GEORGE MASON UNIVERSITY
UNIVERSITY CATALOG
1980-1981

Graduate School
College of Arts and Sciences
College of Professional Studies
School of Business Administration
School of Law
Division of Continuing Education
Notice
Although this catalog was prepared on the basis of the best information available at the time of publication, all information, including statements of tuition and fees, course offerings, admissions and graduation requirements, is subject to change without notice or obligation.

Admission Policy
Admission to the University and acceptance into a particular degree program is necessarily on a competitive basis. The spaces available in each program are determined largely by the availability of resources to staff course sections. The demand for resources across University programs is also necessarily balanced to meet the institution's many educational responsibilities. As a result, the University engages in qualitative evaluations of students and makes selections based on past performance as well as on evidence of their prospects for success in a program. Acceptance into junior-level courses, in particular, is limited in fields such as business, education, nursing, and social work. (Further information appears under the appropriate catalog section.) Selection from the pool of applicants to the junior level is on a competitive basis with priority given to those with evidence of the best potential for success in the program. Grade point averages are important, and a necessary but not sufficient condition; however, they may not be the only evidence used by the various selection committees.

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

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

Education
The following programs have been approved by the Virginia State Department of Education and the National Council for Accreditation of Teacher Education:
- Undergraduate
  - Early Childhood Education—Nursery School through Grade 3
  - Upper Elementary Education—Grades 4 through 7
  - Secondary Education—Grades 7 through 12 (Certification only)
  - Special Certification (Music Education, K-12; Health Education, 7-12; and Physical Education, K-12)
- Graduate
  - Elementary Education
  - Guidance and Counseling
  - Reading
  - School Administration and Supervision
  - Secondary Education
  - Special Education
- Nursing
  - BSN Degree. The Nursing Program is accredited by the Virginia State Board of Nursing and by the National League for Nursing.

Social Work
BS Degree. The Social Work Program has been granted full accreditation by the Council on Social Work Education.

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.

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. A copy of the policy can be found in the Office of the Registrar.

The office mentioned also maintains a Directory of Records which lists all education records maintained on students by this institution. Questions concerning the Family Education Rights and Privacy Act may be referred to this same office.

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, or age (except where sex or age is a bona fide occupational qualification). Appropriate procedures shall be 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 the handicapped, women, and minorities. 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 HEW 504 regulations of the Rehabilitation Act of 1973 regarding handicapped students which require that the University make programs accessible to qualified handicapped students.

Any student, employee, or applicant for admission or employment who believes that he/she has 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, and then state the facts that occasioned the complaint, present any relevant documents or correspondence, and request 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 Comptroller (Finley Building, Room 115A; 323-2569). 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; 323-2178). For information related to graduate academic programs, requirements, and related matters, contact the Office of Graduate Admissions (Robinson Hall, Room 2202; 323-2104); for undergraduate, contact the Office of Admissions (Finley Building, Room 117, 323-2102); for other questions, contact the University switchboard, 323-2000.

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

George Mason University
University Catalog
July 1980

http://catalog.gmu.edu
## Degree Programs
### Undergraduate
- Accounting BS
- American Studies BA
- Area Studies BA
- Art BA
- Biology BA, BS
- Business Administration BS
- Chemistry BA, BS
- Computer Science BS
- Decision Sciences BS
- Early Childhood Education BS Ed
- Economics BA, BS
- Elementary Education BS Ed
- English BA
- Finance BS
- Fire Administration and Technology BS
- French BA
- Geography BA
- German BA
- Government and Politics BA
- Health Education BS Ed
- History BA
- Individualized Study BIS
- Industrial Education BS Ed
- 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 BA
- Theatre BA
### Graduate
- Biology MS
- Business Administration MBA
- Economics MA
- Education DA Ed
- Elementary Education M Ed
- English MA
- Geographic and Cartographic Sciences MS
- Guidance and Counseling M Ed
- History MA, MAT
- Mathematics MS
- Nursing MSN
- Psychology MA
- Public Administration MPA, DPA
- Reading M Ed
- School Administration and Supervision M Ed
- Secondary Education M Ed
- Spanish MA
- Special Education M Ed
### Professional
- Law JD
### Certificate Programs
- Gerontology
- Psychology Technician
- Teaching of English as a Second Language
### Preprofessional Study
- Engineering (two-year)
- Predental
- Predivinity
- Pre-law
- Premedical
- Preveterinary

