advanced Conducting (2:0:3) Prereq MUSI 391 or Pol Advanced conducting course emphasizing the techniques of bringing a musical ensemble to concert standard. Consideration of the interpretation of repertoire from the applicable historical periods. Students demonstrate mastery of selected scores by conducting one of the University musical ensembles.

300 Techniques of Twentieth-Century Style Analysis (3:0:0) Prereq MUSI 216, 218, and 318, or Pol Several analytical methods for understanding the complex nature of 20th century music and the diverse styles of today's composers. Selected masterworks from contemporary music literature.

301 Orchestra (3:0:0) Prereq MUSI 216, 218, and 318, or Pol Principles of combining and balancing instruments in orchestral and chamber contexts. Attention to orchestral terminology and general notation as well as
tempe, range, clefs, transposition, special effects, and scoring procedures.

302 Historical, Theoretical, and Analytical Study of Music III (3:0:0) Prereq MUSI 216 and 231 or Pol Study of development of Western music from Beethoven through the post-Romantic era, with emphasis on historical, theoretical, and analytical aspects.

303 Historical, Theoretical, and Analytical Study of Music IV (3:0:0) Prereq MUSI 216 and 231 or Pol Study of Western music from late 19th century impressionism to the present, with emphasis on historical, theoretical, and analytical aspects.

304 Choral Literature I (3:0:0) Prereq MUSI 216 and 231 or Pol Study of sacred and secular choral literature from Medieval times to the present, with emphasis on various genres such as Mass, motet, madrigal, anthem, cantata, passio, oratorio, and cantata.

305 Choral Literature II (3:0:0) Prereq MUSI 216 and 231 or Pol Opera from 17th century to present, with emphasis on historical and stylistic development. Important works in the operatic repertory.

306 Keyboard Literature (3:0:0) Prereq MUSI 216 and 231 or Pol Study of keyboard literature and its antecedents from 16th century to present. Solo keyboard genres such as choral Prelude, suite, sonata, theme and variations, and character pieces in an historical context.

400 Orchestral Literature (3:0:0) Prereq MUSI 216 and 231 or Pol Chronological survey of development of orchestra and its literature from 17th century to present. Suites, symphonies, concerto, sonatas, and other orchestral works of important composers.

401 The Teaching of General Music in the Elementary School (3:0:0) Prereq MUSI 114, 216, 218, 231, and EDUC 301 and 313, for music majors only Survey of repertoire and methods for teaching general music in the elementary school. Field experience req.

402 The Teaching of General Music in the Secondary School (3:0:0) Prereq MUSI 114, 216, 218, 231, and EDUC 301 and 313, for music majors only Survey of repertoire and methods for teaching high school choral groups, small ensembles, and voice classes. Field experience req.

403 The Teaching of Vocal Music in the Secondary School (3:0:0) Prereq MUSI 114, 216, 218, 231, and EDUC 301 and 313, for music majors only Survey of repertoire and methods for teaching of music in schools, private studio, and community. Field experience req.

404 Senior Recital (1:0:0) Coreq MUSI 477 or 478 Public recital given by students during senior year.

405 Composition Recital (1:0:0) Prereq 6 hr of under Pol Private Music Instruction—Composition successfully taken after being admitted into the Composition Concentration of the BM degree program Public recital given by composition students during senior year.

406 Independent Study (3:0:0), (3:0:0) Prereq Music majors with 64 hr and 2 of the following: MUSI 335, 336, 435, 436, and Pol. Music faculty individual research and study of selected subject in close consultation with an instructor. A student may choose from the musicological, ethnomusicological, theoretical, compositional, or education-related areas of music, and produce at least one major written work. Field experience req.

511 Analytical Techniques (3:0:0) Prereq Baccalaureate degree in music or Pol A detailed formal and stylistic examination of music selected from the major style periods. Examination of the analytical skills necessary for theoretical study at the graduate level.

512 Advanced Orchestration (3:0:0) Prereq Baccalaureate degree in music with a minimum of 3 hr study in orchestration or Pol Intensive study through analysis and arranging of advanced methods of instrumentation. Scoring for large
forces, 20th-century vocal and instrumental techniques such as in popular music. New methods of notation. Late 20th-century performance practices.

541 Chamber Music Literature (3:3:0) Prereq Baccalaureate degree in music or Pol A Historical and analytical study of the techniques and historical development of chamber music (chamber ensembles, soloists, and nonetts) in various instrumental combinations, from the 17th through the 20th centuries.

543 Concerto Literature (3:3:0) Prereq Baccalaureate degree in music or Pol A Historical and analytical study of the concepts which produced the concerto form and its extensive literature, from the 17th through 20th centuries.

544 Music Education (3:3:0) Prereq Degree in music education or Pol Intensive examination of specific areas of concern to music educators engaged in teaching vocal, instrumental, and general music at all levels or functioning as private studio teachers. Individual research, group discussions, and participation in related activities. Field experiences req.

581 Graduate Choral Ensemble (1:0:3) Performance of works from the choral repertoire with public concerts. May be taken for 4 times.

597 Advanced Topics in Conducting (3:3:0) Prereq Baccalaureate degree in music with a minimum of 2 sem study in conducting or Pol Intensive study of an advanced topic in conducting chosen according to interests of students and instructor from the following: (1) Choral Music Performance; (2) Orchestral Conducting; (3) Performance Techniques and Score Preparation; (3) Orchestral Performance Techniques and Score Preparation (4) Performance Practices in Choral Music before 1750 (5) Conducting Techniques; Analysis as a Guide to Score Interpretation in Music of All Periods. Maximum of 6 cr may be earned.

652 Introduction to Research in Music Education (3:3:0) Prereq Baccalaureate degree in music with certification to teach music development of skills, attitudes and understanding necessary in doing and reporting research in the teaching of music, incl philosophical bases, scope and organization, stylistic practices in writing the research report, the study of materials and resources in music, education, and music education, and the proper utilization of library and other research.
766 Seminar in Nursing Administration at the Middle Management Level (3:3:0) Prereq Admission to grad nursing prog; NURS 755. Emphasis on the roles and functions of the nurse in middle management as the nurse manager develops patterns of nursing care, articulating nursing education, and nursing service.

783 Practicum in Nursing Administration at the Middle Management Level II (3:3:0) Prereq NURS 763, 765. NURS 786 is co- or pre req Implementation and integration of the roles and functions of the nurse in middle management. Emphasis on utilization of appropriate management principles and processes in a selected health-related agency. Lab arranged.

773 Nursing in Long-Term Care I (3:3:0) Prereq Admission to grad nursing prog. NURS 755. NURS 773 is co- or pre req 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. Lab in Nursing Research (3:3:0) Prereq NURS 773. NURS 773, 775. Expansion of selected content in long term care as it relates to advanced clinical nursing practice. Collaboration with other health care providers in groups and communities is examined. Emphasis on selection and application of nursing care and advanced standards of practice.

778 Practicum in Long-Term Care II (3:3:0) Prereq NURS 755, 759, 773, 775. NURS 778 is co- or pre req Opportunity to apply roles of an advanced nurse clinician in a selected clinical setting. Lab arranged.

790 Principles and Methods of Nursing Research (3:3:0) Prereq Admission to grad nursing prog. NURS 755, 759, 773. NURS 773, 775. NURS 777 is co- or pre req Methods of nursing research applied to problem identification, research design, and data collection and measurement. NURS 790 is a prerequisite to NURS 793. Lab arranged.

791 Current Issues in Nursing Research (3:3:0) Prereq NURS 790. Research projects by student, individually or in groups, under direction of faculty member.

793 Thesis (3:6:0:3) Prereq Admission to grad nursing prog. NURS 755, 759, 779. Exploration of a nursing problem using appropriate research methodology under supervision of graduate faculty member(s).

793 Thesis (3:6:0:3) Prereq Admission to grad nursing prog. NURS 755, 759, 779. Exploration of a nursing problem using appropriate research methodology under supervision of graduate faculty member(s).

756 Seminar in Supervision of Nursing in Health Care Agencies (3:3:0) Prereq Completion of MGMT 301 or BUAD 660 or equivalent. Emphasis on the roles and responsibilities of the professional supervisor and the process of supervising facilitating the provision of nursing care to clients in health care agencies.

657 Overview of Nursing Education (3:3:0) Prereq Full-time student and/or post-master status. Focus on history and philosophy of nursing education, principles and methods of teaching and learning used in nursing, and current trends in nursing education. Emphasis on selected curriculum designs with application of instructional strategies appropriate to implementing selected programs.

660/PHL 616 Seminar in the Ethics of Health Care (3:3:0) Prereq Admission to grad nursing prog as a common foundation for health care roles and responsibilities. Emphasis on ethical and moral principles and values, and the impact of ethical theories and principles on health care, focusing on the ethical dilemmas common in health-related agencies.

670 Division of Aging (3:3:0) Prereq Full-time student and/or post-master status; NURS 657 is co- or pre req Analysis and application of the dynamics of nursing education. Emphasis on selected curriculum designs with application of instructional strategies appropriate to implementing selected programs.

557 Approaches to Data Analysis in Nursing Research (3:3:0) Prereq Admission to grad nursing prog Examination of univariate and multivariate techniques for analyzing nursing research data. Emphasis on selection and application of procedures in relation to level of data and type and size of sample in nursing research.

783 Seminar in Nursing Administration at the Middle Management Level I (3:3:0) Prereq Admission to grad nursing prog; NURS 755, and BUAD 660, 661 or equiv are co- or pre req Emphasis on the roles and responsibilities of the professional nurse supervisor and the process of supervising facilitating the provision of nursing care to clients in health care agencies. Roles and functions of the nurse in middle management. Lab arranged.
Philosophy Courses (PHIL)

Philosophy and Religion
100 Introduction to Philosophy (3:3:0) Intro to nature of philosophical reasoning and to some of the main problems of philosophy.
105 Practical Reasoning (3:3:0) A non-formal systematic study of rational argumentation, focusing on written arguments. Students explore competing philosophical methods for understanding, evaluating and constructing arguments.
111 Introduction to Social and Political Philosophy (3:3:0) Examination of philosophical foundations of some of the major concepts and institutions in social and political thought.
151 Introduction to Ethics (3:3:0) Consideration of some of the perennial issues in ethical theory.
173 Introduction to Logic (3:3:0) Basic concepts and techniques of deduction, emphasizing the modern treatment of such topics as quantification and rules of inference, with study of the classical treatment.
212 Alternative Futures for Science and Society (3:3:0) Inquiry into how values of freedom and rationality are involved in the ways in which science and technology are being used to meet problems of our day.
254 Contemporary Ethical Problems (3:3:0) Topics include homosexuality, abortion, drugs, civil disobedience, capital punishment, the rights of the individual vs. the rights of society.
273 Introduction to Symbolic Logic (3:3:0) Study of predicate calculus by means of a step-by-step construction of artificial languages. Topics include procedures for constructing a calculus, proof techniques, and significant properties of predicate calculus and procedures for recognizing phrases.
301 History of Western Philosophy: Ancient (3:3:0) Selected figures and problems in philosophy from the pre-Socratics to the Stoics and Epicureans. May not be taken by students who have previously taken PHIL 231.
302 History of Western Philosophy: Medieval (3:3:0) Figures and problems of medieval philosophy: in-depth study of major philosophers of the medieval period (e.g., Locke, Berkeley, Husserl, Kant, and Hegel). May not be taken by students who have previously taken PHIL 234.
303 History of Western Philosophy: Modern (3:3:0) Figures and problems of modern philosophy: in-depth study of the major philosophical figures of the 19th and 20th centuries. May not be taken by students who have previously taken PHIL 234.
309 Medicine and Human Values (3:3:0) Examination of some of the major moral issues involved in the practice of medicine and arising from research in the life sciences. Topics include medical experimentation, eugenics, definition of death, euthanasia, abortion, distribution of scarce resources, transplants, organ donation, and psychiatric medicine. May not be taken by students who have previously taken PHIL 310.
311 Philosophy of Law (3:3:0) Prereq 3 hr in philosophy Investigation of theories of natural law, legal positivism, and legal realism as they pertain to some of the central philosophical questions about law: What is the nature of law? What is a legal system? What is a valid law? What is a good reason for a judicial decision?
313 Philosophy of Religion (3:3:0) Prereq 3 hr in philosophy Study of classical appeals to philosophy in support of belief in God’s existence (Phil. Augustine, Anselm, Aquinas, Descartes), and the defense of the mechanical theory of God, the concept of religious experience in the philosophies of Hegel, Schleiermacher, and Kierkegaard, problem of religious language in contemporary philosophy.
315 Philosophy of History (3:3:0) Prereq 3 hr in philosophy Investigation of development of historical consciousness of humanity. Intended to distinguish the historical from the uncritical version of history-consciousness; and to investigate the various forms of historical consciousness by studying different interpretations of history.
325 Karl Marx Social and Political Thought (3:3:0) Prereq 3 cr in PHIL or Poli Sci and evaluation of Marx social and political ideas based on writings selected from several political and social philosophers of Marx thought to post-Marxian socialist theory and practice.
331 Philosophy in the United States (3:3:0) Prereq 3 hr in philosophy Selected studies of American philosophers of the 19th and 20th centuries, such as Thoreau, Pierce, James, Royce, Santayana, Dewey, and Whitehead. Emphasis on their relation to American culture.
332 Twentieth-Century Analytic Philosophy (3:3:0) Prereq 3 hr in philosophy Examination of the attempts of 20th century philosophers to solve philosophical problems by an analysis of language. Figures and movements covered include Russell, Moore, Wittgenstein, logical positivism, and ordinary language philosophy.
334 Latin American Thought (3:3:0) Prereq 3 hr in philosophy Historical sources and present range of Latin American thought. Metaphysical, ethical, and aesthetic theories from a number of different Latin American schools and personal and national philosophies. Distinguished philosophers of recent times such as Korn and Romero (Argentina), Fanis Brito (Brazil), Mendieta (Mexico), Deusta (Peru), and Vaz Ferreira (Uruguay). Contemporary thought touching religious, social, and political topics.
336, 337 Contemporary Continental Thought: Phenomenology and Existentialism (3:3:0) Prereq 3 hr in philosophy Study of phenomenological and existential thought which demonstrates that the movement is both a criticism of and a continuation of the philosophical outlook of the Enlightenment, as well as a means of coming to terms with existential crises in our day. PHIL 336 focuses on the existentialist’s concern with the meaning of being human by exploring the themes of subjectivity, absurdity, and the meaning-giving functions of traditional religious belief and the possibility and meaning of the themes of reality as consequences of changing attitudes toward consciousness. The courses need not be taken in sequence.
351, 352, 353, 354 Ethics and Contemporary Political Thought I, II, III, IV (3:3:0) Prereq 3 hr in philosophy. One course in ethics is rec intensive examination of contemporary political thought from a perspective of ethical theory. Offered in alternate semesters in the following sequence: democracy, communism, third world political thought, and radical political thought. Need not be taken in sequence.
355 Contemporary Political Philosophy (3:3:0) Prereq 3 hr in philosophy PHIL 151 is rec major and issues in recent moral philosophy.
356 Philosophy of Art (3:3:0) Prereq 3 hr in philosophy Basic principles which arise from an inquiry into the meaning and value of art and our response to art.
357 Philosophy of the Social Sciences (3:3:0) Prereq 3 hr in philosophy Philosophical aspects of the scope, methods, and assumptions of social sciences, with emphasis on issues of freedom and values.
371 Philosophy of Natural Sciences (3:3:0) Prereq 3 hr in philosophy. One semester of rec intensive study of the methodological and philosophical aspects of science. Among the questions discussed are: What constitutes a good scientific explanation? What grounds are used for comparing rival theories? Is there a special methodology of science? selected from Marston, B. (1956) The logical structure of psychological and philosophical disciplines.
373 Theory of Knowledge (3:3:0) Prereq 3 hr in philosophy Discourse on basic principles concerning the nature of knowledge, with study of the relation of knowledge to perception, belief, and language.
374 Philosophy of Mind (3:3:0) Prereq 3 hr in philosophy Investigation of such theories as dualism, behaviorism and materialism as they pertain to some of the central philosophical questions about mind. What is mind? What is the relation of mind to body? What is the justification, of our belief in minds outside of ourselves?
375 Metaphysics (3:3:0) Prereq 3 hr in philosophy Study of basic problems concerning being in general and foundations of individual being; traditional treatments of such problems as realism, idealism, and the possibility of the existence of such non-sensical objects as unicorns. Selected readings from figures such as Plato, Aristotle, Aquinas, Spinoza, Leibniz, Kant, Bradley, Heidegger, and others.
391, 392 Special Topics in Philosophy (3:3:0), (3:3:0) Examination of topics of current interest, such as death and dying, the rights of children, or philosophical controversies in modern physics.