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George Mason University

Kerry Glenn Beamer
Baccalaureate Degree in

Bachelor of Science

In Chemical Engineering

2003
# Academic Calendar 1980-1981

## Fall Semester 1980

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, June 11 through Friday, June 13</td>
<td>Welcoming days; orientation programs and placement testing for undergraduates; early registration for certain newly admitted students (by invitation only)</td>
</tr>
<tr>
<td>Saturday, June 14</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Sunday, June 15</td>
<td>Last day for filing Graduate School admissions applications for Fall 1980</td>
</tr>
<tr>
<td>Tuesday, July 1</td>
<td>Last recommended date for filing undergraduate admissions applications for Fall Semester</td>
</tr>
<tr>
<td>Thursday, July 3</td>
<td>Last day for undergraduate students not in continuous registration (Summer Session excluded) to notify admissions office for re-enrollment Fall Semester</td>
</tr>
<tr>
<td>Friday, July 4</td>
<td>Independence Day; University closed</td>
</tr>
<tr>
<td>Wednesday, July 9</td>
<td>Foreign languages placement testing for undergraduates</td>
</tr>
<tr>
<td>Saturday, July 12</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Monday, Tuesday July 21, 22</td>
<td>Mid-summer welcoming day, orientation program, and early registration for certain newly admitted students (by invitation only)</td>
</tr>
<tr>
<td>Wednesday, July 23</td>
<td>Start counseling for Fall Extended Studies enrollees</td>
</tr>
<tr>
<td>Tuesday, July 29</td>
<td>Challenge Examination, Master of Business Administration (MBA)</td>
</tr>
<tr>
<td>Wednesday, August 6</td>
<td>Tuition and fees due for early-registered students</td>
</tr>
<tr>
<td>Friday, August 22</td>
<td>BIOL 124-125 examination for nurses</td>
</tr>
<tr>
<td>Monday, August 25</td>
<td>Welcoming day; orientation programs for new faculty and for undergraduates; English composition proficiency examination and mathematics placement testing</td>
</tr>
<tr>
<td>Monday, August 25 through Thursday, August 28</td>
<td>Registration for times and priorities see calendar in <em>Schedule of Classes</em></td>
</tr>
<tr>
<td>Monday, September 1</td>
<td>Labor Day; University closed</td>
</tr>
<tr>
<td>Tuesday, September 2</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Tuesday, September 9</td>
<td>Last day for adding new courses (except those meeting only once a week)</td>
</tr>
<tr>
<td>Tuesday, September 9</td>
<td>Last day for a full tuition refund</td>
</tr>
<tr>
<td>Tuesday, September 16</td>
<td>Last day for adding those new courses which meet only once a week</td>
</tr>
<tr>
<td>Tuesday, September 16</td>
<td>Last day for a partial tuition refund—Second week</td>
</tr>
<tr>
<td>Friday, September 19</td>
<td>Last day for filing Winter degree applications (master’s) in office of the graduate dean</td>
</tr>
<tr>
<td>Tuesday, September 23</td>
<td>Last day for partial tuition refund—Third and final week</td>
</tr>
<tr>
<td>Tuesday, September 23</td>
<td>Last day for dropping a course without incurring a grade of F</td>
</tr>
<tr>
<td>Friday, October 3</td>
<td>Second deferred tuition payment due</td>
</tr>
<tr>
<td>Saturday, October 11</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Sunday, October 12 through Tuesday, October 14</td>
<td>Mid-semester recess. University closed (NOTE: Monday classes and laboratories will meet on Wednesday this week only)</td>
</tr>
<tr>
<td>Wednesday, October 15</td>
<td>Monday classes and laboratories meet at scheduled times and places: Wednesday classes and laboratories do not meet this week</td>
</tr>
<tr>
<td>Friday, October 17</td>
<td>Last day for filing Spring degree applications (bachelor’s) in Office of the Registrar</td>
</tr>
<tr>
<td>Saturday, October 18</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Saturday, October 25</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Saturday, November 1</td>
<td>Last day for filing Graduate School admissions applications for Spring Semester</td>
</tr>
<tr>
<td>Monday, November 3</td>
<td>Third deferred tuition payment due</td>
</tr>
<tr>
<td>Wednesday, November 5</td>
<td>Foreign languages placement testing for undergraduates</td>
</tr>
<tr>
<td>Thursday, November 13</td>
<td>Spring Semester Schedule of Classes and registration calendar published</td>
</tr>
<tr>
<td>Friday, November 14</td>
<td>Recommended filing date for financial aid applications for Spring 1981</td>
</tr>
<tr>
<td>Monday, November 17</td>
<td>Last day for undergraduate students not enrolled in first semester to notify admissions office for re-enrollment Spring Semester</td>
</tr>
<tr>
<td>Friday, November 21</td>
<td>Winter master's theses due in office of the graduate dean</td>
</tr>
<tr>
<td>Tuesday, November 25</td>
<td>Challenge Examination, Master of Business Administration (MBA)</td>
</tr>
<tr>
<td>Thursday, November 27</td>
<td>Thanksgiving recess; University closed</td>
</tr>
<tr>
<td>Monday, December 1</td>
<td>Last recommended date for filing undergraduate admissions applications for Spring Semester</td>
</tr>
<tr>
<td>Monday, December 1 through Friday, December 5</td>
<td>Early registration (for times and priorities see calendar in <em>Schedule of Classes</em>)</td>
</tr>
<tr>
<td>Saturday, December 6</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Monday, December 8</td>
<td>Start counseling for Spring Extended Studies enrollees</td>
</tr>
<tr>
<td>Friday, December 12</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Saturday, December 13</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Monday, December 15</td>
<td>Study day</td>
</tr>
<tr>
<td>(to 4 p.m.)</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
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</tr>
<tr>
<td>Monday, December 15 (4 p.m.)</td>
<td>Examinations</td>
</tr>
<tr>
<td>Tuesday, December 23</td>
<td></td>
</tr>
<tr>
<td>Wednesday, December 24</td>
<td>Inter-semester break begins</td>
</tr>
<tr>
<td>Thursday, December 25</td>
<td>Christmas and New Year's Day; University closed. Other closing days</td>
</tr>
<tr>
<td>Friday, January 1</td>
<td>to be announced.</td>
</tr>
<tr>
<td>Saturday, January 10</td>
<td>Winter commencement</td>
</tr>
<tr>
<td>Wednesday, January 7</td>
<td>Tuition and fees due for early-registered students</td>
</tr>
<tr>
<td>Friday, January 9</td>
<td>BIOL 124-125 examinations for nurses</td>
</tr>
<tr>
<td>Saturday, January 10</td>
<td>Music competency placement tests</td>
</tr>
<tr>
<td>Monday, January 12</td>
<td>Welcoming day; orientation programs for new undergraduates;</td>
</tr>
<tr>
<td></td>
<td>English composition proficiency examination and mathematics placement</td>
</tr>
<tr>
<td>Monday, January 12</td>
<td>Registration (for times and priorities see calendar in Schedule of</td>
</tr>
<tr>
<td></td>
<td>Classes)</td>
</tr>
<tr>
<td>Monday, January 19</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Saturday, January 24</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Monday, January 26</td>
<td>Last day for adding new courses (except those meeting only once a week)</td>
</tr>
<tr>
<td>Monday, January 26</td>
<td>Last day for full tuition refund</td>
</tr>
<tr>
<td>Monday, February 2</td>
<td>Last day for adding those new courses which meet only once a week</td>
</tr>
<tr>
<td>Monday, February 2</td>
<td>Last day for partial tuition refund—Second week</td>
</tr>
<tr>
<td>Friday, February 6</td>
<td>Last day for filing Spring degree applications (master's) in office of</td>
</tr>
<tr>
<td></td>
<td>the graduate dean</td>
</tr>
<tr>
<td>Saturday, February 7</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Monday, February 9</td>
<td>Last day for dropping a course without incurring a grade of F</td>
</tr>
<tr>
<td>Monday, February 9</td>
<td>Last day for partial tuition refund—Third and final week</td>
</tr>
<tr>
<td>Thursday, February 12</td>
<td>Second deferred tuition payment due</td>
</tr>
<tr>
<td>Sunday, February 15</td>
<td>Last day for filing Graduate School admissions applications for Summer</td>
</tr>
<tr>
<td>Friday, February 20</td>
<td>1981</td>
</tr>
<tr>
<td>Saturday, February 21</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Wednesday, March 11</td>
<td>Foreign languages placement testing for undergraduates</td>
</tr>
<tr>
<td>Thursday, March 12</td>
<td>Third deferred tuition payment due</td>
</tr>
<tr>
<td>Sunday, March 15</td>
<td>Mid-semester recess</td>
</tr>
<tr>
<td>through Sunday, March 22</td>
<td></td>
</tr>
<tr>
<td>Monday, March 16</td>
<td>Recommended filing date for financial aid applications for Summer</td>
</tr>
<tr>
<td>Friday, March 20</td>
<td>1981</td>
</tr>
<tr>
<td>Saturday, March 21</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
<tr>
<td>Wednesday, April 1</td>
<td>Recommended filing date for financial aid applications for 1981-82</td>
</tr>
<tr>
<td>Monday, April 6</td>
<td>Fall Semester Schedule of Classes and registration calendar published</td>
</tr>
<tr>
<td>Monday, April 20</td>
<td>Early registration (for times and priorities see calendar in Schedule</td>
</tr>
<tr>
<td>through Friday, April 24</td>
<td>of Classes)</td>
</tr>
<tr>
<td>Friday, April 24</td>
<td>Last day for filing Summer degree applications (master's) in office of</td>
</tr>
<tr>
<td></td>
<td>the graduate dean</td>
</tr>
<tr>
<td>Friday, April 24</td>
<td>Spring master's theses due in office of the graduate dean</td>
</tr>
<tr>
<td>Saturday, April 25</td>
<td>Graduate Record Examination (GRE)</td>
</tr>
<tr>
<td>Tuesday, April 28</td>
<td>Master of Business Administration (MBA) Challenge Examinations</td>
</tr>
<tr>
<td>Friday, May 1</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Monday, May 4</td>
<td>Study day</td>
</tr>
<tr>
<td>(to 4 p.m.)</td>
<td></td>
</tr>
<tr>
<td>Monday, May 4</td>
<td>Examinations</td>
</tr>
<tr>
<td>(4 p.m.) through Tuesday, May 12</td>
<td></td>
</tr>
<tr>
<td>Saturday, May 16</td>
<td>Spring commencement</td>
</tr>
<tr>
<td>Monday, May 25</td>
<td>Memorial Day; University closed</td>
</tr>
<tr>
<td>Saturday, June 13</td>
<td>Graduate Record Examination (GRE)—Aptitude Test only</td>
</tr>
<tr>
<td>Monday, June 15</td>
<td>Last day for filing Graduate School admissions applications for Fall</td>
</tr>
<tr>
<td>Saturday, June 20</td>
<td>Law School Admissions Test (LSAT)</td>
</tr>
<tr>
<td>Monday, June 29</td>
<td>Last recommended date for filing undergraduate admissions applications</td>
</tr>
<tr>
<td></td>
<td>for Fall 1981</td>
</tr>
<tr>
<td>Wednesday, July 15</td>
<td>Graduate Management Admission Test (GMAT)</td>
</tr>
</tbody>
</table>

**Summer Session**

Summer Session consists of several terms, ranging in length from five to eight weeks, during the period June 1 through August 8. Classes are offered during both day and evening hours. For details, consult the Summer Session Catalog which is available mid-March.

http://catalog.gmu.edu
Contents

Academic Calendar ................................................................. iv
Profile of George Mason University ........................................ 1
School of Law ........................................................................ 9
Student Information .............................................................. 13
Tuition and Fees ..................................................................... 21
Financial Assistance .............................................................. 24
Undergraduate Policies and Procedures .................................... 27
Graduate School Policies and Procedures ................................. 41
College of Arts and Sciences .................................................... 57
College of Professional Studies ................................................ 105
School of Business Administration .......................................... 119
Division of Continuing Education ............................................. 127
Bachelor of Individualized Study .............................................. 131
University Courses .................................................................. 134
Certificate Programs .............................................................. 134
Course Dictionary .................................................................. 137
Directory of Board of Visitors, Administration, and Faculty .... 195
Maps ..................................................................................... 210
Index .................................................................................... 212
Telephone Directory .............................................................. Inside Back Cover
Profile of George Mason
The University: Beginnings

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

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

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

In an attempt to meet the state's long-range mandate, the George Mason College Board of Control, supported by the citizens of Alexandria, Falls Church, Arlington and Fairfax County, worked to acquire 422 additional acres. In January, 1972, the George Mason College Foundation, Inc., acquired the former Fairfax High School on Route 50 in Fairfax City; this facility is now known as the North Campus. By the end of 1977 the University's Main Campus had reached its current size of 571 acres.

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

The University: Direction

Mission and Goals
(Approved by the Board of Visitors January 8, 1975)

The statute creating this institution, and its location in the most rapidly growing, densely populated suburban area of Virginia, together impose on this University a mission capable of providing leadership in identifying and meeting the higher education needs of all who reside in Northern Virginia. George Mason University accepts the responsibility for carrying on a persisting and aggressive search for ways of serving the educational, research and community service needs of Northern Virginia, the development of its faculty and facilities to meet these needs and those of the state and of the nation to which it can contribute, and the articulation of its capabilities with those of other institutions of higher education in Virginia.

To accomplish this mission, George Mason University will strive to achieve the following goals:

Goal 1. George Mason University will seek out and meet the evolving needs of the citizens of Northern Virginia for higher education, research and knowledge-based services. The criteria by which the needs of its constituencies will be assessed will include needs manifested by students enrolling in this and other institutions of higher learning, the advances in education technology as their worthiness is proven, the career opportunities offered by employers in this and other regions, and the needs for moral and cultural development.

This University in framing its offerings will adapt its programs flexibly and imaginatively to cope with the evolution of each of the criteria listed. It will take advantage of its unique laboratory-like setting in a modern suburban area, richly endowed with both industrial and residential facilities and with historic significance, and adjacent to Washington, D.C., a center of national and international activities. Since its resources and capacities will necessarily be limited, it will in formulating its offerings, continually seek evidence of the substantiality of the needs voiced by students or groups within the surrounding region and the educational feasibility of serving these needs.

Goal 2. George Mason University is committed to develop in those men and women who enroll in its programs those qualities which will make of them cultured, thoughtful and informed men and women. This University accepts the obligation of helping individuals to equip themselves for successful careers in business, in public services, in the arts, or in the professions. In addition it will aspire to develop in each of its students moral and cultural values, minds capable of disciplined reasoning and rigorous decision making, and the innate desire to achieve excellence and leadership in whatever field of endeavor the individual pursues.

To these ends George Mason University will incorporate in all degree programs it offers a substantial core from the arts and sciences designed to develop the ability of each of its graduates to reason effectively, to express himself or herself clearly, and to identify those values for which he or she stands.

Goal 3. George Mason University will endeavor to serve those individuals who will be pursuing programs leading to baccalaureate, graduate and professional degrees and also those individuals who seek to further their previous education but have neither a need for, nor the desire to attain a degree.

To these ends this University will offer (a) carefully designed baccalaureate and graduate programs, articulated with the programs and courses offered by other institutions of higher education in this region, (b) an array of courses especially tailored to enable individuals to continue their educations and thus to grow occupa-
tionally, and (c) encouragement to individuals to pursue lifelong learning in order to fulfill themselves as citizens, as parents and as self-sustaining individuals.

Goal 4. George Mason University will develop, as its student body and its faculty grow in numbers, internal communities that will associate faculty members and students who share common intellectual interests, that will encourage interchange among students and faculty members, and that will overcome the impact of "bigness" by providing foci for association among students. It will achieve this objective by maintaining a complex of separate but interrelated colleges limited in size, each with a distinctive educational task. The educational tasks of these colleges will be to provide programs of demonstrable excellence in (a) the liberal arts, (b) professional fields, (c) graduate study and (d) continuing education.

Goal 5. George Mason University will enhance the accessibility of this University to capable students regardless of race, creed, age, sex, income or geographical location within Northern Virginia. It will do this by expanding its ability to provide financial aid; by continually re-evaluating its admission criteria; by modifications in its own curricula and teaching processes; and by devising methods that make its services conveniently available to all who might benefit from them throughout the Northern Virginia region.

Goal 6. George Mason University will continually strive to develop an academic, social and physical environment that will enable not only the younger student but also the more mature student to broaden his or her perception of self and to formulate new goals. The University recognizes the special need to reach effectively those students who are associated with the University only a few hours each week, and will seek to provide through its academic programs and its student services a responsive environment that will stimulate the development of each student.

Goal 7. The University will attract, support and periodically review the performance of a faculty of men and women of diverse races and creeds from the liberal and applied arts, the sciences, and professional studies who demonstrate excellence in teaching. This faculty will be encouraged and aided in its efforts (a) to further develop competency in identified fields of specialization, (b) to extend the frontiers of research, and (c) to enhance community services. By its excellence and effort, the faculty will forward the University's educational leadership role in the region and be a vital and integral part of the intellectual development and growth of Northern Virginia.

Goal 8. George Mason University will encourage research as an integral part of the learning process by both students and faculty. The University is committed to the idea that learning must comprehend active inquiry, the satisfaction of intellectual curiosity, and the persisting scholarship that broadens and deepens understanding and that for some participants leads to the discovery of new knowledge.

Goal 9. George Mason University acknowledges its role of assisting in the development and improvement of the cultural and intellectual life of the community, particularly Northern Virginia. The University has a significant opportunity to serve in ways that go beyond formal educational programs and community-benefitting research; therefore, the University will encourage its faculty members and students continually to enhance their capabilities in light of community needs and actively to translate those capabilities into community service. Programs which advance this goal will be actively sought for the mutual growth and benefit of George Mason University and Northern Virginia in the years ahead.

Goal 10. George Mason University will continue to plan its physical plant expansion and continually improve its organization, administrative services and procedures to ensure for the future a harmonious and pleasant environment, and to enhance the excellence of all its activities. In order to achieve this goal the University will seek both human and financial resources that will cause it to be a dynamic force for improvement of higher education in Northern Virginia, and an example of moral and educational leadership.

The University: Setting

From urban east to rural west, the Northern Virginia region is a complex setting for a growing university such as George Mason. With the University located close to the center, the region's character is profiled by a variety of lifestyles and attractions.

The historical and the contemporary combine in Northern Virginia. Homes of historical significance remain, preserved and restored by active historical societies. Mt. Vernon, Washington's estate on the Potomac River, is the most famous; also singularly impressive are Gunston Hall, the 18th-
century home of the prominent Virginia statesman, George Mason, and Woodlawn Plantation, the colonial home of Martha Washington's granddaughter Eleanor Parke Custis.

Exemplifying contemporary life in the region are the United States Division Offices of Mobil Corporation, the Central Intelligence Agency, and the U.S. Geological Survey; Wolf Trap Farm Park for the Performing Arts (one of only two such national parks in America); and mammoth Tyson's Corner Shopping Center—all located within ten miles of the University's main campus.

The population of Northern Virginia (nearly one million) is largely suburban. Development stretches increasingly westward from Old Town Alexandria on the Potomac toward Leesburg and Bull Run Mountain, and southward toward Marine Corps Base Quantico and Prince William Forest Park. The Northern Virginian earns one of the highest incomes in the nation; is greatly interested in cultural affairs; and, being well educated, is keenly supportive of intellectual needs, including libraries, community colleges, and university education.

Circled on the north, east, and south by the great arc of the Potomac, the environment of the fall line is naturally wooded and rolling. Developers of the planned communities in the region—principal among these is Reston—have preserved the natural surroundings through careful siting of parks and bicycle and horseback trails to complement streams and lakes. Great Falls Park on the Potomac is but one of the many nearby outdoor recreational attractions.

Sixteen miles east, across the Potomac, is Washington, D.C., a major urban setting for the nation's treasures: the Capitol and the White House; parks, monuments and memorials to past presidents; museums and art galleries; shops and restaurants in historic Georgetown; and a wealth of theaters, including Ford's and the John F. Kennedy Center for the Performing Arts. Arlington National Cemetery, the Pentagon, and National Airport cluster on the Virginia side of the Potomac.

Within a 90-mile radius of Northern Virginia are Richmond, historic capital of the Commonwealth; and Charlottesville, site of Thomas Jefferson's estate, Monticello. Annapolis, only 50 miles away, is the seaport home of the U.S. Naval Academy and the capital of Maryland. Recreation facilities are in abundance at the Atlantic Ocean beaches, along the Appalachian Trail, and in the Blue Ridge and Shenandoah Mountains.

Related closely to Maryland and the District of Columbia, the Northern Virginia region has become the concentrated north of a great southern state. 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. This is the setting for George Mason University.

The State University in Northern Virginia Today

George Mason University offers professional, graduate, and undergraduate degree programs at three Northern Virginia campus locations: the GMU Main Campus, located just 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 University's School of Law, located in Arlington at No. Fairfax Drive and Kirkwood Road, one block east of the Virginia Square Metro Station. In addition, courses are taught at more than 25 off-campus sites in Northern Virginia each semester.

Since 1964, when the first four academic buildings opened on the Main Campus, growth has been constant, expansion has been rapid. Today, the University serves more than 13,000 day and evening students through the Graduate School, the College of Arts and Sciences, the College of Professional Studies, the School of Business Administration, the School of Law, and the Division of Continuing Education. Approximately 6,000 students enroll in Summer Session courses.
In a suburban setting, George Mason University provides for its diverse student population a distinctive education in the best traditions of higher education. While a large majority of the students commute to the campuses from the suburban and metropolitan areas of Northern Virginia, Maryland, and Washington, D.C., both the academic and physical design of the University counter the typical commuter school image.

Through the years, the University's mission and goals have fostered in all degree programs a substantial core from the liberal arts and sciences; this arts and sciences tradition has been actively nurtured. As a result, the University today stands as an example of well-designed, well-directed higher education for Northern Virginians.

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

The University turned its attention to the needs of the younger students with the completion of on-campus housing in late 1977. Five hundred students now reside in new apartments located on the Main Campus; and the University is beginning construction on two new five-story residence halls, each to accommodate 250 additional students.

In the development of George Mason's Main Campus, careful attention has been paid to the preservation of the natural beauty of the area. The three-story student apartments are pleasingly designed and carefully constructed to blend into their wooded setting; hundreds of wooded acres remain untouched on the Main Campus. Parking areas are located on the campus perimeter, with buildings situated at the campus center surrounded by groves of trees.

Finley Building, on the north side of the Main Campus, provides offices for the president and other administrators of the University; here, too, visitors can find direction and information. Several modern classroom and administrative buildings—East and West Buildings and Krug Hall—form a well-landscaped quadrangle behind Finley Building; located adjacent is Thompson Hall; and just beyond the quadrangle are the Student Union, Robinson Hall, and Fenwick Library. A modern lecture hall, a physical education complex, a biology greenhouse, and several temporary facilities complete the current makeup of the Main Campus.

On-going construction, however, is a part of George Mason life. Begun in 1978, a four-story addition to Robinson Hall will open in fall 1980. This facility includes laboratories for geology, geography-cartography, biology, the physical sciences, and engineering; departmental offices for economics, sociology, social work, and business administration; a number of classrooms; and a 530-seat theatre. In Spring 1980, construction began on Academic III, a new academic building to house psychology, geology, and the research components of biology and physics; administrative offices and a television production studio are also planned for Academic III. A five-story tower addition to Fenwick Library, now funded for construction, is the second of six such modules scheduled to be built at intervals.

In addition to Academic III and the residence hall construction under way, 1980 will see groundbreaking for a second Student Union, an outdoor track and playing field, and a field house.

The Department of Fine, Performing Arts and Communication is temporarily located on the University's 16-acre North Campus. The North Campus facility provides art, music, dance, and theatre areas, including studio and rehearsal rooms and an 800-seat auditorium. A specialized library and a cafeteria are available. A cluster of other key University services is also housed at the North Campus. Scheduled shuttle buses operate between the North and Main campuses.

A 1979 addition to George Mason is the University's School of Law, located in a modern three-story building on the Orange Line of the Metro in the heavily-populated urban corridor of Arlington.