Physical Education (PHED)

Health and Physical Education Activity Courses
All activity courses meet a minimum one hour per week (or the equivalent of 14 hours of outside coursework) to be arranged during the sem.

Dance
107 Folk, Square, and Social Dance (2:0:3) Basic steps, sequences, and style of each dance form.
125 Beginning Modern Dance (2:0:3) (Same as DACN 125) Knowledge, skills, and an appreciation of modern dance.
126 Beginning Intermediate Modern Dance (2:0:3) Same as DACN 126) Prereq PHED 125 or Pol Contenional exploration of techniques, aesthetics, and creativity.
207 Intermediate Folk, Square, and Social Dance (2:0:3) Prereq PHED 107 or Pol Advanced skills in square and social dance with new steps and styles to folk and social dances.

Individual Sports
103 Beginning Fencing (2:0:3) Basic skills, techniques, and rules of foil fencing.
105 Aerobics, Basic Conditioning (2:0:3) Develop skills for cardiovascular fitness programs.
106 Beginning Gymnastics (2:0:3) Basic skills and techniques of gymnastics.
108 Weight Training and Body Conditioning (2:0:3) Principles and techniques of individualized progressive resistance exercise and cardiovascular fitness.
109 Beginning Ice Skating (2:0:3) Fundamental skills necessary to select equipment and to skate forward and backward.
110 Beginning Swimming (2:0:3) Intro open only to non-swimmers. Emphasis on becoming safe swimmers. (Fee)
116 Combat Sports, Games, Unarmed Combat, and Wrestling (2:0:3) Development and skill in combat sports.
133 Tennis for All (2:0:3) Basic ground strokes, volley, serve and smash, rules, strategy, and terminology.
140 Golf (2:0:3) Grip, stance, swing, rules, and etiquette. (Fee)
148 Badminton and Bowling (3:0:3) Basic skills, rules, terminology, and strategy.
150 Intermediate Swimming (2:0:3) Increase proficiency, endurance, and versatility in aquatics. (Fee)
151 Beginning Tennis (2:0:3) Basic skills, rules, terminology, and strategy.
152 Tennis for the Advanced Beginner (2:0:3) Prereq PHED 151 or equiv experience. Continuation of basic ground strokes, serve, volley, and smash; racket selection, rules, terminology, and strategy.
153 Intermediate Tennis (2:0:3) Prereq PHED 152 or equiv experience. Basic skills with the intro of the chop, slice, forehand, and volley;154 Advanced Tennis (2:0:3) Prereq PHED 153 or equiv skill level. For experienced players to strengthen skills, strategies, and tactics. Students taking tennis classes are required to purchase a can of new balls in a whole United States Tennis Association Rule Book.
161 Archery and Golf (2:0:3) Basic skills, techniques, and rules of target archery and golf.
165 Racquetball (2:0:3) Fundamental skills, techniques, and strategy of playing singles and doubles racquetball.
170, 171, 172, 173 Individual Physical Education (2:0:3) for each Prereq Pol and classification of “C” or “D” on the Department of Recreation, Physical Education, and Sports-NC only (Fee)
200 Swimmers (2:0:3) Prereq Students must swim 50 meters of crawl or breast stroke. Speed, endurance, and preparation for strong, safe stroke technique.
210 Advanced Life Saving (2:0:3) Meets certification req for Advanced Life Saving for American National Red Cross. (Fee)
250 Water Safety Instructor (2:0:3) Meets the W.S.I. req for the American Red Cross. (Fee)

Team Sports
101 Soccer and Volleyball (2:0:3) Basic skills, rules, and strategies of each sport.
104 Non-Contact Lacrosse (2:0:3) Basic skills, rules, and strategy.
111 Basketball and Soccer (2:0:3) Basic skills, strategy, and rules of each sport.
121 Flag Football and Basketball (2:0:3) Basic skills, rules, and strategy for each sport.
124 Basketball and Softball (2:0:3) Basic skills, rules, and strategy for each sport.
131 Volleyball and Field Hockey (2:0:3) Basic skills, strategy, and rules for each sport.

Recreational Activities
115 Recreation—Fishing and Camping (2:0:3) Fishing techniques with various rods; basic camping techniques.
117 Rock Climbing (2:0:3) Basic climbing skills, safety and use of equipment; S-NC only (Fee)
119 Recreation—Trap and Skeet Shooting (2:0:3) Fundamentals and safety in shooting clay targets and reloading. (Fee)
120 Recreation—Orienteering, Backpacking, and Cookery (2:0:3) Basic skills and knowledge of these activities.
180 Whitewater Canoeing (2:0:3) Prereq Must be able to swim four or five lengths of pool and to put on a life jacket. Basic water skills must be mastered on flat water prior to the 2 whitewater canoe trips. (Fee)
255 Basic Scuba Diving (2:0:3) Prereq Intermediate level swimming ability. Basic skill and knowledge to prepare for the Open Water Diver Certificate (PADII). (Fee)

Professional Courses
206 Gymnastics for Children and Youth (2:1:3) Prereq PHED 106 or Pol Fundamentals and progressions in teaching gymnastics; history and philosophy of secondary school age with 12-15 yr field experience involving lab.
211 Sports Officializing and Intramural Administration (3:2:3) Application of officiating techniques and organization of intramural programs.
300 Kinesiology (3:3:0) Prereq BIOL 124, 125. Study of human movement and cinematographic analysis.
301 Physical Education in Elementary School (3:3:0) Planning experiences in physical education for children. Field experience (10 to 12 hr) in public school reqs. Not open to physical education majors.
303 Professional Dimensions of Physical Education (3:3:0) Intro to the professional practice of physical education.
304 Sport, Culture, and Society (3:3:0) Prereq PHED 303 or Pol Sport viewed from historical, political, economic, and cultural perspectives. Spring only.
306 Psychomotor Learning (3:3:0) Prereq EDUC 302, 312, and Pol Leases. Fundamentals of second sport and physical education and exercise. Saturday morning lab and an adapted aquatics lab. Fall only.
313 Tennis, Flag Football, Volleyball, Folk, Square, and Social Dance (4:0:6) For physical education majors only. Basic skills progressions and drills. Skill analysis and peer group teaching. Fall only.
314 Basketball, Weight Training, Conditioning, Track, and Field, and Soccer (4:0:6) For physical education majors only. Basic skills progressions and drills. Skill analysis and peer group teaching. Spring only.
315 Archery, Badminton, and Golf (2:0:3) For physical education majors only. Basic skills progressions and drills and skill analysis and peer group teaching.
316 Recreation and Outdoor Education (2:1:3) Techniques of recreational leadership; community resources, supervision and evaluation methods of converting leisure into outdoor recreation experience.
365 Measurement and Evaluation in Physical Education (3:3:0) Prereq PHED 300, 302, Selection, administration, evaluation and construction of measurement and evaluation tests and techniques; statistical analysis of data and survey of selected instruments. Spring only.
371 Curricular Experiences in Secondary School Physical Education (3:3:0) Prereq PHED 300, 313, and 314 Analysis of planning, instruction of experiential techniques and methods of teaching physical fitness activities, basic motor skills, games and sports at the secondary school level. Fall only.
397, 398 Fundamentals of Aging I, II (3:3:0) Prereq 8 hr of biology, anatomy, or physiology; and 3 hr of psychology or sociology. Interdisciplinary approach to the study of aging in physical, psychological, and social aspects of normal aging as well as issues in health care, mental health, social services, education, and public policy. Field experience req.
403 Curricular Experiences in Elementary School Physical Education (3:3:0) Prereq PHED 300, 313, and 314 Curricular experiences and methods for elementary school physical education with a 12 to 15 hr field experience req. Fall only.
410 Psychology of Sport and Coaching (3:3:0) Research, trends, and techniques of coaching.
420, 421 Coaching of Sports (2:1:3, 2:1:3) Prereq Pol Sport viewed from historical, political, economic, and social perspectives for beginners. A course which will teach the student the ins and outs of coaching sport. The student will repeat this course as often as possible, but no more than 3 cr may be taken. Each cr req a minimum of 60 hr of participation over a period of 6 weeks in the specialized area. Areas selected with faculty advisor approval.
441 Practicum in Athletic Training (1-2:0:0) Prereq PHED 430 and PoD Application of techniques and procedures in the care and prevention of athletic injuries in a selected environment under certified trainer supervision. Involves at least 100 hr of participation for each cr hr in athletic training.
442 Practicum in Physical Education (1-2:0:0) Prereq 54 or 84 hr and PoD Supervised professional practice in a selected campus and/or community setting. May repeat this course as often as possible, but no more than 3 cr hr may be taken. Each cr hr req a minimum of 60 hr of participation over a period of 6 weeks in the specialty. Areas selected with faculty advisor approval.
450 Philosophy in Physical Education (3:3:0) Prereq BIOL 124-125, PHED 300. Human physiological response to and effects of exercise. Fall only.

470 Leisure and Recreation Programming for Older Adults (3:3:0) Survey of recreation activities for older adults in a variety of settings. Evaluation of current programs through observation and participation in local programs is req.
472 Physical Education Program, Grades K Through 12 (3:3:0) Prereq PHED 430 Selection, design, and application of learning experiences appropriate for elementary, middle, and secondary schools. Includes philosophy, objectives, class control, methods. May be taken only in the sem in which student teaching is done. Spring only.
479 Internship in Physical Education with Selected Specialization (12:0:0) Directed internship in physical education and minor in special education. Practica may be req. Spring only.
499 Independent Study in Physical Education (1-3:0:0) Prereq 64 hr and PoD Study of a problem area in physical education research, theory, or practice under the direction of faculty. May be repeated, but no more than 3 cr hr may be given.
500 Workshop in Physical Education (1, 2, 3:0:0) Concentrated full-time workshops, weekend seminars, and workshops dealing with selected topics in physical education and ancillary fields. May be repeated. No more than 6 sem hr may be applied for degree cr.
510 Study in Sport (3:3:0) Discussion of current problems, issues, and research in special physical education. Practica may be req.
530 Exercise Physiology and Fitness Programs for Older Adults (3:3:0) Prereq PHED 307 or PoD Principles of exercise physiology related to fitness and health of older populations 3 to 6 hr field experience.
604 History of Sport and Physical Education through the Middle Ages (3:3:0) History of sport and physical education in ancient civilizations through the Middle Ages.
605 History of Sport and Physical Education From Renaissance to Present (3:3:0) Role of sport and physical education in Europe and its impact on developments in America.
610 Advanced Exercise Physiology (3:3:0) Prereq PHED 450 or equiv, or Pol Lecture, demonstration, lab research, and seminar experiences in the application of research findings to the understanding of physiological function and exercise.
616 Motor Behavior and Evaluation (3:3:0) Human motor behavior research and theory with application to evaluation of skill acquisition.
660 Management Administration and Policy Development in Physical Education and Athletics (3:3:0) Advanced study in the communication techniques, fiscal management, legal liability, facility planning and policy development.
671 Teaching Physical Education in the Secondary School (3:3:0) Advanced course in methods, materials, and techniques for the instruction of physical education in the secondary school.
680 Seminar in Current Issues in Physical Education and Sport (3:3:0) Identify and analyze current issues in physical education and sport.
706 Comparative Physical Education and Sport (3:3:0) Study of present-day physical education and sport in selected countries.

Physics Courses (PHYS)
103, 104 Principles and Development of Modern Physics (4:3:3, 4:3:3) Prereq PHYS 103 prereq to PHYS 104 For nonscience majors. Topics incl mechanics, relativity, cosmology, atomic, nuclear physics, and elementary particles. Emphasis on historical, philosophical, and social aspects of modern physics.
106 Physics for the Life and Health Sciences (3:3:0) Topics incl mechanics, properties of fluids and gases, heat, electricity and magnetism, light, the atom and radiation. Basic principles of topics emphasize application to health sciences.
111 Frontiers of Physics Overview of subfields of physics, their interrelation, and relationship of physics to other disciplines. Discussion of current research topics in physics; career opportunities.
151 Physics for Elementary School Teachers (4:2:2) Basic concepts of physics with emphasis on subjects of
particular important to an elementary school teacher. Topics incl motion, astronomy, electricity and magnetism, energy, heat, meteorology, light, the atom, and the nucleus. Open only to elementary education majors. Spring only.

201 Energy and Environment (3:3:0) Basic ideas of science and technology with emphasis on their interaction with the environment. Designed for science and nonscience majors with interests in current concerns of energy and environment. Origin, forms, uses, and distribution of energy and resulting environmental effects. Students who have completed PHYS 201 under the old title may not enroll for this course. May not be incr for cr by physics majors within the 44 hr of physics courses req for BS degree or within the 31 hr of physics courses req for the BA degree.

203 Introduction to Electronics (3:2:3) Intro to characters and uses of various modern electronic devices, circuits, and instruments. Some applications relevant to the student's major are demonstrated. Not open to physics and engineering majors.

225 Problems in Physics I (1-3:0:0) Prereq 24 hr and 3,000 average in physics and mathematics Individual study of physics problems of current interest. May be taken 3 times.

250 University Physics I (4:3:1) Co-req MATH 114 Mechanics, heat, and thermodynamics.

251 University Electronics I (3:3:2) Same as ENGR 301. Prereq PHYS 250, 351, or Pol Intro to digital systems, circuits, and computers. Topics incl binary systems and codes, digital logic gates and circuits, microelectronics and integrated circuits, multiplexing, nanometers shift registers, counters, A/D converters, microcomputers, microprocessors, and interfacing techniques.

252 Electronics (4:2:5) Same as ENGR 302. Prereq PHYS 251 or Pol Electronics, design, and operational characteristics of power supplies, amplifiers, oscillators, and digital logic circuits.

253 Classical Mechanics (3:3:0) Prereq PHYS 352, 353, and MATH 304 Motion of a particle in 1, 2, and 3 dimensions, systems of particles, non-inertial coordinate systems, equations of Lagrange and Hamilton.

255 Electromagnetic Theory (3:3:0) Same as ENGR 305. Prereq PHYS 352, 352, and PHYS 304 Interaction of static charges, interaction of stationary currents, electromagnetic induction, Maxwell's equations.

256 Wave Motion and Electromagnetic Radiation (3:3:0) Prereq PHYS 352 VIBRATING STRING, plane waves, interference diffraction, polarization, electromagnetic waves, dispersion, relativity.

257 Thermodynamics (3:3:0) Prereq PHYS 250 and MATH 213 Classical concepts of energy and temperature, basic definitions, first and second laws and their application to engineering systems, properties of pure substances, equations of state, analysis and applications thermodynamics principles.

311, 312 Mathematical Methods in Physics and Engineering (3:3:0, 3:3:0) Prereq PHYS 352 and MATH 304 or PHYS 351 or MATH 313 as preq for PHYS 312 Math techniques and methods used in engineering Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices, and complex variables.