A revised master physical plan and a ten-year academic plan were approved in 1978 by the University's governing board. Highlights of the physical design through 1986 include facilities to accommodate 16,000 students, with varied on-campus living quarters for about 4,000; the design also indicates major development of athletic, food, and other service facilities by 1981. The academic plan calls for expansion into a selected number of doctoral programs beginning in 1980, broadening of offerings in the liberal arts and sciences, as well as new professional and master's level programs.

Special Facilities for Study

Library Services

University library services are provided on both the Main and North campuses and at the Law School location of George Mason. The full line of services is available to all University students, faculty, and personnel. Students enrolled in credit courses offered by institutions with membership in the Northern Virginia Consortium have borrowing privileges. The libraries are open to all others for reference use.

The library system for George Mason totals 300,000 volumes, acquires approximately 20,000 new books each year, and receives over 3,100 periodicals. Fenwick Library on the Main Campus is the central collection, containing over 160,000 book volumes and 250,000 microforms. The School of Law Library in Arlington includes over 125,000 book volumes and law journals. The specialized library at the North Campus
serves students in fine, 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).

Located within easy reach of George Mason University is 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 also several 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
- Research Center for the Federal Theatre Project. The Research Center contains the major collection of playscripts, radioscritos, set and costume designs, and other creative materials produced by the Federal Theatre of the 1930's. Based on more than 250,000 items placed on deposit at George Mason by the Library of Congress in 1974, the collection also includes gifts from private individuals and a growing oral-video history library.
- American Symphony Orchestra League Archives. The collection includes correspondence with member associations of the League, programs of symphony orchestras, financial reports of member organizations, administrative records of the League itself, its publicity, publications, and photographs.
- Ollie Atkins Photograph Collection. Ollie Atkins spent 22 years as a correspondent and photographer for The Saturday Evening Post and was the official White House Photographer from January 1965 until December 1974. The collection consists of over 25,000 of his prints and negatives.
- William Scott Papers. William Scott (Virginia) served in Congress from 1966 until 1972 and as a U.S. Senator from 1972 until 1978. Senator Scott has donated his office files, legislative records, and correspondence to George Mason University. (The collection will be available to researchers after processing is completed, some time in 1980.)
- African Art Collection. The collection ranges from artifacts and contemporary art to native apparel.
- C. Harrison Mann Collection. The collection was started as a memorial to Mr. Mann, a former leader in the General Assembly of Virginia, a long-time supporter of George Mason College, and a member of the Board of Visitors of the University. The collection contains a number of rare historical maps, atlases, geographies, and law books relating to Virginia, all from Mann’s private collection.

The Special Collections Division and the Research Center for the Federal Theatre Project—on the fifth floor of Fenwick Library—are open from 8:30 a.m. until 4 p.m. daily. Arrangements for use of the resources can be made by contacting the director at 323-2251 or 323-2546.

Studio Theatre
The Studio Theatre, located in Robinson Hall, is George Mason’s first Main-Campus performance facility for theatre, dance, and music. Designed as an intimate performance space, this 530-seat modified proscenium theatre houses experimental dance events, music concerts and recitals, and small theatre productions.

Computer Facilities
Computer facilities are at the disposal of faculty and students for instructional and research purposes. The systems available are a Hewlett-Packard 3000 Series III computer with one megabyte of memory for academic and administrative use and a Hewlett-Packard 2000 Access computer supporting 32 interactive terminals for academic use. Both computers are located in the basement of Thompson Hall. Through remote job entry facilities, George Mason
University also has access to a CDC Cyber 172 located at the University of Virginia and an IBM 370/158 located at the College of William and Mary.

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

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

During the fall and spring semesters, the academic computing facilities are open from 8 a.m. until 10 p.m., Monday through Friday; 10 a.m. until 5 p.m. on Saturday; and noon until 5 p.m. on Sunday.

Electron Microscope

The biology department has a high resolution electron microscope for use in the graduate biological ultrastructure courses and for graduate and faculty research. Problems currently under investigation concern the fine structure of nerve, endocrine, and muscle cells in vertebrate and invertebrate animals; diseased and normal plant cells; spores of marine fungi; and the high resolution microscopy of blood proteins.

Centers, Clinics, Laboratories, Institutes

The Educational Child/Youth Study Center and the Guidance Counseling Laboratory. On-site training facilities for students in several education programs are available. These centers provide practical experience for graduate students in the reading program by offering diagnostic and tutorial services to primary and secondary pupils in public and private schools in the Northern Virginia area. Graduate students in special education have the opportunity to observe and interact with children and youth who have learning disabilities, emotional disturbances, or mental retardation.

The Psychological Clinic. For graduate students in psychology, the Psychological Clinic provides 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. In a typical psychological testing case, the interviewing and testing is done by a graduate student under the supervision of a staff clinical or counseling psychologist.

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. 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.

Federal Facilities. In addition to these campus 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—enlarge the educational environment for graduate students.

Academic Structure and Programs

Graduate School (1972)

The Graduate School offers courses of study leading to the Master of Arts (MA) in economics, English, history, psychology, and Spanish; the Master of Science (MS) in biology, mathematics, and geographic and cartographic sciences; the Master of Education (M Ed) in elementary education, guidance and counseling, reading, school administration and supervision, secondary education, and special education; the Master of Business Administration (MBA); the Master of Public Administration (MPA); the Master of Science in Nursing (MSN); and the Master of Arts in Teaching (MAT) in history.

The Doctor of Arts in Education (DA Ed) and the Doctor of Professional Studies (DPS) have the option of obtaining teaching certification at the graduate level.

College of Arts and Sciences (1972)

Courses of study in the College of Arts and Sciences leading to the Bachelor of Arts (BA) degree are available with majors in 22 areas: American studies, area studies, art, biology, chemistry, economics, English, French, geography, German, government and politics, history, international studies, mathematics, music, philosophy, physics, psychology, sociology, Spanish, speech, and theatre.

Courses of study in the College of Arts and Sciences leading to the Bachelor of Science (BS) degree are available with majors in 12 areas: biology, chemistry, computer science, economics, fire administration and technology, law enforcement, mathematics, medical technology, physics, psychology, public administration, and social work.

The College also offers a Bachelor of Music (BM) degree. While completing the requirements for a baccalaureate degree within the College of Arts and Sciences, students have the option of obtaining teaching certification at the secondary level.

In addition to four-year programs, the College offers a two-year engineering course of study designed to meet most of the basic requirements of the first two years of the standard engineering curriculum.

College of Professional Studies (1972)

Majors and degrees possible in the College of Professional Studies are the Bachelor of Science in Education (BS Ed) with majors in early childhood education, elementary education, health education, industrial education, and physical education; and the Bachelor of Science in Nursing (BSN).

School of Business Administration (1977)

Courses of study in the School of Business Administration lead to the degree of Bachelor of Science (BS) with majors in accounting, business administration, decision sciences, finance, management, and marketing.

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 location in Arlington. As a part of George Mason, the School of Law is now one of three Virginia law schools functioning under the direction of state institutions, the other two at the University of Virginia and the College of William and Mary. The School currently enrolls approximately 500 students and offers a regular three-year curriculum leading to conferral of the Juris Doctor (JD) degree.

Division of Continuing Education (1973)

The University’s Division of Continuing Education performs a number of functions generally associated with continuing and adult education, special programs, and lifelong learning.

The Division administers the nontraditional degree program, 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; nursing continuing education; and community service and noncredit activities.

Special academic programs offered through the Division of Continuing Education originate in the appropriate college and school of the University, and hence are subject to official University regulations and procedures.

Summer Session

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

University Information

Consortium Membership

George Mason University is the host institution of the Consortium for Continuing Higher Education in Northern Virginia. In addition to George Mason University, 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 yearly by the Office of the Consortium Administrator, 4210 Roberts Road, Fairfax, VA 22032.

Minority Affairs

The Office of Minority Affairs is designed to enhance the services of George Mason University to minority communities. The general objective is to shape the University as

http://catalog.gmu.edu
an educational environment that reflects and expresses the ethnic and cultural diversity of its context and addresses the educational needs of all the people of its constituent area.

The program is an integrated component of the total program of the University and is designed to affect not only the minority population but every segment of the University in a positive way.

The Minority Affairs Program has three service emphases: to students; to faculty, staff, and administration; and to the University in its relations with minority communities.

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

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

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

American Minority Cultures

The University provides instruction in many phases of Western and non-Western cultures. It also includes courses in American minority cultures. In addition, the University provides general courses in such subjects as American history and sociology, in which a portion of each course is devoted to

the place and importance of minority groups in the American culture. Courses in such subjects as music, literature, and political thought include the contributions of American minorities to the total field. Academic departments seek textbooks that adequately represent the aspirations and contributions of American minorities. The University welcomes students from all minority groups.

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

Affirmative Action

The Office of Equal Employment Opportunity/Affirmative Action hired its first full-time director effective March 1, 1977. The primary objective of the program administered by this office 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 qualifica-
tion; 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."

While the Equal Employment Opportunity/Affirmative Action office has as its primary objective the affirmative recruitment, hiring, and promotion of qualified minority persons, its overall objective is total equal employment opportunity for all present and potential George Mason University employees.

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

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

The Office of News and Information Services

The Office of News and Information Services, located in Room 217 of the Finley Building, is responsible for all internal and external communications dealing with information about the University, its departments, programs, faculty, staff, and special events. The office produces in house, an internal weekly publication covering items of general interest to University faculty and staff (notices of events and meetings, notes on staff members); faculty focus, a monthly newsletter designed to cover the particular interests of faculty; and GMU Today, a quarterly tabloid magazine featuring articles about the University and its people. GMU Today is distributed to students, faculty, staff, alumni, and the community. In addition, the Office of News and Information Services handles the GMU Speakers Bureau, which arranges for faculty, staff, and students to fulfill speaking engagement requests from area high schools, clubs, associations, and organizations.

Office of Alumni Relations and Development

The Office of Alumni Relations and Development was established by Board of Visitors action with primary responsibility for coordinating and assisting in the development of alumni activities and programs initiated jointly by the University and the Alumni Association. The office, located on the fourth floor of Fenwick Library, is open from 8:30 a.m. until 5 p.m., Monday through Friday. Its director maintains an open-door policy and encourages inquiries on all aspects of alumni relations and development.

Specific areas of responsibility include the maintenance of alumni records, the development and publication of alumni periodicals, alumni mailings, planning and coordination of alumni special events, and the development of an annual fund. Currently, the office is administering records on nearly 8,000 alumni which include address and biographical information. GMU Alumnus is published six times a year and is mailed to all graduates of the institution. This periodical focuses on alumni achievement, academic program development, Alumni Association activities, campus special events, and University facilities growth. Additionally, alumni residing in the Washington metropolitan area are mailed This Month at Mason, a monthly calendar of events and activities occurring on the University campuses during the Fall and Spring Semesters.

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 Department of Security and Safety. At the time of registration the student must certify that (a) the vehicle has a valid state registration and valid insurance from a recognized insurance company evidencing coverage for public liability in conformance with the laws of the commonwealth of Virginia; (b) the student has a valid state driver's license; and (c) the student understands that he or she is governed by University Motor Vehicle and Traffic Rules and Regulations, a copy of which is furnished at the time of registration of the vehicle. A fee of $1.00 is charged for each vehicle registered. Every registered vehicle must display in full view the University's vehicular registration decal, to be affixed immediately upon issuance to the left half of the rear bumper. The decal is valid for the period September 1-August 31 of the specified 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 Department of Security and Safety (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.

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

At George Mason, learning is not confined to the classroom. In addition to extensive academic offerings, George Mason students find a variety of campus activities that allow full expression of talents and interests.

Believing that student participation helps shape the character and quality of the institution, the University encourages student support of activities such as student government and student publications and participation in academic, social, honor, international, minority, religious, and sports-oriented student organizations. Participation in campus theatre, film, lecture, concert, and dance programs is also encouraged.

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

Student Union

Most nonacademic activities and programs at the University take place in the Student Union on the Main Campus, and the people coordinating these student affairs are conveniently located in the Union: the offices of the vice president for Student Affairs, the associate dean for Student Life, the coordinator of the Student Union, the coordinator of Services for the Handicapped, and the director of Minority Affairs Programs; the offices of Student Health Services, Career Services, Cooperative Education, Veterans Affairs, Financial Aid, the Counseling Center, and the Campus Ministry; 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 rooms for playing games, watching television, listening to music, and playing cards. Banking, bookstore, and drycleaning services are available on the second floor of the Union: the George Mason Bank, Compass Drycleaning, and the Bookstore operate for the convenience of students, faculty, and staff.

On the North Campus, a study lounge is located in Room 107; and the offices of Student Affairs, Student Health Services, and Career Services are located in Room 105.

Food services, supplied by a contract, are available on all of the University’s campuses. On the Main Campus, the lower level of the Student Union houses a snack bar, a cafeteria, and a rathskeller. Patios on both the north and south sides of the building adjoin the eating areas. For the convenience of the campus community, vending machines are also located in various buildings. For information concerning catering service, contact the Food Service Manager on the Main Campus. The Student Union also has a variety of meeting facilities.

Students who wish to schedule meetings or conferences in the Student Union (or throughout the University) do so through the Scheduling Clerk in Room 310 of the Student Union, as explained in the following section.

Reserving University Facilities

The Student Union and other University facilities may be utilized for nonacademic events by individuals or groups of students and by organizations. Most facilities may be reserved free of charge to University groups with some exceptions for support costs for special events. All reservations of this type, whether for the Student Union or other University facilities, must be made through the Scheduling Clerk in Room 310 of the Student Union (323-2164). At least two weeks prior to the date of the event, a reservation form should be filled out and submitted; approval is then given according to the procedures outlined in the George Mason University Administrative Procedures Manual.

For additional information regarding the scheduling of facilities, call 323-2164.

Athletic Activities

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

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

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

The University is affiliated with the Association of Intercollegiate Athletics for Women (AIAW), the Virginia Association of Intercollegiate Athletics for Women (VAIAW), and the
Southern Region II of the AIAW. Tennis and softball teams compete in Division III of the AIAW; all other teams participate in Division II.

The 1979 women's volleyball team won its third Virginia small college championship in four years and went on to represent the state in the Southern Region II Championship. During the off-season, the women's volleyball team competes in United States Volleyball Association tournaments throughout the East Coast and also conducts clinics for area high schools to encourage the development of the sport at all levels.

In the spring of 1980, the women's softball team won the 2nd Virginia state fast pitch championship and went on to represent the University in national competition. The 1979 women's cross-country team placed fourth in the VAIAW championships and qualified two runners for the AIAW nationals. The 1979-80 indoor and outdoor track and field teams participated in the Mason-Dixon and VAIAW championships.

In 1979, the men's program produced a Capital Collegiate Conference championship team in golf. The baseball, cross-country, fencing, golf, tennis, track and field, and volleyball teams participated in regional and national championship tournaments to help establish another fine record of athletic achievement.

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

**Arts and Communication Activities**

George Mason offers students the opportunity to participate in many arts events throughout the school year. An active dance company presents two concerts each year; additionally, guest dancers and choreographers are invited to work with students.

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

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

George Mason's forensics team, which includes individual events and debate, competes in 20 tournaments each year in the Midwest, the West, and along the East Coast. During the 1978-79 season, the team won 456 trophies including two distinctive titles. The Individual Events Squad earned the title of "Number One Team in the Nation" in the National Debate Tournament, while the Debate Squad became the "Top Junior Varsity Team" in a tournament at Kent State University.

Academic credit is available for participation in forensics. Interested students should contact Dr. Bruce B. Manchester, director of Forensics (691-7954).

**Student Organizations**

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

All recognized student organizations are members of Student Government's Inter-Club Council. Recognition and
Student Services

Health Services

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

During the academic year, programs are offered with emphasis on preventive health care. Programs for 1979-80 dealt with areas such as blood pressure, Pap testing, and weight control as related to behavior modification.

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 105 (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 & Sickness Health Insurance Plan and the University-sponsored dental plan made available through DENTICARE of Virginia.

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

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

Health insurance brochures, enrollment applications, and claim forms, as well as dental plan information, may be obtained at both North and Main Campus health offices.

Services to the Handicapped

The University has identified an office to provide a focus for its services to the handicapped. The office is in the Division of Student Affairs located in the Student Union.

Housing

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

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

Counseling Center

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

Services offered include personal counseling dealing with adjustment and emotional concerns; educational and vocational counseling; reading and study skills assistance; marriage and couples counseling; communication skills; and campus consultation with faculty, staff, and students. Interest, personality, and intelligence tests are also available as a means of enhancing self-understanding.

A series of groups and workshops for personal and academic skills development are offered each semester. Brochures listing these programs are available at the Counseling Center.

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.
Paraprofessional advising/counseling is offered by peer counselors as an integral part of the Center's services, with the following programs available:

- **Reentry Student Program.** This drop-in service and meeting place provides reentry students the opportunity to obtain information, exchange ideas, gain support from other students returning to school, and to participate in groups and workshops.

- **Study Skills Service.** A staff of trained peer counselors conducts workshops and provides individual study skills assistance. Workshops are offered in time management, reading, note-taking, exam skills, research paper preparation, and improvement of memory, motivation, and concentration. Printed and taped materials describing how to improve reading and study skills are also available through the Study Skills Service.

- **Black Peer Counseling.** Trained black undergraduates provide informal assistance for black students.

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

Counseling Center services are provided to all University Students, at no charge, in Room 364 of the Student Union (323-2165). The office is open Monday through Friday from 8:30 a.m. until 5 p.m. and Tuesday and Wednesday until 8 p.m.

### Career Services

The Office of Career Services provides assistance in career planning, career information, cooperative education, part-time jobs for undergraduates, and senior/alumni placement. A schedule of services and workshops is published each semester. The offices, located in Rooms 365 and 303 of the Student Union, are open Monday through Friday from 8:30 a.m. until 5 p.m. and Tuesday and Wednesday until 8 p.m. For information call 323-2476 or 323-2535. Major services offered to students include:

- **Career Counseling.** Individual appointments and group seminars are available to help students define career goals; research academic majors, occupational areas, and employers; and develop job hunting skills (making employer contacts, writing resumes, interviewing). Evening programs are available.

- **Career Reference Library.** A specialized self-help library contains occupational information on career fields related to University majors, graduate and professional school catalogs, government employment information, job directories and guides. Staff assistance in locating materials is available.

- **Cooperative Education.** The Cooperative Education Program provides qualified students with the opportunity to integrate classroom theory with curriculum-related, professional work experience. Students who successfully complete a Cooperative Education work cycle with a federal agency qualify for noncompetitive appointment upon completion of the requirements for a baccalaureate degree. Satisfactory performance on work assignments is recognized by the University through notation on academic transcripts of participating students.

Orientation sessions for the Cooperative Education Program are offered on a regular basis to provide more complete information. Since placements are usually available to sophomores or juniors, students are urged to contact the Office of Cooperative Education as early as their freshman year. For further information contact the coordinator in Room 303 of the Student Union Building (323-2535).