315 Physics of Musical Sounds (3:3:0) Prereq MUSI 101 or 115 or Pol Physics of music. Topics incl simple harmonic motion, vibration, temperament, ear, architectural acoustics, sound recording and reproduction. May not be incr for cr by physics majors within the 44 hr of physics courses req for BS, or within the 31 hr of physics courses req for BA.

316 Sound and Light in the Arts (3:3:0) Nature of light, color, and sound, mechanisms of vision and hearing, color additive and subtractive, sounds, composition of music and art, lasers, holography and fiber optics, recording and reproduction of sound and sound. May not be incr for cr by physics majors within the 44 hr of physics courses req for BS, or within the 31 hr of physics courses req for BA.

326 Problems in Physics II (1:0:5) Prereq 54 hr and 2,500 average in physics and mathematical sciences Individual study of physics problems of current interest. May be taken 3 times.


341-342 College Physics (4:3:2, 4:3:2 1 hr recitation) Prereq 54 hr or one year of college-level science and one semester of college-level mathematics, or Pol 2 sem basic physics course with emphasis on topics of classical and modern physics. Principles of mechanics, fluid flows, waves in fluid media, turbulence, thermal convection, stability considerations, elastic deformations, stress-strain tensor, and body waves in elastic media.

350 University Physics III (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250 Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, and nuclear physics.

350 University Physics I (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250. Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, waves.

350 University Physics I (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250. Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, waves.

350 University Physics I (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250. Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, waves.

350 University Physics I (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250. Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, waves.

350 University Physics I (3:3:0) (1 hr recitation) Coreq MATH 213, PHYS 351; preq PHYS 250. Electricity and magnetism, optics, waves.

352 University Physics II Laboratory (10:2:0) Coreq MATH 213; preq PHYS 250. Laboratory experiments in mechanics, electricity, magnetism, optics, waves.
207 General Experimental Psychology (3:0:0) Prereq PSYC 100 or Pol Survey of animal and human learning, perception, motivation, and memory.

211 Developmental Psychology (3:0:0) Prereq PSYC 100 or Pol Review of major developmental theories of man incl perspectives of childhood, adolescence, adulthood, and old age.

220 Personality Theory (3:0:0) Prereq PSYC 100 or Pol Intro to classical and contemporary theories of personality and a study of personality characteristics and problems commonly encountered in business and industry.

231 Social Psychology (3:3:0) Prereq PSYC 100 or Pol Study of man’s development in a social matrix incl such topics as socialization, cultural behavior, group norms, and attitude formation.

300 Analysis and Interpretation of Psychological Data (4:3:2) Prereq 6 hr of psychology incl PSYC 100, or Pol Descriptive and inferential statistics in design, analysis, and interpretation of psychological research with practical application using calculators.

303 Computer Applications in Biobehavioral Research (3:3:0) Prereq PSYC 100 and ENGR 240 or Pol Survey of computer applications to research in perception, learning, cognition, motivation and physiological psychology. Software and hardware req and their implementation for controlling biobehavioral experiments and processing and collecting response data.

304 Principles of Learning (4:3:2) Prereq PSYC 300 or Pol Experiential methodology within the context of the basic principles of learning incl such topics as classical and instrumental conditioning and discrimination learning.

305 Human Learning and Memory (4:3:2) Prereq PSYC 300 or Pol Experiential methodology within the context of discrimination, concept formation, verbal learning, psycholinguistics, and memory.

309 Perception (4:3:2) Prereq PSYC 300 or Pol Experiential methodology within the context of perceptual psychology incl such topics as psychophysics, perceptual organization, and constancies.

311 Comparative Psychology (4:3:2) Prereq PSYC 300 or Pol Experiential methodology within the context of a study of behavior through the phylogenetic continuum incl such topics as species-specific behavior, early experience and learning.

313 Animal Psychology (3:0:0) Prereq 6 hr of psychology incl PSYC 100, or Pol Study of process of human psychological development from conception to adolescence incl such topics as genetic factors, emotional and intellectual growth, and emotional development.

314 Adolescent Psychology (3:3:0) Prereq 6 hr of psychology incl PSYC 100, or Pol Study of the biological and cultural changes accompanying adolescence, incl the effect of these changes on emotional, intellectual, and social development.

316 Motivation (4:3:2) Prereq PSYC 300 or Pol Experiential methodology within the context of the concepts and principles which determine human and animal motivation incl such topics as instincts and drives.

320 Psychological Tests and Measurements (4:3:2) Prereq PSYC 300 or Pol Examination and application of principles underlying the theory, interpretation, and administration of psychological tests incl a study of tests of intelligence, achievement, and ability.

321 Counseling Psychology (3:3:0) Prereq PSYC 325 or Pol Review of the theories and methods in psychological counseling.

322 Behavior Modification (3:3:0) Prereq PSYC 207 or 220 or Pol Examination of experimental principles of human and animal behavior with particular emphasis on applied behavior analysis, incl the design, implementation, and evaluation of operant intervention programs across a wide variety of human situations and the opportunity to apply this approach to human subjects. Students who have taken PSYC 202 cannot take this course.

323 Clinical and Social Psychology Research Techniques (4:3:2) Prereq PSYC 300 or Pol Review and application of psychological research techniques incl interviewing, surveying, analysis, and process analysis.

325 Abnormal Psychology (3:3:0) Prereq PSYC 220 or Pol Study of development of abnormal behavior patterns incl such topics as methods of diagnosis and prevention of serious mental disorders such as psychosomatic disorders, psychoses, and personality disorders.

326 Therapeutic Communication Skills (3:3:0) Prereq PSYC 325 or Pol Intro to understanding and use of basic therapeutic communication skills employed in clinical and counseling psychology incl a review of clinical psychology incl a review of current clinical practice.

420 Clinical Methods in Psychology (3:3:0) Prereq PSYC 100 or Pol Historical perspective of the clinical psychology incl a review of current clinical practice.

421, 422 Undergraduate Practicum in Psychology (3:3:0, 3:3:0) Prereq PSYC 325 and 326 and Pol Clinical Psychology Practicum in Laboratory Supervised experience in application of psychological principles requiring work in a nonclassroom situation.

423 Group Psychotherapy Techniques (3:3:0) Prereq PSYC 100 or Pol Review of current techniques of group psychotherapy with emphasis on humanistic and interpersonal approaches, incl applications to family therapy, alcoholism, and drug abuse.

461, 462 Experiential Training and Development: A Psychological Perspective (3:3:0) Prereq PSYC 230, pre- or coreq PSYC 320, or Pol An overview and critique of training methods currently used in industry from the viewpoint of psychological theory, incl simulations, on-the-job training, supervision/leadership skills training, computer-assisted instruction, and programmed texts. Principles of needs analysis, program development, and program evaluation are discussed within the framework of industrial psychology.

460 Independent Study in Psychology (1-3:0:0) Prereq experimental course, a 2,500 GPA in psychology and a written proposal approved in advance of registration by instructor and the department chairperson. Study of a psychological problem according to individual interest with stress on research methods. By POC, a student may take 2nd sem for a maximum of 6 hr of cr. Students meet once a week to discuss their progress.

461, 462 Special Topics (3:3, 3:3) Prereq Pol Selected topics reflecting interest in specialized areas. Announced in advance.

463 Undergraduate Thesis (1-3:0:0) Prereq 84 hr psychology major, an experimental psychology lab course, 3,000 GPA in psychology, PSYC 460, Pol, and prior approval of thesis proposal. Directed research on a topic agreed upon by student and adviser. The student must take PSYC 460 with the same adviser in order to develop a thesis proposal prior to registering for PSYC 499. The student must complete a thesis and defend it orally before the adviser and 2 faculty members. With POC, students may take a second sem for a maximum of 6 hr cr.

506 Theories of Personality (3:3:0) Prereq PSYC 220 Comparative review of prevalent theories of personality with special emphasis on their fundamental models and their similarities and differences.


508 Theories of Development (3:3:0) Prereq PSYC 313 or 211 Major theories of infant and child development incl cognitive theories of Piaget, Freud, and Vygotsky.

513 Infant Development (3:3:0) Prereq PSYC 313 (210) or Pol Examination of current issues, research methods, and clinical evaluation techniques in the field of infant development.

524 Alcoholism: A Determined and Over-Determined Problem (3:3:0) Prereq PSYC 100 and an intro course in either biology or sociology, or Pol, or certification by 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 (3:3:0) Prereq PSYC 230 or an experimental lab course or Pol Investigation of complex man-machine interactions found in industry today. Extensive empirical research findings are examined.

531 Human in Organizational Systems (3:3:0) Prereq PSYC 230 or Pol Review of theories and research relating to such topics as job satisfaction and motivation, work design, group behavior, leadership, organizational change, contact hr per 3 sem hr cr.

548, 549 Practicum in Gerontology (3:0:0, 3:0:0) Prereq 3 sem of the 3 core courses in the gerontology certificate program Practicum experience in a gerontological setting under supervision of qualified professionals.

559 Drugs, Hormones, and Behavior (3:3:0) Prereq PSYC 372 or equiv or Pol Overview of the chemistry of behavior, incl neurotransmitters, mechanisms of action of therapeutic drugs such as antidepressants, tranquilizers, hallucinogens and other psychoactive drugs, chemical theories of memory, and effects of hormones on behavior.

560 Advanced Experimental Social Psychology (3:3:0) Prereq PSYC 321 Study of major trends in social psychological research with emphasis on the ethical and practical implications of research findings.
psychological basis of human language acquisition and methods, intracranial stimulation in humans, selected experience, with special emphasis on the processing dynamics of neuroses, psychoses, character disorders, and development.

649 Problems in Psychology (3:3:3) Students who took PSYC 642 before Fall 1977 may not receive credit for this course. A new way to think about psychological problems is presented. The lack of tangible theoretical achievement may be attributed to the need for fundamental conceptual and methodological foundations of current psychology. These concepts are criticized and other concepts in psychology and cognitive disciplines are considered in their place.

651 Methodology of Research (3:3:3) F Prereq PSYC 300 and either 304, 305, 309, 311, or 316. Survey of statistical techniques and experiments in various fields of psychology culminates in individual experiments exemplifying proper research methods. Advanced experimental design is reviewed.

653 Experimental Research Design (3:3:3) F, Sp Prereq PSYC 300 and either 304, 305, 309, 311, or 316. Review of experimental design, fundamental assumptions in analyses of variance, analysis of variance and covariance designs, and multiple comparison tests are also reviewed.

655 Experimental and Research Design (3:3:3) F, Sp, Prereq PSYC 332. Intensive survey of major types of psychopathological disturbances; causes, symptoms, and dynamics of neuroses, psychoses, character disorders, and psychosomatic disorders.

616 General Psychopathology (3:3:3) F, Sp Prereq PSYC 305, or Pol. Study of the psychological basis of human language acquisition and competence, incl research on aphasia, association, autism, second language learning, grammatical transformations, and the psychological reality of transformational rules.

621 Current Issues in Experimental Psychology (3:3:3) Prereq Undergrad or grad course in aging Review of the experimental literature in psychology of aging, incl intellectual functioning, personality and adjustment, minor and major adjustment problems, and role of psychology in social issues.

618 General Psychology (3:3:3) F, S Prereq PSYC 305 or Pol. Study of the psychological basis of human language acquisition and competence, incl research on arousal, association, autism, second language learning, grammatical transformations, and the psychological reality of transformational rules.

619 Clinical Psychology (3:3:3) F, Sp, Prereq PSYC 305 or Pol. Study of the psychological basis of human language acquisition and competence, incl research on research methods and clinical diagnosis in psychology.

654 Naturalistic Methods in Psychology (3:3:3) F Prereq PSYC 300 and either 304, 305, 309, 311, or 316. Theory and technique of research in a laboratory set up. Student research learn such topics as classical and instrumental conditioning and discrimination learning is reviewed. Theories of animal learning incl.

661 Clinical Applications of Psychology (3:3:3) Sp Prereq PSYC 305 or Pol. Study of the psychological basis of human language acquisition and competence, incl research on clinical psychology and the positive mental health movement. Focus on methodological and theoretical issues that govern applicability of these processes. May be repeated.

626 Seminar in Psychology (3:3:3) F, Sp, Prereq PSYC 305. Focus on methodological and theoretical issues that govern applicability of these processes. May be repeated.

627 Seminar in Special Topics (3:3:3) F, Prereq PSYC 305. Focus on methodological and theoretical issues that govern applicability of these processes. May be repeated.

628 Seminar in Special Topics (3:3:3) F, Prereq PSYC 305. Focus on methodological and theoretical issues that govern applicability of these processes. May be repeated.
examination of selected aspects of the law-psychology interface. Focus on how clinicians contribute to the legal process and how law affects the application of psychology. Students select issues relevant to their career goals, search the literature, and present their findings to the class.

758 Psychological Practicum F, Sp, Su (1-6:0:0) Prereq PSYC 728; 2 assessment courses; 711, 715, or 786; and testing experience in the Psychological Clinic. Apply (in writing) for PoD 60 days prior to the beginning of the sem. Practice experiences are expected to be assigned.

755 Advanced Analysis of Psychological Data F (3:3:0) Prereq PSYC 651, 652, or 653, or equiv Intro to manipulation techniques of statistical analysis appropriate for applied problems in psychology. Techniques of data checking and cleaning, data manipulation and transformation, and simple and complex statistical analyses as applied to psychological problems are covered in depth with 3 widely used statistical packages—BMD, SPSS, and SOUPAC.

756 Multivariate Techniques in Psychology Sp (3:3:0) Prereq PSYC 300 or equiv; PSYC 755 strongly rec Survey of multivariate statistical techniques as applied to psychological research. Emphasizing analysis of complex designs and interpretation of multivariate data analyses resulting from computer processing.

765 Seminar in Psychology Internship F, Sp (3:0:0) Prereq Completion of req courses in school psychology and/or Po program coordinator One-school-year supervised field experience where the advanced school psychology student functions as a staff member within a school. Activities include psychological assessment, consultation with teachers, parents, and administrators; and involvement in the complete range of functions req of the school psychologist.

772 Seminar in Behavioral Assessment of Toxic Effects F (3:3:0) Prereq Grad course in physiological psychology or animal behavior, and a course in drugs and behavioral effects in the environment. Po Intensive intro to methodology of behavioral assessment of adverse drug or chemical effects. In-depth discussion of major research in behavioral toxicology, such as the effects on behavior of heavy metals, inhaled and gases, and abused substances.

784 Psychological Counseling Techniques I Sp (3:3:0) Open only to degree students; Prereq PSYC 728 and Po Application of various counseling techniques generated by current dynamic and interpersonal approaches to counseling. Focus on group counseling approaches, giving the student experience in techniques used in contemporary practice. Tapes of students' counseling sessions are req for course cr.

785 Psychological Counseling Techniques II F (3:3:0) Open only to degree students; Prereq PSYC 728 and Po Continuation of Counseling Techniques I focusing on counseling techniques designed for working with group, individual, and couples counseling.

786 Functional Assessment and Treatment in Gerontology Sp (3:3:0) Prereq A course in the psychology of aging. PSYC 320 and PSYC 422, or equiv Courses functional assessment and treatment of conceptual and practical gerontological problems involved. Intervention strategies with older adults are examined, incl interviewing, group work with older persons, milieu therapy, reality therapy, and the design of supportive environments.

790 Seminar in Professional Psychology (1-3:0:0) Prereq Admission to the doctoral progr All students are req to enroll for each sem they are in the program. Focuses on the role of psychologists in various work settings. Consideration given to the functions performed by psychologists in those settings, to contributions by psychologists to the overall goals of those settings, to relationships with other professionals, and applications of psychology to management and policy issues arising in the various settings. Ethical issues addressed.

792 Special Topics in Psychology (3:3:0) Prereq Admission to Po prog or Po Selected topics reflecting specialized areas in psychology. Content varies. May be repeated.

797 Directed Reading and Research (1-3:0:0) Independent reading on a topic agreed to by a student and a faculty member. May be taken for credit or not repeated for degree or by students who also register for PSYC 799.