- **Internships.** The Federal Summer Intern Program is an annual program offering noncredit, career-related, paid internships in federal agencies. Application must be made in February of each year. Information on other noncredit internships is maintained in the Career Reference Library.
• Job Referral Program. Seniors and alumni can register for weekly bulletins of full-time job notices received by the office. Part-time and summer job boards are maintained for all students and alumni.

• On-Campus Interview Program. During the fall and spring semesters, employers conduct professional interviews on campus for full-time career positions with their organizations.

• Permanent Credential File. University students may establish permanent 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 maintains an Office of Veterans Affairs to assist 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 Tuesday and Wednesday until 7 p.m. during regular semesters.

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. This is usually shortly after the catalog is published. For a detailed description of educational benefits available to veterans, service personnel, dependents, and survivors, see the section titled "Financial Assistance" in this catalog.

Campus Ministry

The Campus Ministry Association is an ecumenical group of chaplains concerned with being of service to the George Mason University community. Chaplains are available for religious, educational, and social activities counseling and for community service and social action, including working for the alleviation of hungry and starving peoples worldwide.

The organization is sponsored by Catholic, Jewish, and Protestant efforts.

Chaplains are on campus daily for discussion and assistance of any kind for all members of the University community. The Campus Ministry office is located in the Student Union, Main Floor, Room 229 (323-2160).

Student Regulations

Conduct

Academic institutions exist for the transmission of knowledge, the development of students, and the general well-being of society. Free inquiry and free expression are indispensable to the attainment of these goals. As members of the academic community, students should be encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth.

Freedom to teach and freedom to learn are inseparable factors of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on campus, and in the larger community. Students should exercise their freedom with responsibility.

The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the academic community. The University has a duty to develop policies and procedures which provide and safeguard this freedom.

George Mason University believes that the procedures, rights, and safeguards outlined below are indispensable to achieving the goals desired—freedom to teach, to learn, and to search for truth.

The University respects and is determined to protect 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 it feels are necessary to maintain order, to protect individuals and property, and to fulfill its purposes and responsibilities as a University. To this end the University realizes that the prevailing rule in matters of student discipline must continue to be that of common sense, and excessive legalism can only disrupt the University and its community of students, faculty, and staff.

A student enrolling in the University assumes an obligation to conduct himself in a manner compatible with the University's function as an educational institution. To fulfill its functions of imparting and gaining knowledge, 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 of the educational process.

The Office of the Associate Dean for Student Life is administratively responsible for supervising student conduct on campus. A system of courts has been established for administering 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 Dean for Student Life, located in Room 310 of the Student Union (323-2522).

Honor System

Until 1972 George Mason University was part of the University of Virginia. As such, the Honor System takes its beginnings back to 1842. As originally formulated in 1842, the Honor System at the University applied only to final written examinations. Through its more than a century of continuous use, the pledge has been extended to all academic work submitted for credit, statements made to the faculty, and other declarations of good faith or intent. Considered reprehensible under the system are lying, cheating, plagiarism, and stealing.

George Mason University established its Honor System on May 14, 1972. It is recognized and approved as an integral part of the University. The essence of the code is that a student's word can be accepted in academic matters without question as truth and that any violation of a student's word is an offense against the Honor Code.

All students and faculty in the University have the duty as participating community members to report to a member of the Honor Committee any alleged violations of the Honor Code. This duty is of importance not only because it enforces the Honor Code, but also because it gives each student the opportunity to express respect for personal integrity and an honest academic community.

The Honor Code is administered by 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 and indispensable duty is to instill the concepts and spirit of the Honor Code within the student body. The secondary function of this group is to sit as a hearing committee on all alleged violations of the code.

At the beginning of each semester each faculty member has the responsibility to delineate to all his classes his own, as well as departmental, policy pertaining to the Honor Code. In addition, each department has a designated liaison to the Honor Committee who is available to answer most questions that may arise. 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
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:

1. 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.

2. Extent of the Honor Code
The Honor Code of the George Mason University shall deal specifically with:
Cheating and attempted cheating
Plagiarism
Lying
Stealing
Cheating encompasses the following:
The willful giving or receiving of an unauthorized, unfair, dishonest, or unscrupulous advantage in academic work over other students.
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.

At tempted Cheating.
Plagiarism encompasses the following:
Presenting, as one's own the words, the work, or the opinions of someone else without proper acknowledgment.
The borrowing of the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

Lying encompasses the following:
The willful and knowledgeable telling of an untrue or falsehood as well as any form of deceit, attempted deception, or fraud in an oral or written statement relating to academic work.

a. Lying to administration and faculty members.
b. Falsifying any University document by mutilation, addition, or deletion.
c. Lying to Honor Committee members and councils during investigation and hearing.

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.)

3. 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.

4. 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.

5. Procedure for Reporting a Violation
Any student or faculty member witnessing a violation of the Honor Code shall report, whenever and whenever possible, one or more corroborating witnesses to the overt act. The accuser(s) (student or faculty) will inform the suspected party and the Honor Committee of the accusation in writing within seven (7) working days. They shall inform the suspected party that he has four (4) days to contact a member of the Honor Committee and request a hearing or to withdraw from school. Any member of the George Mason University Academic Community that has knowledge of but does not report an Honor Code Violation may be accused of lying under the Honor Code.

6. Counsel for the Accused and Accuser
Counsel for the accused and accuser may be provided by any member of the George Mason University academic community, including members of the Honor Committee.

7. 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 Chairperson of the Honor Committee. (The appearance of the accuser is required unless otherwise exempted by the request of both counsels, or the Chairperson of the Honor Committee.)

8. 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.

9. 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:

Oral Reprimand
An oral statement to the student by the Chairperson of the Honor Committee. No entry is made on the student’s scholastic record.

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.

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 is not made a part of the student’s scholastic record.

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 stu-
dent's permanent record will reflect the academic evaluation made by the instructor.

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.

10. Appeal
A written request for an appeal, detailing new evidence, procedural irregularities, or other sufficient grounds, must be presented to the Chairperson of the Honor Committee within seven (7) working days after the date on which the verdict was rendered. (The Appeal Board will consist of at least three voting members.) If a new hearing is granted, no voting member from the original hearing may vote in the second or subsequent hearings of the same case.

11. Keeping of Records
In the event that the accused is found "not guilty," the Chairperson 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 this 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.

12. Composition of the Committee
The Honor Committee shall consist of the following members: two graduate students, five seniors, four juniors, three sophomores, three freshmen, and the faculty adviser(s), although the latter shall be a nonvoting member. One or more clerks will be appointed by the Committee from the student body who will serve as aides to the Chairperson.
The Chairperson of the Committee will be elected by majority vote of the Committee members. For a particular hearing, five members of the Honor Committee will be designated as voting members.
The Faculty Adviser, as a nonvoting member of the Committee, should sit with and advise the Committee at all hearings.
The Faculty Adviser shall be chosen by the Honor Committee. Previous Honor Committee members may serve during the summer term.

13. 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 Code Committee. A Committee member must maintain a 2.0 average to continue in office.

14. Election of the Honor Committee
In the Spring Semester, five juniors, four sophomores, three freshmen and two graduate students shall be elected. The term of office shall begin upon election and run until the following spring elections.
In the Fall Semester an election shall be held to fill any vacancies that have occurred and to elect three freshmen to serve until the following spring elections.
If a vacancy occurs between elections, it may be filled by a majority vote of the remaining members.

15. The Challenging of 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 Chairperson 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.

16. 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.

Tuition and Fees

Tuition and Fees
Any person who is undertaking any form of academic study with George Mason University must be registered as a student and must pay the prescribed charges. Registration is not allowed if there are outstanding financial obligations.
Tuition is charged at the in-state rate only if the student has been formally classified by the University as a Virginia student. All new students are required to complete the Virginia Domicile Classification Form (available in the Office of Admissions) and submit it with their 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. Students who do not have an approved in-state classification on file at the time of billing are assessed tuition at the out-of-state rate.
Tuition and fees for early-registered students are due and payable at the Cashier's office on or before August 6, 1980, and January 7, 1981. 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 during the registration process or on the day of registering during the ADD period results in a late charge of $10.
Deferred Payment Plan

A deferred payment plan is available for students whose tuition and fees for the semester exceed $250. There is a $10 administrative cost charged to all students taking advantage of the deferred payment plan. Students must pay at least one-third or $250 (whichever is greater) of the tuition and fees as the initial payment, with the remaining tuition and fees payable in two equal payments. Students using the deferred plan must come to the Cashier's office to make the initial payment and sign a deferred payment contract. Bills for installment payments are not prepared. It is the student's responsibility to ensure payment of installments on or before the due dates published. Contracts are not mailed to students.

Failure to make any tuition and fees payment on or before the due date results in a late charge of $10. Students who have not made payment within three days following the due date are placed on financial probation for a period of seven calendar days. Students who have not completed satisfactory arrangements by the end of the probationary period are placed on financial suspension without further notice.

Due Dates for Deferred Payments

First Semester: Second and third payments due October 3 and November 3, 1980.
Second Semester: Second and third payments due February 12 and March 12, 1981.

Payments must be received in the Cashier's office on or before the due date. Postmark of the due date is accepted.

Checks

Checks in payment of tuition, fees, fines, or other obligations to the University should be made payable to George Mason University. Second party checks are not acceptable; pay checks from local business firms payable to the student are the exception to this rule.

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

Failure to Meet Financial Obligations

Students who fail to meet any financial obligation to the University are placed on financial suspension. These obligations include tuition and fees, emergency loans, traffic fines, library fines, and all related penalties.

The policies governing the failure to meet financial obligations also apply to students owing fines to libraries of institutions and participating public libraries of the Consortium for Continuing Higher Education in Northern Virginia.

Reinstatement Fee

A student placed on financial suspension due to an outstanding obligation in excess of fifty ($50) dollars is not permitted to register in a subsequent semester 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 transcript of record is issued, no diploma is released, and no registration for a subsequent semester or term is permitted. These penalties are removed upon payment in full of the amounts owed. In those instances where the outstanding financial obligation, which caused the financial suspension, is in excess of fifty ($50) dollars, a reinstatement fee of twenty-five ($25) dollars is also imposed.
Refunds

Tuition, less an administrative charge of $20, is refunded in the event a student cancels registration before the beginning of the semester or withdraws within the first five working days of the semester. Assessed penalties are nonrefundable.

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

Off-Campus

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

Other Required Fees

Deposits. Each student enrolled in a laboratory course (chemistry) is required to purchase from the Cashier one laboratory card priced at $5. Cards must be purchased the second week of classes within the semester. This is intended to cover breakage or loss of any equipment by the student. As such loss(es) occur, the card is “punched” for the cost of the item in question. Unused portions of the card are redeemed upon presentation to the Cashier at the end of the second semester (but no later than June 30, 1981).

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

Motor Vehicle Registration Fees. All students who desire to park their vehicles on University property must register them with the University’s Department of Security and Safety and pay a fee of $1 for a parking decal. (See Regulations on Motor Vehicles.)

Credits Earned Elsewhere

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

Eligibility for In-State Tuition

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

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

Domicile, however, is primarily a question of intent and the burden of proof of domicile is upon the student seeking the benefit of reduced tuition. Students who wish additional detailed information on domicile should contact the Residence Clerk in the Office of Admissions (323-2108).

State Legislation Governing the Determination of Student Status for Tuition Purposes

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 custody. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor if there are no circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on such emancipated minor.

2. Except as provided in 23-7.2, no person in attendance at a State Institution of higher education shall be entitled to reduced tuition charges, unless such person is and has been domiciled in Virginia for a period of at least one year immediately prior to the commencement of the term, semester or quarter for which any such reduced tuition charge is sought.

3. A person who enrolls in any such institution while not domiciled in Virginia does not become entitled to reduced tuition charges by mere presence or residence in Virginia. In order to become so entitled, any such person must establish that, one year before the date of the alleged entitlement, he or she was at least 18 years of age or, if under the age of 18, was an emancipated minor, and he had abandoned his or her Virginia domicile and was present in Virginia with the unqualified intention of remaining in Virginia for the period immediately after leaving such institution and indefinitely thereafter.

4. A person who is classified or classifiable at the date of his or her marriage as eligible to receive the privileges herein described, may receive or continue to receive such privileges until he or she abandons his or her Virginia domicile other than through any presumption of law attaching to the ceremony of marriage.

5. A student who is not a member of the armed forces and who is not otherwise eligible for reduced tuition charges and whose spouse or parent is a member of the armed forces stationed in this State pursuant to military orders shall be entitled to reduced tuition charges if such spouse or either parent, for a period of at least one year immediately prior to and at the time of commencement of the term, semester or quarter for which reduced tuition charges are sought, has resided in Virginia, been employed full-time and paid personal income taxes to Virginia. Such student shall be eligible for reduced tuition through such parent under this section only if he or she is claimed as a dependent for Virginia and federal income tax purposes. Such student shall be entitled to reduced tuition charges so long as such parent or spouse continues to reside in Virginia, to be employed full-time and to pay personal income taxes to Virginia.

6. Entitlement to reduced tuition charges must be established by convincing evidence and the burden of establishing entitlement shall be on the person claiming such entitlement.

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Financial Assistance

Financial Aid

The Financial Aid Office provides a variety of services to assist students in the financing of their education. These services include financial counseling, referral and information resources, and financial assistance. Student financial assistance consists of grants, loans, and employment; awards are based on financial need. Located in the Student Union Building, Room 354, the office is open Monday through Friday from 8:30 a.m. until 5 p.m., and Tuesday and Wednesday until 7:30 p.m.

To apply for financial aid, 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 four weeks time prior to the April 1 deadline. The application deadlines for consideration of federal and most of the state funds are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981-82 Academic Year</td>
<td>April 1, 1981</td>
</tr>
<tr>
<td>Summer 1981</td>
<td>April 15, 1981</td>
</tr>
<tr>
<td>1982-83 Academic Year</td>
<td>April 1, 1982</td>
</tr>
</tbody>
</table>

Applications received after April 1 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. The University makes available to qualified students long-term, 3 percent interest loans from the federally-sponsored National Direct Student Loan Program. Repayment begins nine months after graduation and may be deferred for students entering graduate school, the Peace Corps, Vista, or military service. Students must be enrolled at least half-time in order to qualify.

Supplemental Educational Opportunity Grant. A limited number of direct grants are available to undergraduate students who are at least half-time, who show exceptional financial need, and who require such assistance to attend college. To receive this grant, students must be awarded a matching scholarship or loan.

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

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

Law Enforcement Education Program. The Law Enforcement Education Program provides financial assistance to allow state and local law enforcement personnel to continue their education at the college and university level. Grants to cover tuition and fees per academic year are offered to students who qualify under the current LEEP guidelines. Only students who are currently being funded by LEEP are eligible.

Federal Nursing Program. The University participates in the Federal Nursing Loan and Scholarship Program for students planning careers in the field of nursing. Federal Nursing Scholarships are available to nursing students who show exceptional financial need.

Guaranteed Student Loan Program. Students may borrow directly from lenders in order to finance educational expenses. While most of these loans are made by commercial lenders, some states are also lenders. The state lending institution for Virginia residents is the Virginia Education Loan Authority. The loan may amount to as much as $2,500 per year up to a maximum of $7,500 for one undergraduate student. The government will pay the interest rate of 7 percent until the repayment period begins nine months after the student completes the academic program. Applications for the Guaranteed Student Loan are made directly to the lending agency, and may be made by students who are enrolled at least half-time. Virginia Education Loan Authority applications may be obtained in the Financial Aid Office. Under some circumstances, federally-insured loans are available. The regulations governing these loans are very similar to those guaranteed by the State.

Virginia Programs for State Residents

Virginia Loans. The state provides funds to be used for long-term, low-interest loans for eligible students. Recipients must be full-time students.
Virginia Scholarships. These scholarships are for students who demonstrate financial eligibility and who have established a record of academic and personal achievement. Recipients must be full-time students.

The Virginia College Scholarship Assistance Program. This is a student incentive grant program using both federal and state funds geared to the individual student’s financial need. Full-time students who are legal residents and who are undergraduates may apply for CSAP on the Virginia Financial Aid Form. The VFAF must be received by the College Scholarship Service in Princeton, New Jersey, prior to March 31.

State Nursing Scholarships. The Bureau of Public Health Nursing provides limited scholarships to Virginia residents. These scholarships are based on need, and applications are made directly to the Bureau of Public Health Nursing. The application deadline for students previously enrolled in a nursing program is March 15 and for new students entering a nursing program, the deadline is June 15.

Emergency Loan Program. Students who are currently enrolled may borrow up to $75 on a short-term basis. Emergency loans are for legitimate emergencies and are not for tuition and fees or books and supplies. Emergency loans are to be repaid within 45 days, and overdue payment results in a late charge of $5. Failure to repay the loan within 45 days, without requesting an extension for a reasonable excuse, may result in financial suspension. Students financially suspended for failure to repay an emergency loan will forfeit the possibility of any future emergency loans.

Graduate Assistance

University Fellowships. A limited number of unrestricted University Fellowships are awarded to graduate students on a competitive basis. These fellowships, with stipends up to $3500, are funded by the commonwealth of Virginia and are awarded in all departments. They are intended to encourage and assist superior students in pursuing graduate study and completing requirements for graduate degrees in the minimum possible time. A recipient of a University Fellowship must enroll as a full-time student. Application should be made on forms supplied by the Graduate School Office. Completed applications must be submitted to the Graduate School for major department review. Applicants who are currently enrolled in graduate study at the University 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 a number of graduate assistantships in the research and instructional programs of the various departments. To be eligible for an assistantship, a student must be admitted to degree status and take a minimum of six semester hours of graduate credit each semester. Assistantships are available in all graduate departments. 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 who are 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 3.00 cumulative grade point average, and demonstrate financial need.

In-Service Training Program for Teachers. A candidate for a graduate degree may establish eligibility to receive state funds for graduate study closely related to his/her field of work through one of the State’s Division Superintendents of Schools. The candidate may use the funds to enroll at the University in previously approved courses.

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

Veterans Affairs

Veterans Educational Benefits

In order to receive monthly Veterans Educational Benefits while attending the University, contact must be made with the Office of Veterans Affairs. The following actions must be taken:

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 an original copy of the student’s DD-214. Active duty personnel must use Form 22-1990a.

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

3. It is important that students request the veterans counselor to send an enrollment certificate to the VA each school year (each semester, if the student is under half-time or on active duty). Students who want to receive benefits for a summer session must request an additional enrollment certificate.

4. It is each student’s responsibility to notify 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 additional 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. Students with complaints regarding late checks (or any check problems), address changes, or similar matters should contact the Veterans Administration Regional Office, 941 North Capitol Street, N.W., Washington, DC 20421 (telephone 202-872-1151). There is no longer a Veterans Representative on campus. The Office of Veterans Affairs is limited to calls only on hardship cases.