799 Thematic Research in School Psychology (4:0:0) Prereq req courses in school psychology prog and/or Po program coordinator Practical project in the school system under the supervision of a faculty member. The student completes a research study that has been approved by advisor and at least one other faculty member. Not available to students enrolled in EDUC 490 or PSYC 799.

790 Thesis (3-6:0:0) Open Students, with the Doctor of Arts in Education (var or Prereq DA Ed admission to study in psychology. Program of studies designed by student's discipline director and approved by student's doctoral committee which brings the program to the attention of the DA Ed 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 may be repeated.

Public Administration Courses (PUAD)

Public Affairs

501 Theory and Practice of Public Administration (3:3:0) Prereq Grad stdg or PoD Survey and review of the field of public administration to include development of U.S. governmental administration, theories of administrative organization and behavior, administrative processes, management of people and money, administrative responsibility, and the public policy-making—public policy-implementation nexus.

503 The Political Environment of Public Management (3:3:0) Prereq Grad stdg or PoD Skills involved in a public manager's interaction with private groups, legislative bodies, advisory committees, the press, the other administrative agencies, political executives and the government. Case studies of administrative participation in the political process of public policy making.

511 Methods of Analysis for Public Managers I (3:3:0) Techniques and methods used by public managers to solve policy-related problems or to analyze policy-related data. Focus on problem definition, research design, and problem solving under conditions of uncertainty in the public sector.

512 Methods of Analysis for Public Managers II (3:3:0) Prereq PUAD 611 Techniques and skills available to, and used by, public managers to solve policy-related problems or to analyze policy-related data. Focus on data gathering and analysis, use of computers, systems theory and analysis, and operations research.


620 Organization Theory and Management Behavior (3:3:0) Consideration of behavior within the context of public organization and the consequent changes req in management. Focus on such issues as perception, attitude formation, motivation, leadership, systems theory, communication and flow, conflict theory, and decision theory.

621 Principles and Practices in Government Organization and Management (3:3:0) Prereq PUAD 620 Major management theories applicable to the American federal government, state and local systems, and private organizations. Relationship of theories to management practices in contemporary American administration.

622 Program Planning and Implementation (3:3:0) Prereq PUAD 621 Introduction of operationalizing public legislation 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 req for effective program implementation.

640 Public Policy Process (3:3:0) Processes of making public policy, incl detection of public issues, consideration of alternatives, and adoption and implementation of solutions. Highlights the major actors in the policy process, as well as the environmental forces that affect public policy.

641 Policy Analysis (3:3:0) Prereq PUAD 611 Substantive issues in the conceptualization and practical applications of policy science and other formal perspectives to policy articulation, program formulation, and program evaluation in the public sector.

642 Program Evaluation (3:3:0) Prereq PUAD 611 Practical exploration of assessment techniques utilized by central analysts and client units in government, incl program impact and program strategy evaluations, cost analysis, field experiments, productivity studies, and evaluation research.

650 Intergovernmental Relations in the United States (3:3:0) An introduction to intergovernmental relations, with emphasis on contemporary patterns of fiscal relations and operational grant programs.

651 Administration in the Commonwealth of Virginia (3:3:0) Culture, demography, and socio-economic environment of public administration in VA. Governmental agencies, legislative functions, executive leadership, staff agencies, state-local relationships, interstate regionalism, and the administrative, fiscal and managerial aspects of public budgeting. Public policy implications. Particular attention to budgetary reform movements and their successes and failures.

652 State and Local Financial Management (3:3:0) Prereq PUAD 660 or PoD Systems of public finance at state level. Impact of budgetary systems and taxation on state government, impact of federal grants-in-aid, revenue sources, and the relationship of national, state, and local jurisdictions as partners in a federal system. Program auditing and new budgetary techniques are examined for their application at the state level.

670 Personnel Administration in the Public Sector (3:3:0) Public and private personnel management and the historical development of the civil service. Emphasis on procedures involved in personnel selection, training, and placement of person­ nel in public organizations. Selected problems and their impact on public personnel systems.

671 Employee Labor Relations (3:3:0) Prereq PUAD 660 or PoD Methods of labor relations, including negotiation, representation elections, bilateral policy negotiations, administration of agreements, management rights, union and membership security, the strike issue and grievance procedure, impact of public administration, and assessment of future developments.

700 Ethical Dimensions of Public Administration (3:3:0) Prereq Final sem of a student's MPA program Topics of ethical dimensions incl conflicts of interest, moral and professional values and traditions, standards of conduct and ethics, and conflict­ing values of public officials and social equity of public programs.


702 Dynamics of the Federal Bureaucracy (3:3:0) Structure and functions of the federal bureaucracy, the public-policymaker nexus; administrative roles of Congress, administrative functions of the presidency and of over­head agencies; study of selected operational problems in major departments, independent agencies, and critical policy issues and task forces, advisory committees, regional offices, and interest groups.

705 Issues in Local Government Administration (3:3:0) Contemporary problems—such as land use, transportation, economic development, growth management, and environmental impact—in the management of counties, cities, towns, and special districts, with emphasis on local govern­ment in VA.

706 Issues in Public Financial Management (3:3:0) Prereq PUAD 661 Issues of special importance or of current concern in public financial management.

707 Issues in Public Personnel Administration (3:3:0) Prereq PUAD 670, or PoD Current issues in public personnel administration, and of optional ways of dealing with them, with special attention to their relationship to and impact on the role of public personnel managers.

708 Special Topics in Psychology (3:3:0) Prereq Admission to the doctoral progr All students are req to enroll for each sem they are in the program. Focuses on the role of psychologists in various work settings. Consideration given to the functions performed by psychologists in those settings, to contributions by psychologists to the overall goals of those settings, to relationships with other professionals, and applications of psychology to management and policy issues arising in the various settings. Ethical issues addressed.

709 Directed Reading and Research (1-3:0:0) Independent reading on a topic agreed to by a student and a faculty member. May be taken for credit or not repeated for degree or by students who also register for PSYC 799.

790 Directed Research in School Psychology (4:0:0) Prereq req courses in school psychology prog and/or Po program coordinator Practical project in the school system under the supervision of a faculty member. The student completes a research study that has been approved by advisor and at least one other faculty member. Not available to students enrolled in EDUC 490 or PSYC 799.

797 Thesis (3-6:0:0) Open Students, with the Doctor of Arts in Education (var or Prereq DA Ed admission to study in psychology. Program of studies designed by student's discipline director and approved by student's doctoral committee which brings the program to the attention of the DA Ed 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 may be repeated.

799 Directed Reading and Research (3:3:0) Prereq Po prog dir and Po Reading and research on a
specific topic, under the direction of a faculty member. Winter or summer term can be determined after the research and report may be req. May be repeated once. 798 Research Project (3:00) Prereq PUAD 795 and PoD Student completion of an original research project related to public affairs, based on the basis of the approval of research design each student prepares and defends a final report that is the result of the research project. Final report must be accepted by the Department of Public Affairs. 800 Introductory Doctoral Program Seminar (1:1:0) Prereq PoC accepted in DPA Prog intensive orientation, self-appraisal, and planning seminar for individuals entering the DPA program. 801-802 Doctoral Seminar—The Foundations of Public Administration I and II (6:6:0), (6:6:0) Prereq PUAD 800 Theories involved in public administration, as an intellectual discipline and as a field of practice, to society, organizations, and the individual. Emphasis incl conceptual and analytical approaches, ethical dimensions, comparative perspectives, and future prospects of public administration actions. Req of DPA students during the first year of study. 803 Doctoral Seminar in Issues in Public Administration (12:2:0) Prereq PUAD 800. Major programmatic, functional, or operational aspects of public administration, and the principal historical, current, and prospective issues of contemporary public administration design. Emphasis on small teams for fact-finding, analysis, and presentation on important issues, as well as full-group sessions. The interaction is designed to be followed. May be repeated with the object of enhancing student sensitivity to and knowledge about the future. Ways for designing the structures and procedures of public organization so they can adapt to change. 819 Doctoral Tutorial in Change, Innovation, and Public Administration (1-3:0:0) Prereq Pol and Po participant's advisory committee; doctoral students from other programs may enroll only by Pol Recognition, anticipatory analysis and analysis of economic, political, social, and technological change as it influences and is influenced by public administration structure, institution, and creative social change, with the object of enhancing student sensitivity to and knowledge about the future. Ways for designing the structures and procedures of public organizations so they can adapt to change. 820 Doctoral Seminar in Leadership (3:3:0) Prereq Pol and Po participant's advisory committee; doctoral students from other programs may enroll only by Pol Recognition. Independent study, intensive study of particular features of change, innovation, and public administration. Study arranged and supervised with the tutorial professor. 821 Doctoral Seminar in Leadership (3:3:0) Prereq Pol and Po participant's advisory committee; doctoral students from other programs may enroll only by Pol Recognition. Independent study, intensive study of particular features of leadership. Study is arranged and supervised with the appropriate tutorial professor. 840 Doctoral Seminar in Analysis and Evaluation (3:3:0) Prereq Pol and Po participant's advisory committee; doctoral students from other programs may enroll only by Pol Recognition and qualitative approaches and techniques used in recognizing, defining, and assessing public issues and problems. Conceptualizing and assessing problems, employing and judging the strengths and weaknesses of tools and techniques, and identifying and categorizing the information required for competent analysis and evaluation. 841 Doctoral Tutorial in Analysis and Evaluation (1:3:0:0) Prereq Pol and Po participant's advisory committee; doctoral students from other programs may enroll only with Pol and Po. Prereq Pol and Po, individualized, intensive study of particular features of analysis and evaluation. Study is arranged and supervised with the tutorial professor. 999 Doctoral Dissertation (18-24) To be taken only with the approval of the student's discipline director. Registration may be req. at 3 cr hr may be spread over a multi-sem contiguous period. DPA candidates must register for at least 3 cr hr each sem until completion of the dissertation. Public Affairs courses (PUAF) 850 Studies for the Doctor of Arts in Education (var cr) Prereq DA Ed admission to study in public affairs. Program of studies designed by student's discipline director and approved by student's doctoral committee, which brings the student to participate in the 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 may be repeated. Real Estate and Urban Development Courses (REUD) School of Business Administration After 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. 301 Introduction to Real Estate and Urban Development (3:3:0) Dimensions and specialties involved in the public control and private development, sale, finance, and management of real estate. Subject areas incl land planning, land use control, appraisal, finance, brokerage, property management, and investment. 411 Real Estate Business and Law (3:3:0) Prereq REU 301 or Pol Topics incl cost, income, and market approaches to value for various types of real property as well as the reconciliation of varying estimates of value based upon these different approaches. 412 Real Estate Finance (3:3:0) Prereq REU 301 or Pol Study of how financial institutions which provide real estate financing acquire and manage their funds. Consideration given to various methods of financing alternative real estate projects. 413 Real Estate Investment (3:3:0) Prereq REU 301 or Pol Intro to fundamentals of real estate investment covering factors in developing an overall real estate investment strategy; analytical skills needed to conduct investment analysis; and characteristics of types of real estate investment opportunities. 421 Real Estate Law (3:3:0) Prereq BULE 301 or Pol Basic principles of modern real estate law incl classifications of property, types of ownership, acquisition and transfer, leasing, government regulation, and taxation. Emphasis on the real estate sale incl the contract of sale.
of mysticism in East and West through exploration of various ways of understanding mystical experience. Readings and discussion emphasize one or more of the Eastern (Hinduism, Buddhism), Western (Christianity, Zen) and Western traditions (Judaism, Christianity, Islam).

338 Mythologies of the Orient (3:3:0) Prereq 3 hr in religion or Pol Examination of several mythic themes: creation of gods and goddesses; the nature of the divine; the nature of the universe and of the earth. These themes are considered in the Hindu and Buddhist traditions of India, in the folk beliefs and Buddhism of China, and in the development of the Zoroastrian and Islamic religions.

371 History of Western Christian Thought I: Classical and Medieval (3:3:0) Prereq RELI 252 or Pol; suggested PHIL 232 and 234 Development of Christian doctrine from the close of the New Testament to the 15th century. Relationship between Greek, Roman, and Medieval philosophy and the theological expressions of belief.

372 History of Western Christian Thought II: Modern (3:3:0) Prereq RELI 252 or Pol; suggested PHIL 232 and 234 Development of Christian doctrine from Reformation to present. Effects of scientific empiricism, existentialism and linguistic analysis on Protestant and Catholic theology.

374 Islamic Thought (3:3:0) Prereq RELI 211; 54 hr or Pol Major components of Islamic thought and its role in regulating the various aspects of social life in the Muslim World. Emphasis on religious foundation of Islamic society and culture.

376, 377 Special Topics in Religious Thought (3:3:0), (3:3:0) Prereq 3 hr in philosophy or religion, or Pol Selected topics from a philosophical perspective. Topics vary.

Russian Courses (RUSS)

Foreign Languages and Literatures

Placement: See Academic Policies and Procedures 101 Elementary Russian I (3:3:1) Designed for students with no knowledge of Russian. Intro to Russian, incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary Russian II (3:3:1) Prereq RUSS 101 or Pol; Continuation of RUSS 101. Lab work req.


201 Intermediate Russian I (3:3:1) Prereq RUSS 102 or 109, or appropriate placement score, or Pol Further development of skills in listening, speaking, reading, and writing. RUSS 201 and 202 must be taken in sequence. Lab work req.

202 (251) Intermediate Russian II (3:3:1) Prereq RUSS 201, or appropriate placement score, or POL Application of language skills to reading, composition and discussion. Lab work req.

209 Intensive Intermediate Russian (6:6:2) Prereq RUSS 102 or 109, or appropriate placement score, or Pol Equiv to RUSS 201 and 202, taught in a single term. May not be taken for cr in combination with RUSS 201 and 202. Lab work req.

252 Russian Conversation and Composition (3:3:0) Prereq RUSS 202 (251) Or Development of students' ability to express themselves orally on topics of current interest and everyday situations; composition provides practice in the ability to understand, read, and write Russian. RUSS 202 and 201 must be taken in sequence. Lab work req.

254 Readings in Russian Literature (3:3:0) Prereq RUSS 202 (251) Or Pol Readings of Russian literary works in the original language with lectures, discussions, and examination in English.

300 Field Study in Russian Culture (1-3:0:0) Prereq HIST 328 or 329; GEOG 230; RUS 353 or 354; Or Pol Study tour to Soviet Union of between 2 and 3 weeks. Students must attend a series of lectures before the tour and must consult with the designated faculty member on a research project on a topic in Russian culture resulting in a term paper or report.

303 Russian Advanced Conversation (3:3:0) Prereq RUSS 254 Or Development of oral proficiency incl current Soviet expressions.

311 Contemporary Soviet Short Fiction (3:3:0) Prereq RUSS 202 (251) Or equiv Reading and discussion of short stories by the best-known Soviet writers of today. Readings in original language, with lectures and discussion partly in English, partly in Russian. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

325 Major Russian Writers (3:3:0) Prereq ENGL 102 or equiv English Composition. Readings in major works of major Russian writers in translation; coursework in English. Writers to be studied vary.

326, 327 A Survey of Russian Literature (3:3:0), (3:3:0) Prereq 54 hr or Pol RUSS 326 consists of a survey of major works of Russian literature from the late 19th and the 20th centuries. Coursework in English.

353 Russian Civilization (3:3:0) Prereq 54 Pol or Pol Civilization and culture of Russia and the Soviet Union. In addition to readings and lectures, incl films, slides, and music. Coursework in English. May be taken toward fulfillment of the Non-W Culture req for the BA degree.

354 Continental Perspectives on Russian Life (3:3:0) Prereq 54 or Pol; Social life, art, economics, education, view of life, and personal aspirations of the Soviet citizen today. Coursework in English. May be taken toward fulfillment of the Non-W Culture req for the BA degree.

380, 381 Advanced Russian (3:3:0), (3:3:0) Prereq RUSS 202, 209 or equiv A comprehensive study of the more difficult characteristics of contemporary standard Russian in the areas of grammar, style and vocabulary usage. Emphasis on developing fluency in oral and written expression.

401 Readings in the Social Sciences (3:3:0) Prereq 15 hr of Russian or equiv Reading, translation, and discussion of Soviet materials in fields of history, politics, geography, and sociology.

402 Scientific Russian (3:3:0) Prereq 15 hr of Russian or equiv Reading, translation, and discussion of Soviet materials in natural and social sciences.

407 Russian Theater and Drama (3:3:0) Prereq 54 hr or Pol Development of Russian theater incl directing techniques in the Moscow Art Theater. Reading and discussion of major Russian plays of the 19th and 20th centuries. Coursework in English. Knowledge of Russian is not req.

410 Russian Poetry (3:3:0) Prereq 15 hr of Russian or equiv Historical development of Russian poetry, and of representative works by Russian poets reading in Russian. Coursework in English and Russian.

415 The Slavs: A Cultural Survey (3:3:0) Prereq 54 hr or Pol Development of Slavic culture through the ages, with emphasis on the Western (Polish, Czech) and Southern (Uygur, Bulgarian) Slavs. Coursework in English.

498, 499 Senior Seminar (3:3:0), (3:3:0) Prereq 84 hr as a major in Russian Affairs and Pol Research, analysis, and discussion of selected topics in Russian language, literature, and culture. Preparation of a seminar report. Maximum of 6 hr may be applied to fulfillment of req in the major.

Social Work Courses (SOCW)

Social Work

100 Introduction to Social Work (1:3:0) Intro classroom discussion and field observation on functions, values, methods, effectiveness of opportunities, and limitations of social work in helping people.

301 Laboratory in Interpersonal Communication (3:3:0) Prereq SOCI 101, PSYC 100, Or Pol Experiential emphasis on the biological, psychosocial, cultural, and personal influences on the behavior of those who need and those who give help. Students are helped to examine their own behavioral and learning patterns, values, and attitudes, and to use experiential learning to help social work clients. Field service of at least 60 hr req.

323, 324 Human Behavior in the Social Environment I, II (3:3:0), (3:3:0) (must be taken in sequence) Prereq SOCI 101, PSYC 100, or equiv Prereq for course: study of the functional components of human social systems, settings, and roles of social work.

351 Social Welfare Policy and Services (3:3:0) Prereqs: SOCI 101, PSYC 100, Or Pol Intro to social welfare service, its historical development, central concepts, institutional nature, and trends. Focus is on research on social policy, evaluation, and investigation and analyses of human service delivery systems, settings, and roles of social work.

352 Social Welfare Policy and Services II (3:3:0) Prereq 351, or Pol Research projects on social policy, social welfare, and social work policies. Students must have taken at least one previous lower division course in social welfare policy and practice.

455 Planning and Organizing for Community Change (3:3:0) Prereq 84 hr or Pol Community organization and planning, with specifics in the practice of “grass-roots” community organizations. Following areas incl the community development approach, neighborhood study and analysis, direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent social work, and role of social work in planned change.

456 Senior Practicum I (3:3:0) Prereq 357, 358, and 324 or 324 with a grade of at least C and rec of faculty open only to social work majors. Under supervision of instructors provided by field agencies, students are involved in 4 days per week in learning through participation in the provision of service to individual clients, families, groups, and/or communities and in activities sponsored by or involving professional social workers. Weekly seminar, completion of a special project, and periodic faculty-agency visits.

457 Social Work Practicum II (3:3:0) Prereq SOCW 453, with a grade of at least C and rec faculty Field experience and weekly seminar.

458 Senior Practicum/Bloc Placement (10:0:0) Prereq SOCW 357, 358, 323, 324, 471, completion of all req soc work courses except electives above. Fieldwork by major with 84 hr. G.P.A. of 3.200 (in social work) and rec of the faculty Under supervisor instruction provided by field agencies, students are involved in 4 days per week in learning through participation in the provision of service to individual clients, families, groups, and/or communities, and in activities sponsored by or involving professional social workers. Weekly seminar, completion of a special project, and periodic faculty-agency visits.

471 Research in Social Work (3:0:3) Prereq SOCI 221, SOCW 453, or Pol Principles and the theory underlying scientific inquiry. Emphasis on the use of research in social work practice, steps in conducting research, and utility of research efforts in developing and evaluating social work knowledge and skills.

472 Selected Topics in Social Work Policy (3:3:0) Prereq 54 hr or Pol Opportunity to study depth special areas of social work which are of interest to students, faculty, and the social work community. Topics vary.

473 Field Placement (3:3:0) Prereq 54 hr or Pol Opportunity to study depth special areas of social work which are of interest to students, faculty, and the social work community. Topics vary.

474 Senior Practicum (3:3:0) Prereq 54 hr or Pol; On site opportunity to study depth special areas of social work which are of interest to students, faculty, and the social work community. Topics vary.
Sociology Courses (SOCI)

101 Introductory Sociology (3:3:0) Intro to basic sociological concepts. Aspects of human behavior; individual and group interaction; social mobility and stratification; status and class; race relations; urbanism; crime and criminology; social change and the social system.


201 Marriage and the Family (3:3:0) Prereq SOCI 101 or Pol Sci 101. A study of marriage and family in contemporary America. Human sexuality, premarital behavior, marital adjustment, socialization, family economics, divorce, and variations in family life.

203 The Sociology of Small Groups (3:3:0) Prereq SOCI 101 or Pol Sci 101. Characteristics, structure, and processes of small group dynamics; theories and models of group analysis; techniques of observation and research in small groups.

205 Sociology of Deviance (3:3:0) Prereq SOCI 101 or Pol Sci 101. Major theoretical approaches to deviant behavior are explored: functional theory, conflict theory, and symbolic interaction theory. Positive and negative aspects of deviant behavior in relation to their effects upon society.

216 to 299 Social and Collective Identity: The Socialization Process (3:3:0) Prereq 3 hr of sociology, or Pol institutional and personal dimensions of the socialization process analyzed in terms of roles, groups, processes, and the development of self-consciousness. The life cycle is examined in terms of major agents of socialization. Focus on influence of certain ascribed status prescriptions in contemporary society—such as race, age, sex, and the handicapped.

221 Statistics for the Behavioral Sciences (4:3:2) Prereq SOCI 101 or Pol Intro to fundamentals of applied statistics as used in behavioral sciences to incl descriptive statistics, inferential statistics, correlation-regression analysis, reliability analysis, nonparametric tests, and practical experience with calculators in analyzing statistical data to actual problems of the behavioral sciences.

240 Social Services in Society (3:3:3) Prereq SOCI 101 or Pol Survey course covering the institutions of health and welfare in society. Emphasis on various avocational efforts made by organizations to combat effects of social problems, and the understanding of social issues and the value of studies of these issues.

299 Independent Study (1-3:0:0) Prereq SOCI 101 and a written proposal approved in advance of enrollment Individuals study of a sociological topic of interest to the student. Open to Sociology majors only.

300 Social Control (3:3:0) Prereq SOCI 101 or Pol How various social institutions function to organize and regulate society. Topics incl family, education, ideology, law, media, work, and political systems. This course serves as a foundation of many specialized courses offered by the department, especially those which focus on control of crime and delinquency.

311 Criminology (3:3:3) Prereq SOCI 101 or Pol Analysis of the nature, genesis, organization, and personal and social consequences of crime and criminal behavior; an examination of theories of punishment and treatment of criminals and prevention of crime; police and court systems, prisons, and reformatories.

320 Sociology of Delinquency (3:3:0) Prereq SOCI 101 or Pol Types, causes, treatment, and prevention of delinquent behavior.

330 Sociological Research Methodology (4:3:2) Prereq SOCI 221 or Pol Intro to empirical research in sociology. Historical development, research design, sampling techniques, statistical analysis, and interpretation of results, and research reporting.

340 Sociology of Work (3:3:3) Prereq 3 hr of sociology or Pol Meaning and structure of the world of work and its relationship to social, political, and economic aspects of human society.

360 Demographic Analysis (Population Problems) (3:3:0) Prereq 6 hr of sociology incl SOCI 101 or Pol. (It is rec that students first take SOCI 322) Influence of population structures on social behavior; the effects of rate of growth on social, economic, and political problems of human society.

370 Sociology of Collective Behavior (3:3:3) Prereq 6 hr of sociology incl SOCI 101 or Pol Analysis of crowds, mobs, and movements. Structure and function of social movements distinguished from other formal and collective behavior.
mobility, occupational status and prestige, importance of the work setting, work satisfaction and alienation, and impact of the professions on society.

506 Socialization Processes (3:3:0) Prereq Grad stdg or Pol Science and Pol Studies, programs of the cultural transmission process in specific local cultures selected from various world culture regions—e.g., Oceania, Sub-Saharan Africa, India—with an emphasis on how culture, development, and current social and political conditions may meet the present and future development of the intergenerational transmission of culture.

507 Criminology (3:3:0) Prereq Grad stdg or Pol Crime and criminal causation. Theories of social, biological, and individual causes of crime are considered.

508 (508) Juvenile Delinquency (3:3:0) Prereq Grad stdg or Pol Sociology of adolescent behavior. Sociological factors that determine which behaviors and social patterns are accepted and which are not are explored.

509 Corrections (3:3:0) Prereq Grad stdg or Pol Critical assessment of American adult and juvenile correctional systems. In-depth analysis of current American correctional ideology of punishment and incapacitation. Alternative models will be advanced which stress community-based, community-controlled programming.

510 Qualitative Research Methods (3:3:0) Prereq Grad stdg or Pol Examination of basic research methods involving observations of nature and nature of research sampling, data collection and analysis of the patterns, configurations, ethnographic, ethos, eidos, structures, functions, and styles typical of whole societies and cultures, with an emphasis on unobtrusive methods, participation, and long-term residence, choices of observer status, recording data, uses of technical equipment, key informants, interviewing techniques, and ethical considerations in employing such methods and procedures.

611 Classical Sociological Theory (3:3:0) Prereq Grad stdg or Pol In-depth examination of major issues in classical (pre-1930) sociological theory. Issues include: nature of order and of change, role of values and of social structure. Social and individual aspects of the concept of culture is emphasized. Logic of formal theory construction.

612 Contemporary Sociological Theory (3:3:0) Prereq Grad stdg or Pol Study of contemporary sociological theory such as Structural-Functionalism, Conflict, Exchange, Symbolic Interactionism, Ethnomethodology, and Critical Theory are examined. Contemporary theorists are analyzed in relation to the schools.

615 Social and Cultural Change (3:3:0) Prereq Grad stdg or Pol Social and cultural change in a transnational 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.

620 Design of Social Research (3:3:0) Prereq Grad stdg or Pol Advanced research methodology, or Pol Intro to advanced strategies of social research used in the area of social policy analysis, incl sample design, theory and technique of survey design, interview design, and data collection. Incl an intro to various types of social research; survey, participant observation, case study, and evaluation research.

621 Human Ecology and the City (3:3:0) Prereq Grad stdg or Pol Intro to urban ecology. Origin and development of various types of cities, shape and structure of urban areas, inner and outer city, and spatial patterning of urban institutions.

622 Metropolitan and Regional Development (3:3:0) Prereq Grad stdg or Pol Process of social development in the context of metropolitan and regional social change. Social development is considered in the light of the economic, social, political, demographic, and human resource dimensions.

623 The Suburban Community (3:3:0) Prereq Grad stdg or Pol Development and growth of the suburban community. The study of the suburban as: its development and growth, and association with urban area; and its role in the relation to the inner city; and (d) as part of the metropolitan area and megapolis; (e) as its structure as a community, (f) its role as a political, educational, social, and economic organization and voluntary associations, family and social institutions, social stratification, and social mobility; (f) social change.

630 Analytic Techniques of Social Research (3:3:0) Prereq Grad stdg and undergrad statistics and research methodology, or Pol Advanced strategies of social research used in the area of social policy analysis, focusing on analysis of data, including multiple regression and correlation, multiple regression and correlation, path analysis and elaborative contingency table analysis.

632 Evaluation Research for Social Programs (3:3:0) Prereq SOCI 520, 530, or Pol Study of methodological issues related to the evaluation of social programs. Conceptual and research design, evaluation design, and metatheory of evaluation. Use of multiple regression and correlation, path analysis and elaborative contingency table analysis.

Spanish Courses (SPAN)

Foreign Languages and Literatures


SPAN 100 Spanish for Travel (3:3:0) Development of skills in the spoken language, pronunciation, and use of idiomatic expressions. Not for part of sequence that fulfills foreign language req. May be taken for cr in Spanish for which they have previously earned any cr in Spanish. (Students with cr for SPAN 100 may not take cr for which they meet the prerequisites.)

101 Elementary Spanish I (3:3:1) Designed for students with no knowledge of Spanish. Intro to Spanish, incl elements of grammar, vocabulary, oral skills, listening comprehension, and reading. Lab work req.

102 Elementary Spanish II (3:3:1) Prereq SPAN 101 or Pol Continuation of SPAN 101. Lab work req.

105 Review of Elementary Spanish (3:3:1) Prereq Appropriate placement score or Pol Review of elements of Spanish for students who have studied Spanish previously. May not be taken for cr in combination with SPAN 101, 102, or 105. Lab work req.

109 Intensive Elementary Spanish (6:6:2) Equiv to SPAN 101, 102 taught in a single sem. Rec for students who desire an intensive intro to Spanish. May not be taken for cr in combination with SPAN 101, 102, or 105. Lab work req.

141, 142 Applied Spanish for the Social Sciences (4:4:0) Must be taken in sequence. Further development of skills in listening, speaking, reading, and writing. SPAN 201 and 202 must be taken in sequence. Lab work req.

201 Intermediate Spanish I (3:3:1) Prereq SPAN 202 or appropriate placement score or Pol Further development of skills in listening, speaking, reading, and writing. SPAN 201 and 202 must be taken in sequence. Lab work req.

202 Intermediate Spanish II (3:3:1) Prereq SPAN 201, or appropriate placement score, or Pol Application of skills to reading, composition and discussion. Lab work req.

209 Intensive Intermediate Spanish (6:6:2) Prereq SPAN 208 or Pol Placement Test or AP credit for Span 208 or Pol Equiv to SPAN 201 and 202, taught in a single sem. May not be taken for cr in combination with SPAN 201 or 202. Lab work req.

241 Applied Spanish for the Social Sciences (4:4:2) Prereq SPAN 142 or equv Continuation of SPAN 142. SPAN 241 may be taken in lieu of SPAN 251 to fulfill the final sem of the language req.

301 Advanced Grammar and Syntax (3:3:0) Prereq 15 hr of Spanish or Pol In-depth review of Spanish grammar and syntax. Extensive practice in controlled and free writing, emphasis on fundamental difficulties and points of interference between English and Spanish. May not be taken for cr in combination with SPAN 302. Lab work req.

302 (252) Spanish Conversation and Composition (3:3:0) Prereq 12 hr of Spanish or Pol Development of ability of oral expression on topics of current interest and everyday situations. Emphasis is placed on composition. Compositions practice in more difficult forms of expression.

303 Advanced Conversation (3:3:0) Prereq SPAN 302 (252) or Pol Development of vocabulary and strengthening of conversational skills through class discussions and oral reports based on contemporary themes. Req for Spanish majors. May be taken concurrently with Hispanic civilization and survey courses, but must precede all other courses in the major.

304 Advanced Composition (3:3:0) Prereq SPAN 302 (252) or Pol Development of skills req in writing Spanish containing advanced vocabulary. Emphasis on critical views of the various structures reviewed and supplemented with individual corrections. Req for Spanish majors. May be taken concurrently with Hispanic civilization and survey courses, but must precede all other courses in the major program.

317 The Literature of Spain (3:3:0) Prereq 15 hr of Spanish or Pol Examination of the main periods, trends, genres, and most representative works of Spanish peninsular literature from the 12th century to the present. Req for Spanish majors.

318 The Literature of Spanish America (3:3:0) Prereq 15 hr of Spanish or Pol Development of Spanish American literature from the main authors, periods, and literary trends. Req for Spanish majors.

321 Introduction to Spanish Culture (3:3:0) Prereq 54 hr of Pol History, culture, economic and social development, scientific and artistic achievements that have contributed to the formation of modern Spain. Coursework in English. Cr may be earned either in SPAN 321 or 361, but not in both.

322 Introduction to Latin American Culture (3:3:0) Prereq 54 hr of Pol History, culture, economic and social development, scientific and artistic achievements that have contributed to the formation of modern Latin America. Coursework in English. Cr may be earned either in SPAN 322 or 354, but not in both.

325 Major Hispanic Writers (3:3:0) Prereq ENGL 102 or equiv or Pol Designed for non-majors. Study of the works of major Hispanic writers in translation. Writers studied vary. Coursework in English. May be taken toward fulfillment of the general req in literature for baccalaureate degrees. May be repeated for cr with Pol.

329 Special Topics in Spanish and Latin American Literature (3:3:0) Prereq ENGL 102 or Pol Designed for non-majors. Coursework in English. May be taken toward fulfillment of the Humanities req in Literature for the baccalaureate degree. May be repeated for cr with Pol.

353 Commercial Spanish (3:3:0) Prereq 15 hr of Spanish or Pol Intro to terminology and usage of Spanish in business transactions: practice in the composition of business reports and letters. Cr may be repeated for cr with Pol.

359 Translation of Texts in Specified Fields (3:3:0) Prereq 15 hr of Spanish or Pol Readings and translation of texts selected from current periodicals and newspapers. Rec
for students who wish to improve reading and writing of Spanish and for Latin American Studies majors.

361 Spanish Civilization and Culture (3:3:0) Prereq 15 hr of Spanish or Pol Survey of Spanish culture and civilization from 14th century to present. The topic for a given semester may be obtained from the Department in advance. May be repeated for cr with P.D.

420 Studies in Spanish Linguistics (3:3:0) Prereq SPAN 303, 304 or Pol Studies in Spanish phonetics, phonology, morphology, syntax, semantics, dialectology, or linguistic history. The topic for a given semester may be obtained from the Department in advance. May be repeated for cr with P.D.

425, 426 Independent Study (1-3:0, 1-3:0) Prereq 84 hr as a major in Spanish and Pol Research and analysis of a selected problem in literature or linguistics in consultation with a department member. Maximum of 6 hr of independent study may be applied to fulfillment of req in the major.

430 (331) Literature of the Golden Age (3:3:0) Prereq SPAN 317 or Pol Advanced study of major literary works of Spanish Golden Age (1517-1690). May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

431 Readings in Medieval Spanish Literature (3:3:0) Prereq SPAN 317 or Pol Medieval Spanish literature. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

432 (332) Spanish Literature of the Nineteenth Century (3:3:0) Prereq SPAN 317 or Pol Study of the major works of 19th century Spanish literature with emphasis on the main authors of the Romantic and Post Romantic period. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

433 (333) Spanish Literature (3:3:0) Prereq SPAN 317 or Pol Major works of Cervantes, with emphasis on Don Quixote. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

434 (341) Spanish American Short Story (3:3:0) Prereq SPAN 317 or Pol. Study of the short story in Spanish American literature from early 19th century to present. Reading and discussion of selected short stories by writers representative of major literary movements or trends. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

435 Spanish American Novel (3:3:0) Prereq SPAN 318 or Pol Evolution and development of the most representative novels in Spanish America from colonial times to present. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

441 Spanish American Poetry (3:3:0) Prereq SPAN 318 or Pol Study of the more representative poets of Latin American literature. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

442 (341) Spanish American Short Story (3:3:0) Prereq SPAN 318 or Pol. Study of the short story in Spanish American literature from early 19th century to present. Reading and discussion of selected short stories by writers representative of major literary movements or trends. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

443 Spanish American Novel (3:3:0) Prereq SPAN 318 or Pol Evolution and development of the most representative novels in Spanish America from colonial times to present. May be taken toward fulfillment of the general req in literature for baccalaureate degrees.

447, 498 Senior Honors Tutorial (2:0:0, 2:0:0) Prereq 84 hr as a major in Spanish, with a GPA of 3.00 and 3.00 in the major field. Students meeting these req are admitted to candidacy upon submission of a letter of application to the department Honors Committee in the second half of the junior year, supported by a faculty rec and an interview by and with the approval of the Honors Committee. In the first sem, weekly meetings with a faculty member to discuss reading from a comprehensive list prepared by the Spanish faculty. In the second sem, independent research and completion of an honors essay under the supervision of a member of the Spanish faculty.

500 History of the Spanish Language (3:3:0) Scientific study of the evolution of the Spanish language from its origin in vulgar Latin to its present forms.

501 History of Spanish Literature (3:3:0) Analysis of Spanish literature as the theoretical background.

502 Studies in Spanish Literature (3:3:0) Intensive study of a major work of a literary genre of this period.

503 Studies in Renaissance Literature (3:3:0) Study of a literary movement or selected authors of the Spanish Renaissance.

504 Studies in the Literature of the Golden Age (3:3:0) Study of a major literary genre or a major author of Spanish literature of the Golden Age.

505 Studies in Nineteenth-Century Literature (3:3:0) Study of contemporary theater, the novel, or Pol intro to the design of experiments, random block and Latin square designs, analysis of covariance.

566 Regression Analysis (3:3:0) Prerequisites: STAT 654 or MATH 352 or equiv. Simple and multiple linear regression and correlation, polynomial regression, general regression, search techniques for best regression equation, multicollinearity, autocorrelation, normal correlation model.

567 Nonparametric Statistics (3:3:0) Prereq STAT 654 or MATH 352 or equiv. Nonparametric procedures for two or more samples, independent as well as correlated samples, tests of significance, categorical data, problems with nominal and rank data, coponson families, and ordered categories, and correlation.

570 Mathematical Statistics (3:3:0) Prereq 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)

Performing Arts

101 (106) Introduction to the Theatre Experience (3:3:0) Overview of the theatre as the composite art of playwright, director, actor, designer, and technician; and an examination of the interrelationship of play, physical theatre, and audience through the study of representative plays of various periods of theatre history.

207, 208 Color (3:0:3), (3:0:3) (Same as ART 207, 208) First sem covers study in color as pigments—examination of various color theories and their application, using aqueous paints and color papers; the second sem covers theories of color in light and their application using a variety of light sources and color media.

220 Acting I (3:2:0) Basic training in acting, emphasizing the actor’s use of voice and body in theatre performances, improvisation, nonscripted situations, and short scenes.

222, 223 Voice for the Theatre I & II (3:3:0), (3:3:0) Prereq Pol A 2-sem course developing the voice as an effective instrument for stage characterization, with emphasis on voice production, flexibility, strength, and control.

224, 225 Movement for the Theatre I & II (3:3:0), (3:3:0) Prereq Pol A 2-sem course developing the body as an effective instrument for stage characterization, with emphasis on relaxation, physical sensitivity, alignment and control.

230 Introduction to Theatre Technology (3:3:0) Fundamental technical principles of the theatre. Examine the tools, materials, and techniques used in stage carpentry, metalworking, rigging, painting, special effects, sound, lighting, and technical management.

239 Stage Management (3:3:0) Prereq Pol Lecture and lab in theatre arts, theatre and techniques and problem solving skills necessary for stage management and plays and other performing arts events.

240 Cosmetology (2:3:0) Lecture and lab in techniques, and goods and services of make up, including a knowledge of the tools, materials, and techniques for the construction of costumes for the stage.

270 Theatre Criticism (3:3:0) Basic understanding of the way in which the elements of theatre work together, to increase ability to make critical appraisals of theatre productions, and to enhance enjoyment of the theatre experience. Attendance at productions, discussion and evaluations of productions and professional reviews of productions, and the writing of reviews.

302 Scripts in Performance (3:3:0) Designed for non-majors. Emphasis on awareness and understanding of the processes and responsibilities of production staff. Interviews with directors, actors, designers, and playwrights. Especially appropriate for students in literature who want or need additional work in how that literature becomes performance.

327 Play Performance (3:3:0) Prereq Pol Lecture. Study and practice of acting and directing through rehearsal and public performance. Approximately 45 hr of rehearsal and multitactor analysis of variance, planning sample sizes, intro to the design of experiments, random block and Latin square designs, analysis of covariance.
and performance per hr. Graded S-NC only. May be repeated for a maximum of 6 hr.

325 Acting II (3:3:0) Prereq THR 220 or Pol Lab Scene playing in a variety of genres and styles. Extensive work in subtext, character analysis, and actor movement, designed to extend the principles acquired in Acting I.

326 Acting III (3:3:0) Prereq THR 325 or Pol Advanced lab-performance course given to acting theory and styles. Readings in Delsarte, Dolman, Stanislavski, Brecht, Artaud, Spolin, Chakin, and Grotowski. Application of theories to the playing of selected scenes. Development of a personal approach to acting through experimentation.

327 Asian Theatre Techniques (3:3:0) Prereq THR 220 or Pol Lab-performance course. Study and adaptation of techniques used in several Asian theatre genres. Experimentation in the application of Asian methods—such as body movement, stage makeup, masks, and mask handling of costumes and scenic elements—to scenes from Asian and Western plays.

330 Scene Design (3:3:0) Prereq THR 230 or Pol Basic scene setting and scenicographic drawing. Analysis of a script for visual interpretation; the devising of a stage setting that will accommodate movement, dramatic action, character, and mood. The drafting of floor plan, builder's and painter's elevations. Experience with perspective drawing, color renderings, and scale models.

331 Scene Design Studio (3:3:0) Prereq THR 330 or Pol Intermediate scene design and scenicographic drawing. Emphasis on creation of workable visual metaphors, communication of design ideas, experience with perspective and mechanical drawing, color rendering and scale models.

332 (213) Stage Lighting Design (3:3:0) Prereq THR 230 or Pol Fundamentals of stage lighting design. Knowledge of tools, equipment, and techniques of stage lighting and an intro to lighting design process. Inc terminology, basic electricity, design theories, projections, and specialized lighting techniques.

333 Lighting Design Studio (3:3:0) Prereq THR 332 or Pol Lighting design with concentration on light as an artistic medium, creation of workable lighting metaphors and communication of ideas.

334 Advanced Theatre Technology (3:3:0) Prereq THR 230 or Pol Technical theatre beyond the intro level. In-depth examination of specialized materials and techniques, unusual stage machinery, safety practices, theatre sound, personnel management of the technical direction.

340 Play Production Practicum (1-2:0:0) Prereq Pol Play and study of practice of theatre production techniques through rehearsal and performance. 45 hr of production work per cr hour. Graded on an S-NC basis only and cannot be counted toward the major or required for degree. May be repeated for a maximum of 6 cr.

341 Costume Design (3:3:0) Prereq THR 245 or Pol Lectures and workshops for the professional costume designer. The Costume is studied in relation to historical periods and the artistic demands of scripts.

351, 352 Survey of Theatre History (3:3:0), (3:3:0) Prereq THR 101 Development of the theatre from its beginnings to the present, with reference to theatrical movements, playwrights, producers, designers, actors, and companies. Emphasis on social, cultural, and philosophical factors shaping the theatre in successive time periods.

353 Black Theatre in the United States (3:3:0) Prereq Advanced stgd or Pol History, sources, literature, themes, and techniques of the theatre among Afro-Americans of the S. U.S.

356 Theatre of India and Southeast Asia (3:3:0) Prereq Advanced stgd or Pol Literature, theory, and practice of selected theatrical genres of India and Southeast Asia.

357 Theatre of East Asia (3:3:0) Prereq Advanced stgd or Pol Literature, theory, and practice of selected theatrical genres of China and Japan.

360 Directing I: Basic Concepts (3:3:0) Prereq THR 101 (160) or Pol Lab Basic concepts and techniques of directing for the stage. Emphasis on close textual analysis of script for use of space, characterization, tempo, and mood. Attention to reading and analysis of texts, integrating acting and directing elements, and the historical evolution of the director. Practice in blocking, line reading, and staging short scenes.

361 Directing II: Practical Application (3:3:0) Prereq THR 360 or Pol A lab course to complement Directing I, providing extensive application of basic concepts and culminating in production for public performance.

374 Creative Dramatics and Oral Interpretation in the Elementary School (3:3:0) Investigation and practice in effective communication in creative dramatics and oral interpretation of children's literature. Emphasis on didactic development of techniques among students who have taken LAC 355 or 361 cannot take this course.

376 Puppets, Plays, and Poems: Theatre Techniques for Children and Young People (3:3:0) Prereq Pol Experience with puppetry, storytelling, and theatre techniques. Includes such 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 must demonstrate basic techniques to gain credit toward the total hr needed lor degree. May be repeated for a maximum of 6 hr cr.

380 Playwriting Workshop (3:3:0) Prereq 12 hr of English or Pol A practical workshop in writing plays, with emphasis on the oneact form. May be repeated once, but only 3 hr are accepted in the theatre major.

385, 386 Special Topics in Theatre (3:3:0), (3:3:0) Prereq THR 101 or Pol Topics such as theatre as a political weapon, street theatre, avant-garde theatre, the use of masks, etc. May be repeated for a maximum of 6 hr cr.

390, 421 Acting Styles I & II (3:3:0) Prereq THR 223, 225, 362 or Pol A 2-semester advanced lab performance course given to intensive study of acting style periods from Greek Tragedy to the present. Extensive applications of concepts in productions for public performance. The directing of two or more short plays or one long play.

400, 481, 482, 483 Seminar in Shapers of the Modern Theatre (3:3:0) Prereq THR 351 or Pol Opportunity for intensive study of the ideas and practices of 3 or 4 directors, designers, playwrights, or theorists who have significantly influenced Western theatre, such as Brecht, Artaud, and Grotowski. Multiple numbers allow seminars directed by active theatre practitioners in the following areas of the program: directing and acting, directing, design, history, or costume design.

457 Theories of the Theatre (3:3:0) Prereq THR 351, 352 or Pol Theories of production from Aristotle to Brecht in the West, and Indian and Japanese theatre from Asia.

460, 461 Directing Problems (3:3:0), (3:3:0) Prereq Advanced stgd or Pol Advanced directing intended to complement Directing I and II. Extensive applications of concepts in productions for public performance. The directing of two or more short plays or one long play.

494 Field Experience (3:3:0) Prereq Advanced stgd, Pol, and Prof. Consent. Experience with theatre practitioners in the educational community or professional theatre to provide the student with an opportunity to apply classroom training, knowledge, skills, and theory to an actual situation.

497, 498 Independent Study (3:3:0) Prereq Open only to theatre majors with 84 hr and by special Pol individual research or a creative project in close consultation with instructor. Selection from projects in performance, directing, technical theatre design, or theatre history and criticism.

University Courses (UNIV)

Academic Affairs


411 Electronic Communication (Television) and the Representation of Reality (3:3:0) An examination of the political process as it is projected by news and public affairs programming, the ideal of the family as it appears in prime time drama, and the prevailing assumptions about male/female roles as embodied in dramatic characterizations. Offered Fall 1980. Professor R. W. Lyons.

412 Family Law (3:3:0) Examination of the salient aspects of the law as it affects the family in our changing society.

Topics include the history and 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, alimony, child custody and support, adoption, separation agreements, and tax aspects of separation and divo.
423 Consciousness and Modern Physics (3:3:0) Examines the nature of consciousness and its connection to modern physics. 20th century physics has introduced consciousness in a definite way: Quantum mechanics implies that the nature of something cannot be independent of the act of observing it. Similarly, the theory of relativity of Einstein states that perceptions of the physical reality are relative. These trends in modern physics have prompted some physicists to proceed to new avenues where consciousness is more directly related to the physical Universe. Biological models of perception and the way the brain works parallel the new physics developments. What is most surprising, though, is that all the mystical traditions of all cultures and particularly those of the East view the nature of Reality in close approximation to the way physicists view the Universe. The connection between these two points of view will be made. Students are expected to participate in class presentations and are required to write a term paper. Introspection is an integral part of the course. Offered Fall, 1982, Professor M. Kafatos.

424 South Africa: Crisis and Conflict (3:3:0) An interdisciplinary analysis of current conditions in the Republic of South Africa in an historical context and, as a case study of fundamental socioeconomic and ethical issues of world-wide contemporary importance, Professor B. K. Beyer.

425 Utopias and Utopian Thought in the Western World (3:3:0) Survey of utopian thought (and critiques of this thought), study of the nature and success of a few utopian experiments, and attempts to assess the significance of the idea of utopia in western thought and experience. Professor J. B. Radner.

Vietnamese Courses (VIET)

Foreign Languages and Literatures

301, 302 Vietnamese Culture and Civilization (3:3:0), (3:3:0) Prereq 54 hr or Pol Survey of Vietnamese culture and civilization, incl language, philosophy, religion, and family life, and discussion of the problems of cross-cultural understanding. Coursework in English.

361, 362 Vietnamese Literature (3:3:0), (3:3:0) Prereq Knowledge of Vietnamese Survey of Vietnamese literature from the Early Period to the 20th century. Study of the vernacular genres of verse and prose in Vietnam. May be taken toward fulfillment of the Humanities req in "Literature." For non-W cr.
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Ellis F. Delphin, MA, Director of Housing Services
Carol J. Sudol, RN, Coordinator of Student Health Services
John L. Spaldo, MA, Coordinator of the Student Union

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Olivi, Lorenz James, Assistant Professor. Librarian (Residence) BA 1969, Trinity College. MS 1972, Simmons College School of Library Science.


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Paige, Richard J., Lecturer in Geography. BA 1963, MA 1965, Kent State University; PhD 1972, Columbia University.

Palk, Robert K., Assistant Professor of Mathematics. BS 1966, Seattle National College; MA 1968, PhD 1971, University of California at Berkeley.

Palkovitz, Ann M., Assistant Professor of Anthropology. AB 1974, University of Chicago; MA 1975, Northwestern University.

Palmer, Marilyn R., Lecturer in Chemistry. BS 1966, Marymount College; MS 1972, Duke University.

Palmieri, Joseph, Assistant Professor of English. BA 1964, MA 1966, PhD 1974, University of Maryland.

Papanastatopoulos, Dimitrios A., Adjunct Professor of Physics. BA 1957, University of Athens; DI 1963, Imperial College of London; MS 1964, PhD 1967, University of London.

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Parent, Ellis Alphonse, Assistant Professor of Decision Sciences. BS 1954, United States Naval Academy; MS 1962, United States Naval Postgraduate School; MS 1963, PhD 1965, Pennsylvania State University.

Paritsis, Richard S., Assistant Professor, Counselor, Counseling and Psychological Services. BA 1969, University of Athens; DI 1969, George Washington University; PhD 1978, University of Maryland.

Park, Thae Soo, Lecturer in Economics. BA 1964, MA 1967, PhD 1972, University of Wisconsin at Madison.

Pasnack, Robert, Professor of Psychology. BA 1941, University of Michigan; MS 1942, PhD 1944, University of Chicago.

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Petit, Michael J., Assistant Professor, Librarian. BA 1975, MSL 1978, The Catholic University of America.

Phillips, Michael D., Senior Lecturer in Economics. BA 1958, College of William and Mary; MA 1960, PhD 1966, University of Virginia.

Philos, Conrad D., Professor of Law. JD 1939, Kent College of Law.


Rentschler, Sally E., Assistant Professor, Assistant Director, Division of Continuing Education. BS 1964, Indiana University of Pennsylvania; MA 1969, Northwestern University.

Render, Charles R., Associate Professor, Director of Institutional Analysis. BME 1962, MA 1964, Murray State University; PhD 1972, University of Illinois at Urbana-Champaign.

Reynolds, David F., Visiting Professor of Government and Politics, Special Assistant to the President. BA 1972, The George Washington University.

Rhodehamel, Edward Charles, Lecturer in Geology. BS 1945, MA 1951, Michigan State University.

Rhome, Anne M., Instructor in Nursing. BS 1967, East Tennessee State University; MS 1979, Columbia University.

Ribble, Wellington Leigh, Jr., Lecturer in Decision Sciences. BA 1956, MA 1962, University of Virginia; PhD 1973, Massachusetts Institute of Technology.

Riggs, Benjamin, Associate Professor of Mathematics. BA 1970, Western Michigan University; PhD 1973, Wesleyan University.

Richards, Jeffrey Greene, Lecturer in English. BA 1968, Denison University; MA 1976, Hollins College.

Richardson, Robert Brent, Lecturer in Management. BS 1957, University of Miami; MS 1974, University of Southern California.

Riordan, Patricia Marie, Instructor, Director of Undergraduate Admissions. BS 1963, Northeastern University; MED 1977, George Mason University.

Riggs, Robert D., Instructor, Marketing. BS 1955, University of Maryland; MBA 1961, University of Arizona.


Rizzi, Giuseppe, Lecturer in Italian. BA 1971, MA 1972, University of Rome; JD 1979, Albany Law School.

Ro, Young Chan, Acting Assistant Professor of Religion. BTh 1969, MTh 1970, George Washington University; MTh 1973, Union Theological Seminary.

Robert, Carmi Bensch, Assistant Professor, Director of Alumni Relations. BA 1971, The George Washington University; MA 1979, George Mason University.

Robert, Francine E., Assistant Professor of Nursing. BS 1965, Virginia Commonwealth University; MS 1967, PhD 1969, University of North Dakota.


Robinson, Leslie C., Lecturer in Nursing. BS 1978, Virginia State University; MS 1977, George Mason University.

Rowles, Larry Lewis, Associate Professor of Biology, Acting Chairman, Department of Biology. BS 1965, PhD 1972, University of Chicago.

Rosenak, Kenneth A., Assistant Professor of Sociology, Assistant Professor of American Studies. BA 1970, PhD 1979, University of Colorado.

Rosenbaum, Herbert, Lecturer in Physics. BS 1944, Clemson University; MS 1950, PhD 1952, University of North Carolina.

Rosenzweig, Roy Alan, Assistant Professor of History. AB 1971, Columbia College; MA 1978, Harvard University.

Ross, Kathleen E., Lecturer in Psychology. BA 1965, University of Michigan, MA 1970, University of Iowa.

Roth, Carolyn Beth, Assistant Professor, Librarian. BA 1962, MA 1970, University of Iowa.

Roth, Ronald John, Associate Professor of Chemistry. BS 1967, City College of New York; PhD 1972, Columbia University.

Rothbart, Daniel, Assistant Professor of Philosophy. BA 1962, Middlesex-Oxford University; MS 1966, PhD 1975, State University of New York at Binghamton; PhD 1978, Washington University.

Roy, S. Paiute, Assistant Professor of Biology. BS 1967, MS 1971, The American University; PhD 1974, University of Maryland.

Rupnow, Matthew Paul, Associate Professor of Psychology. BA 1965, Hiram College; PhD 1971, Florida State University.

Russo, Richard E., Lecturer in Law. BS 1959, University of California at San Diego; MA 1978, University of California at Los Angeles.


Russell, Charles S., Lecturer in Law. BA 1944, LLB 1948, University of Virginia.

Russell, Jackie E., Lecturer in Government and Politics. BA 1967, Michigan State University; PhD 1976, Indiana University, Antioch College.

Ruth, Stephen Ruddy, Associate Professor of Decision Sciences. BS 1953, United States Naval Academy; PhD 1971, University of Pennsylvania.
Shaffer, Jay Charles, Professor of Biology. BS 1961, Bucknell University; MS 1963, Temple University; PhD 1967, Yale University.


Shapiro, Jay A., Assistant Professor of Mathematics. BA 1971, Rider College; PhD 1975, Rutgers University.

Shearer, William W., Assistant Professor of Economics. BA 1976, The George Washington University; MA 1979, Polytechnic Institute of New York.

Sheehan, Thomas, Instructor in Decision Sciences. BS 1959, Manhattan College; MS 1970, Polytechnic Institute of New York.

Sheldrake, Alan, Associate Professor of Biology. BS 1964, Frostburg State College; PhD 1973, University of Virginia.

Shinglesburg, Nancy, Lecturer in English. BA 1955, Baylor University; MA 1951, Cornell University.

Shine, Muria, S. Associate Professor of Nursing. BS 1956, Boston College; MS 1959, The Catholic University of America.

Shreve, Susan Richards, Associate Professor of English (on leave, 1981-82). BA 1961, University of Pennsylvania; MA 1969, University of Virginia.

Siegel, Philip, Professor, Coordinator of Cooperative Education. BA 1978, Empire State College.

Sielecki, Michael Anthony, Lecturer in Accounting. BS 1976, Monroe County Community College.

Siff, Frederick Howard, Professor of Decision Sciences, Faculty Chairman, Decision Sciences. BS 1964, Worcester Polytechnic Institute; MS 1966, New York University.

Silva, Mary Elizabeth, Associate Professor of Nursing. BS 1962, MS 1968, SUNY Upstate, New York University; PhD 1975, SUNY Upstate, State University of New York.

Simmons, Charles W., Jr., Lecturer in History. BA 1958, MA 1965, University of Maryland; PhD 1976, University of Michigan at Ann Arbor.

Siu, Victoria M. Cha-Tau, Assistant Professor of History. AB 1956, Trinity College; MA 1964, Manhattanville College of the Sacred Heart; MA 1971, PhD 1975, Georgetown University.

Skog, Judith Ellen, Associate Professor of Sociology. BS 1966, Tufts University; MS 1968, University of Connecticut; PhD 1972, Cornell University.

Skog, Lawrence E., Assistant Professor of Biology. BA 1965, University of Minnesota; MS 1968, University of Connecticut; PhD 1972, Cornell University.

Staben, Susan R., Assistant Professor of Chemistry. BS 1970, PhD 1976, University of Tennessee.

Small, Arnold Charles, Assistant Professor of Psychology. BA 1969, American International College; MA 1972, PhD 1974, University of Rhode Island.


Smart, Donald Duane, Lecturer in Management. BA 1963, Michigan State University.

Smith, Carlton James, Lecturer in Engineering. BS 1960, University of Maryland.

Smith, Donald Francis, Associate Professor of Education. BS 1960, MA 1965, East Carolina University; EdD 1968, The American University.

Smith, Glenn Edward, Associate Professor of Music. BA 1968, MA 1969, California State University; DM 1973, Indiana University.

Smith, James Gordon, Associate Professor of Music. BM 1960, MA 1963, Peabody Conservatory of Music; DMA 1973, University of Illinois.

Smith, John Melvin, Professor of Mathematics Education. BS 1956, University of Richmond; MA 1961, PhD 1970, University of Maryland.

Smith, Kitty Simpson, Associate Professor of Nursing. BS 1955, MS 1956, The Catholic University of America.

Smith, Richard A., Lecturer in Biology. BS 1967, MS 1969, University of Richmond; PhD 1975, Johns Hopkins University.

Smith, Robert Franklin, Associate Professor of Psychology. BS 1971, University of Florida; MA 1973, PhD 1976, University of Wisconsin.

Smith, Robert L., Lecturer in Management. BS 1949, United States Naval Academy; MS 1957, The George Washington University.

Smalley, William Pennington, Professor of Economics, Associate Dean of the College of Arts and Sciences. BA 1940, MA 1941, PhD 1947, University of North Carolina.

Snow, Edward Alan, Associate Professor of English (on leave, 1981-82). BA 1964, Rice University; MA 1966, University of California at Berkeley; PhD 1969, State University of New York at Buffalo.

Soder, John Philip, Jr., Associate Professor of History. BA 1956, MA 1960, Columbia University; PhD 1970, Georgetown University.

Spence, Vernon Gladden, Professor of History. BA 1946, Frederick College; MA 1948, CRAS; PhD 1968, University of Colorado.

Spickel, Mark, Professor of Education, Chairman, Department of Education. BA 1963, Miami University; MS 1967, Xavier University; EdD 1972, Boston University.

Spindler, Prentice MacDonald, Associate Professor of History. BA 1939, University of Texas; MDiv. 1949, General Theological Seminary, MA 1955, University of Houston; PhD 1966, University of Virginia.

Srebnick, Alan Keith, Instructor, Associate Director of Development, Office of Institutional Development.

Stalick, Wayne Myron, Associate Professor of Chemistry. BA 1964, University of Oregon; PhD 1969, Northwestern University.

Stanley, Melissa Sue, Professor of Biology. BS 1953, MA 1959, University of Oregon; PhD 1965, University of Utah.

Starr, Caleb Ralph, Instructor, Mississippi College and Technical College; AM 1949, The George Washington University.

Stawarz, Ralph Fred, Professor of Management, Faculty Chairman, MA 1954, University of Nebraska; MA 1958, University of Michigan; MA 1963, DBA 1972, The George Washington University.

Stephens, Dany F., Lecturer in Business Legal Studies. BA 1973, Knoxville College; JD 1976, Georgetown University Law Center.

Stewart, Barbara McDonald, Lecturer in History. BA 1948, Northwestern University; MA 1951, PhD 1969, Columbia University.

Stewart, Helen, Lecturer in Business. BA 1975, Wittenberg University, Department of Communication. BS 1975, MS 1980, Georgetown University.


Stimson, Richard Alan, Senior Lecturer in Management. ME 1954, University of Cincinnati; MPA 1967, PhD 1971, Ohio State University.


Stover, Charles H., Assistant Professor of Geography, Assistant Dean of the Graduate School, BA 1967, MA 1971, University of Alabama; PhD 1975, Louisiana State University.

Story, Patrick Lee, Assistant Professor. AB 1962, University of Missouri; MA 1963, PhD 1968, Northwestern University.

Strommen, Norton Duane, Lecturer in Geography. BS 1959, MS 1964, University of Wisconsin at Madison; PhD 1975, University of Washington.

Supley, Michael Leo, Associate Professor of Education. BSED 1968, MEd 1969, EdD 1973, University of Florida.

Surts, Janice L., Instructor, Coordinator of Career Counsel- ing. BA 1975, University of Delaware; MA 1977, University of Delaware.

Swanson, Karen Charles, Acting Assistant Professor of Accounting. BS 1964, Illinois Institute of Technology; MA 1968, Michigan State University; MPA 1977, George Mason University.


Sypher, Elleen Brower, Assistant Professor English. AB 1958, Boston College; MA 1959, Columbia University.

Tate, Karen L., Instructor, Coordinator of Career Counseling. BA 1979, University of Delaware; MA 1980, Carleton College.

Taylor, Robert Stephen, Professor of Biology. AB 1955, University of Rochester; PhD 1960, Indiana University.

Tavani, Nicholas John, Associate Professor of Sociology. AB 1951, Temple University; BD 1957, Reformed Episcopal Seminary; MA 1965, PhD 1969, University of Maryland.

Taylor, Anita Marie Grimm, Professor of Communication. BS 1962, MS 1959, Kansas State College; PhD 1971, University of Mississippi.

Taylor, Jane C., Lecturer in Nursing. BS 1971, University of Maryland; MS 1981, The Catholic University of America.

Tedder, James Dale, Associate Professor of French. AB 1952, University of North Carolina; MA 1961, University of Wisconsin; PhD 1967, University of North Carolina.

Thelmas, Christopher Jacob, Associate Professor of English. BA 1970, University of Virginia; MA 1971; PhD 1975, Northwestern University.

Thomasson, Charles Leo, Associate Professor of Education. BA 1963, Harris Teachers College; MA 1966, St. Louis University; PhD 1971, Johns Hopkins University.

Thorpe, James D., Instructor, Associate Professor of Education. BA 1971, ME 1972, University of Virginia; PhD 1980, Virginia Polytechnic Institute and State University.

Tompkins, Jayen, Professor of Psychology. AB 1964, Boston College; MA 1965, University of California at Los Angeles; PhD 1975, University of California at Riverside.


Tombes, Averett S., Professor of Biology, Dean of the Graduate School. BA 1954, University of Richmond; MS 1958, Virginia Polytechnic Institute; PhD 1961, Rutgers University.

Torzilli, Albert Philip, Assistant Professor of Biology. BA 1967, University of Connecticut; PhD 1976, University of Georgia.

Tran, Qu-Pheu, Lecturer in Vietnamese. BS 1960, University of Hawaii; MA 1965, University of Saigon; MA 1974, PhD 1977, University of Texas at Austin.

Tripkett, Robert S., Lecturer in Engineering. BS 1940, University of Arkansas; PhD 1943, University of Chicago; PhD 1976, Laurence University.

Truebell, Beth L., Lecturer in English. BA 1969, State University of New York at Binghamton; MA 1972, University of Maryland.


Tyner, of Missouri. PhD 1972, University of America.

Walker, Charles Edward, Associate Professor of Engineering. BS 1960, National Taiwan University; Taiwan; MA 1964, PhD 1972, University of Missouri; PhD 1972, University of Pennsylvania.

Wang, Peter C., Associate Professor of Engineering. BS 1960, National Taiwan University; Taiwan; MA 1964, PhD 1972, University of Pennsylvania;

Ward, Nicholas William, Associate Professor of Art, Acting Chairman, Department of Art. MFA 1971, Maryland Institute, College of Art.


Waynant, Priscilla Pinson, Lecturer in Education. BS 1968, MS 1972,栽 1973, University of Oklahoma.

Webster, Dennis Wayne, Instructor, Counselor, Counseling Center. BA 1974, State University of New York at Stony Brook; MA 1977, University of Virginia.

Wells, Richard, Assistant Professor of Computer Science. BS 1964, Bucknell University; MS 1967, PhD 1978, Florida State University.


Weil, H. P., Associate Professor of Medicine. BS 1962, Trinity College; AM 1965, PhD 1975, The George Washington University.

Weiss, David M., Lecturer in English. BA 1958, Taylor University; MA 1960, PhD 1969, University of North Carolina.


Wetherbee, Louella Grace Vine, Associate Professor, Director of Libraries. BA 1967, MALS 1969, University of North Carolina.

Wetmore, William H., Research Associate Professor, Director of the George Mason Institute. BS 1943, University of Virginia; MA 1946, PhD 1950, University of North Carolina.

White, Louise Giessy, Assistant Professor of Government and Politics. AB 1942, Smith College; MA 1972, PhD 1974, The George Washington University.


Whitney, Scott, Professor of Law. JD 1952, Harvard Law School.

Wilcox, William Ray, Associate Professor of Economics. BS 1966, Franklin and Marshall College; MS 1967, Lehigh University.


Wilt, Douglas, Associate Professor of Mathematics. BS 1957, Oberlin College; MAT 1969, Fairleigh Dickinson University; MA 1976, New York University.

Wiltman, Karyn, Associate Professor of Economics. BS 1960, Brown University; Rhode Island Hospital School of Nursing; MS 1963, CAGS 1965, Boston University.

Williams, Karen Precious, Assistant Professor of Psychology. BA 1972, University of Pennsylvania; MS 1975, PhD 1979, Florida State University.

Williams, Louise, Assistant Professor of Nursing. BS 1968, North Carolina Central University; MS 1973, Emory University.

Williams, Marcus Doyle, Lecturer in Business Legal Studies. BA 1973, Fisk University; JD 1977, The Catholic University of America.

Williams, Thomas Rhys, Professor of Anthropology. BA 1951, Miami University; MA 1956, PhD 1961, University of Virginia.

Williams, Walter E., Professor of Economics. BS 1958, Caifornia State University; MA 1966, PhD 1972, University of California at Los Angeles.

Wilson, Christopher, Assistant Professor of History. BA 1983, PhD 1987, University of North Carolina at Chapel Hill.

Wilson, Dev, Associate Professor of Psychology. BA 1972, PhD 1978, Florida State University.
### Key to George Mason University map

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  
   News & Information  
   President  
   Speakers Bureau  
   Switchboard  
   Vice President, Academic Affairs  
   Vice President, Business and Finance  
   Vice President, Public Affairs  
   Vice President, University Development  

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  
   Off-Campus Coordination  
   Payroll  
   Personnel  
   Public Service  
   Registrar  
   Summer Session  

5. **FENWICK LIBRARY**  
   Facilities Planning  
   George Mason Institute Government, Society, and the Arts Center  

6. **LECTURE HALL**  
7. **CAMPUSED POLICE**  
8. **THOMPSON HALL**  
   Composition Tutorial Center  
   Dean, Arts and Sciences  
   English Department  
   Foreign Languages and Literatures Department  
   History Department  
   Mathematical Sciences Department  
   Media Services (distribution)  
   University Computing Services  

9. **TRAILERS**  
   Academic Assistance  
   Career Planning  
   CAS (English, Foreign Language and Math)  
   Counseling  
   International Student Services  
   Physics  
   Purchasing  
   Testing and Tutorial Services  

10. **GREENHOUSE**  

11. **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  

12. **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  
    Social Work Department  
    Sociology Department  

13. **HARRIS THEATRE**  

14. **STUDENT APARTMENTS**  

15. **PHYSICAL EDUCATION BUILDING**  
    Athletics  
    Health and Phys. Ed. Department  
    Sports Information  

16. **ATHLETICS OFFICES**  

17. **FIELD HOUSE & TRACK**  

18. **RESIDENCE HALLS**  

19. **MAINTENANCE**  

20. **ACADEMIC III**  
   (under construction)  

21. **STUDENT UNION II**  
   (under construction)  

22. **ST. GEORGE'S**  

23. **PRESIDENT'S HOUSE**  

24. **NORTH CAMPUS**  
   10675 Lee Highway  
   (First floor only accessible to wheelchairs)  

25. **METRO CAMPUS**  
    3401 N. Fairfax Dr., Arlington  
    Admissions (Law)  
    Cafeteria  
    Campus Police (Metro Campus)  
    Dean, School of Law  
    Library (Law)  
    Professional/Conference Center  

26. **ROBERTS ROAD ANNEX**  
    (Tallwood)  
    Alumni Center for Historical Studies  
    Consortium  

### INDEX TO PARKING FACILITIES  
Lot A — Student  
Lot B — Faculty/Staff  
Lot C, D, E — Student  
Lot G — Faculty/Staff  
Lots K — Visitor and Student  
Lot I, J, N — Special Permit  
Lot P — General  
Lot R, S — Student  

### DIRECTIONS TO GEORGE MASON UNIVERSITY  
From the Beltway, take the Braddock Road exit (Route 620 West) for approximately six miles. Use the Braddock Road/Annocke Lane entrance to GMU's Main Campus directly opposite the University Mall Shopping Center.  
Visitor and Theatre parking is in Lot K.
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 over other students.
   2. The above may be accomplished by any means whatsoever, including, but not limited to, the following: fraud, duress, deception, theft, trick, talking, signs, gestures, copying from another student, and the unauthorized use of study aids, memoranda, books, data, or other information.
   3. Attempted Cheating.

B. Plagiarism encompasses the following:
   1. Presenting, as one’s own the words, the work, or the opinions of someone else without proper acknowledgment.
   2. The borrowing of the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

C. Lying encompasses the following:
   The willful and knowledgeable telling of an untruth or falsehood as well as any form of deceit, attempted deception, or fraud in an oral or written statement relating to academic work. This includes but is not limited to:
   1. Lying to administration and faculty members.
   2. Falsifying any University document by mutilation, addition, or deletion.
   3. Lying to Honor Committee members and councils during investigation and hearing. This may constitute a second charge with the committee members (who are acting as judges during that specific hearing) acting as Accusers.

D. Stealing encompasses the following:
   The taking or appropriating without the right or permission to do so, and with the intent to keep or to make use of wrongfully, property belonging to any member of the George Mason community or any property located on the University campus. (This section is relevant only to academic work and related materials.)

III. Responsibility of the Faculty

In order to alleviate misunderstanding, each professor is required to delineate at the beginning of each semester what constitutes a violation of the Honor Code in his class. This should include an explanation of:

A. the extent of group participation that is permissible in preparing term papers, laboratory exhibits or notebooks, reports of any kind, tests, quizzes, examinations, homework, or any other work;
B. the extent to which the use of study aids, memoranda, books, data or other information is authorized during recitations, tests, quizzes, examinations, reports of any kind, laboratory sessions, or any other work; and
C. the nature of plagiarism. Each professor is required to send the Honor Committee a written copy of his policy, which will be kept on file.

Any faculty member who witnesses an Honor Code violation should proceed as outlined under Procedures for Reporting a Violation.

IV. Responsibility of the Students

Students should request a delineation of policy from each professor if none is given at the beginning of each semester. Students should also request an explanation of any part of the delineation that they do not understand. It is the responsibility of the student to understand his professor’s policies with regard to the Honor Code. It is also the responsibility of the student to understand the provisions of the Honor Code.

All students in the University have the duty, as participating members of this community, to report to a member of the Honor Committee any violations of the Honor Code within the prescribed time as outlined under Procedures for Reporting a Violation. This duty is of importance not only because it enforces the Honor Code, but also because it gives each student the opportunity to express his respect for personal integrity and an honest academic community.

V. Procedure for Reporting a Violation

Any student or faculty member witnessing or discovering a violation of the Honor Code shall enlist, wherever and whenever possible, one or more corroborating witnesses to the overt act. The accuser(s) (student or faculty) will, within 15 working days from date of realization, inform the suspected party with a letter of accusation provided by the Honor Committee.

The Honor Committee shall retain a copy of the accusation letter. The letter must inform the suspected party that he has four (4) working days to contact a member of the Honor Committee and be advised of his rights and options, or the Honor Committee shall commence an investigation, this investigation not involving a presumption of guilt on the part of the accused. Any member of the George Mason University Academic Community who has knowledge of but does not report an Honor Code Violation may be accused of lying under the Honor Code.

VI. Counsel for the Accused and Accuser

Counsel for the Accused and accuser may be provided by any member of the George Mason University student community, excluding members of the Honor Committee.

VII. Appearance of Witnesses

The Honor Committee may require any member of the University community to appear as a witness before the Committee at the time of the hearing. All requests for such appearances shall be issued by the Chairman of the Honor Committee. (The appearance of the accuser is required unless otherwise exempted by the request of both counsels, or the Chairman of the Honor Committee.)

VIII. Verdict

In order to find a student guilty of an honor violation, all of the voting members must vote for a verdict of “guilty.” If the vote is not unanimous, the defendant shall be acquitted.

A student may not be tried more than once for the same offense except when an appeal is granted.

IX. Penalty

If the accused is found guilty of an honor violation, the Honor Committee shall determine the nature of the penalty by majority vote.

The Honor Committee is not restricted to any one kind of penalty but will determine a penalty commensurate with the seriousness of the offense. Typical of the range of penalties that may be given are:

A. Oral Reprimand:
   An oral statement to the student by the Chairman of the Honor Committee. No entry is made on the student’s scholastic record.

B. Written Reprimand: A written censure, which is placed in the confidential files of the Honor Committee, 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 the work involved, or for the entire course, is made. The student’s permanent record will reflect the academic evaluation made by the instructor.

E. Suspension from the University for One or More Semesters: A student’s scholastic record would read: “Nonacademic suspension (date to date).” This penalty will be recommended to the Judicial Administrator only in extraordinary circumstances, such as for repeated offenses.

X. Appeal

A written request for an appeal, detailing new evidence, procedural irregularities, or other sufficient grounds, which may have sufficient bearing on the outcome of the trial, must be presented to the Chairman of the Honor
Committee within seven (7) working days after the date on which the verdict was rendered.

XI. Keeping of Records
In the event that the accused is found "not guilty," the Chairman of the Honor Committee will destroy all records of the hearing.

If the accused is found guilty, the records of the hearing shall be kept in the file of the Honor Committee. These records shall include a full transcript of the hearing and all evidence presented at the hearing. If evidence belongs to any person other than the defendant, the original shall be returned to the owner and a copy shall be kept with the records of the Honor Committee.

XII. Composition of the Committee
The Honor Committee shall be proportionately composed of students from each school and faculty advisor(s), although the latter shall be a non-voting member. Undecided majors, BIS students, and continuing education students shall be considered together as a school. The total number of members, exclusive of freshmen, shall be as close to fourteen as practicable. Three freshmen will be appointed in the Fall to serve until the following Spring election. One or more clerks will be appointed by the Committee from the student body who will serve as aides to the Chairman.

The Chairman of the Committee will be elected by majority vote of the Committee members. For a particular hearing, five members of the Honor Committee will be designated as voting members.

The Faculty Advisor, as a nonvoting member of the Committee, should sit with and advise the Committee at all hearings. The Faculty Advisor shall be chosen by the Honor Committee.

Previous Honor Committee members may serve during the summer term.

XIII. Eligibility of Members
Any student who maintains a 2.0 grade-point average and is in good standing with the University shall be eligible for the Honor Committee. A Committee member must maintain a 2.0 average to continue in office.

XIV. Election of the Honor Committee
The Honor Committee shall be elected in the Spring Semester. The term of office shall begin upon election and run until the following Spring election.

In the Fall Semester, the chairman shall appoint new members to fill any vacancies that have occurred and to fill the three freshman seats on the Committee.

All appointments made by the Chairman are subject to majority vote of approval by the remaining members.

XV. The Challenging and Voluntary Withdrawal of a Member of the Committee from Participation in a Particular Hearing
An accused who challenges the right of any member of the Honor Committee to sit in judgment on him must present cause to the Chairman of the Hearing.

The Hearing Committee shall then decide the validity of the challenge with the challenged member abstaining from voting. A simple majority shall decide the validity of any challenge. A successfully challenged Committee member shall not be present during the hearing.

A member of the Honor Committee shall withdraw from a specific hearing if he feels that he is prejudiced as to the facts in the case.

XVI. Provisions for Amendments
Upon petition of 20 percent of the student body, a committee shall be appointed by the Student Government to consider amendments to, or revisions of the Honor Code, said amendments and/or revisions to be then voted on by the student body as a whole. A two-thirds majority of the votes cast shall be necessary for acceptance of any amendment or revision.

The Honor Committee may also propose amendments to be voted on by the student body as described in paragraph one of this section.

Approved amendments will take effect immediately except that new provisions will not be applied to cases initiated prior to amendment. Revised 4/15/81

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 an unemancipated minor shall be the domicile of the parent having the custody.

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. If the person who has custody of such minor is not a domiciled resident of Virginia, the minor will not be 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 in fact 18 years old, if under the age of 18 at the time of entry to the University, and one of the following applies:
   a. A person who is a dependent for Virginia and other than through military orders shall be entitled to reduced tuition charges if such spouse or other 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.
   b. Such student shall be entitled to reduced tuition charges so long as such parent or spouse continues to reside in Virginia, to be employed fulltime and to pay personal income taxes to Virginia.

4. Entitlement to reduced tuition charges must be established by convincing evidence and the burden of establishing entitlement shall be on the person claiming such entitlement.

5. 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 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 student has established his or her 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.

2. Emancipation: When a minor is married or when a minor attains the legal age of majority (18 years) is considered emancipated for the purpose of establishing domicile.

3. Guardian: A person invested with the power by court and charged with the duty, of taking care of the person and administering the property and rights of another person and with whom the person has resided and by whom the person has been supported for a period of at least 12 consecutive months if the person's parents are dead or have abandoned him.
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