6. VA payments are paid on the following basis:

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate</th>
<th>Graduate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>12 hours</td>
<td>9 or more hours</td>
</tr>
<tr>
<td>¼ time</td>
<td>9-11 hours</td>
<td>6, 7, 8 hours</td>
</tr>
<tr>
<td>½ time</td>
<td>6-8 hours</td>
<td>4, 5 hours</td>
</tr>
<tr>
<td>less than ½, more than ¼</td>
<td>4-5 hours</td>
<td>3 hours</td>
</tr>
</tbody>
</table>
   | ¼ time               | less than 4 hours below 3 hours | *Courses must be 500 level or above to be considered graduate.

Active duty servicemen and those taking fewer than six undergraduate or four graduate hours are paid either tuition and fees or the rate set for the training time, whichever is less. Books and supplies are not included. Benefits are not payable for ENGL 101 or 102 when a no-credit grade is received unless the veteran student can supply mitigating circumstances and prove attendance. The Veterans Administration will not pay for an audit course.
Change in Course Hours
The VA does not permit a drop/add period to exceed 30 days. If a course is dropped more than 30 days after the first day of registration, the VA may require the student to repay all benefits received for that course during the semester. Exceptions are permitted when mitigating circumstances for the drop exist. Details are available at the Office of Veterans Affairs.

Veterans Educational Loan
The amount of VA loan which can be approved is determined by the amount the student's educational expenses exceed his/her available resources. The VA has increased the education loan amount to $311 multiplied by the number of months remaining entitlement to a maximum of $2,500 per year, with a maximum of $1,250 per semester. Further information can be obtained at the Office of Veterans Affairs.

Tutorial Services for Veterans
The VA will pay $69 per month, not to exceed $828, for needed tutorial services.

Foundations and Associations
George Mason University Foundation, Inc.
President
Walter J. Gander
Vice President
Open
Treasurer
Richard F. Gibbons

The George Mason University Foundation, Inc., is an autonomous organization designed to enrich programs of the University above and beyond that which can be provided by state funds. Money from the Foundation is used for faculty funding, student scholarships, endowments, grants for special research, and many other ways of aiding and improving university, community, and public life. The Foundation, which qualifies under IRS 501(c)(3) as a nonprofit institution, operates solely on private philanthropies.

Patriot Educational Foundation, Inc.
President
Andy Stynchu la
Past President
James E. Jones

The Patriot Educational Foundation is formed for educational, charitable, and social purposes; specifically for creating the financial support essential in making George Mason University teams competitive in intercollegiate competition. All money contributed to the George Mason University Patriot Educational Foundation is used to defray scholarship costs for student-athletics at the University. All activities of the corporation are administered in accordance with the latest National Collegiate Athletic Association regulations, policies, and procedures with no funds being used for recruitment purposes.

"GM" Club Foundation, Inc.
President
Glynn Smith
Past President
Gary R. Roth
Treasurer
Jay W. Marsh

The "GM" Club Foundation is formed for education, charitable, and social purposes: specifically for creating lasting social and educational relationships among all wearers of the "GM" Varsity letter award; for promoting the interest and welfare of athletics and physical education programs; for encouraging participation in all sports; and for serving George Mason University to enrich the physical facilities, equipment, and programs associated with intramural and intercollegiate competition.

Alumni Association of George Mason University
President
Gail A. Bohan
Vice President
Douglas E. Beaman
Secretary
John W. Thys on
Treasurer
Ronald A. Clark

The Alumni Association realizes the almost limitless opportunities for service and support by alumni to assist George Mason University in becoming a stronger and more dynamic institution. Students and alumni have already made a large investment of time and money in the University. Association members are the group of organized alumni who work toward keeping this investment current. The active support of alumni for the continued growth and development of George Mason will not only benefit the University and the community, but will enhance the value of each alumnus' degree.

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

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

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

Procedures

Submission of Application

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

Application Deadlines

To be assured of consideration, undergraduate applications should be submitted no later than July 1 for fall admission and December 1 for spring admission. Students with honor grades in secondary school and good Scholastic Aptitude Test scores or the equivalent taken in May of their junior year may qualify for early admission decisions on the basis of a three-year record. Regular admission decisions are normally made after the first-semester grades of the senior year and all necessary prescribed test scores have been received by the Office of Admissions. Admission is contingent upon satisfactory completion of the requirements discussed in this section and successful completion of the senior year of high school.

Medical Report

All students approved for admission are required to complete a health form provided by the University.

Test Requirements

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

*Address of the College Board Offices: Box 592, Princeton, New Jersey 08540, or Box 1025, Berkeley, California 94701.

Notice of Acceptance

Candidates who are approved for September admission must notify the University whether they wish to accept or decline this offer. Failure to comply will affect adversely the candidate’s reserved space.

Right to Withdraw Offer of Admission

The University reserves the right to withdraw any offer of admission if the applicant fails to satisfy all requirements prior to the closing of spring or fall registration.

Admissions Committee

The University maintains a faculty committee to review 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.

Policies

Criteria Governing Admission

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 the fundamental mathematical processes.

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

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

4. Senior class rank (should be in the upper 60 percent).

These criteria and those which follow are applied flexibly to assure that people with unusual qualifications are not denied admission. Such people should seek a personal interview. Otherwise, personal interviews and recommendations are not required unless requested by the director of Admissions.

Admission from Secondary School

Degree Programs

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:

- English ........................................... 4 units
- Mathematics .................................... 3 units
- Foreign Language ................................ 2 units
- Social Studies .................................. 1 unit
- Laboratory Science—Biology, Chemistry, Earth Science (ESCP), or Physics ........... 1 unit
- Electives ............................................ 4 units
- Minimum Total .................................. 15 units

*Or the College Entrance Examination of the American Testing Program.

These units must be selected from Algebra I, Algebra II, Geometry, trigonometry, probability, and elementary calculus.

*These units should be in the same foreign language.
Two-Year Engineering Course of Study

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

- **English**: 4 units
- **Mathematics**: 3 1/2 units
- **History**: 1 unit
- **Science**: 2 units
- **Electives**: 5 1/2 units

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

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

Admission from Another College

The University accepts qualified students by transfer from other colleges. An applicant for admission who has attended an institution of collegiate rank for any period of time should request the registrar of each institution attended to send an official transcript of record, including a statement of academic standing, to the Office of Admissions, George Mason University. A complete secondary school record ordinarily is required. Students transferring from vocational programs or nonaccredited institutions normally are expected to meet the University’s requirements governing initial admission from high school.

Application for admission may be considered if the transfer student:
1. is not presently on social or academic probation at the last institution attended,
2. generally has an average of at least C in the institution from which transferring,
3. has not been suspended or dropped from another institution.

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

Admission of Students Not United States Citizens

George Mason University accepts applications for undergraduate admission from students who are not United States citizens. 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 and their school or department.
2. Students must present with their application for admission documents certifying their previous educational training and attainments; such documents will show completion of the equivalent of a U.S. high school diploma.
3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained a satisfactory level of English proficiency on both the total and part scores. Foreign student applicants with degrees from accredited universities in which the language of instruction is English are automatically exempted from this requirement.

Information concerning the time and place of the TOEFL can be obtained from:

- **TOEFL**
  - Education Testing Service
  - Princeton, New Jersey 08549

4. After acceptance, the I-20 will be available upon request to those who wish to secure an F-1 student visa. Such students must enter the United States on a valid student or other visa; visitor or transit visas are not valid for enrollment at George Mason University.
5. Foreign students admitted on F-1 visas to study at George Mason University are required to register for the number of courses each semester (excluding summer sessions) that will qualify them as full-time students (12 credits for undergraduates).
6. Students must meet and conform to all current regulations of the United States Immigration and Naturalization Service.

Summer Session Enrollment

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

Extended Studies Enrollment

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

Academic Policies and Procedures

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

Effective with the 1979-80 academic year, important changes in a number of academic policies and procedures took effect at the University. In particular, students should give attention to the following sections: Test of Standard Written English, Add, Drop, Withdrawal from a Semester, Repeating a Course, Grading Policies, Academic Standing, Academic Requirements for Graduation, and Graduation with Distinction.

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

Placement, Proficiency, and Testing

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

Academic Assistance

The University has established an office to provide students with non-classroom academic opportunities for
learning. The office provides specialized academic assistance to students with self-determined deficiencies. The Tutorial Service provides assistance, free of charge, to students taking courses in the University. Academic Assistance is coordinated with the academic efforts of the 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 (325-2525) for taking College Level Examination Program (CLEP) tests and the Test of Standard Written English (TSWE) and may obtain applications for the Graduate Record Examination (GRE), Law School Admission Test (LSAT), Graduate Management Admission Test (GMAT), Medical College Admission Test (MCAT), Dental Admission Test (DAT), Veterinary Aptitude Test (VAT), and the Miller Analogies Test (MAT). Foreign Language Placement Tests are also conducted by Academic Testing.

Test of Standard Written English (TSWE)
Upon admission to the University and prior to registration, students are required to submit scores of the Test of Standard Written English (TSWE) as an indication of their probable success in writing at the university level. (This requirement affects Extended Studies Enrollees upon admission to the University.)

Students with TSWE scores below University expectations may be required to attend the English department's writing laboratory, the Writing Place, for evaluation and a program to remedy their writing deficiencies. Students successfully completing such programs will receive certification from the Writing Place. Students required to complete programs of this type must have certification of completion before registering for more than 30 hours at GMU. In certain cases, students may be required to postpone registration in ENGL 101 while attending the Writing Place.

Directed and staffed by the Department of English, the Writing Place offers students in all disciplines the opportunity to improve writing skills. Individual tutoring sessions are available at any time during the semester, and students may return as often as necessary. Students may drop in at the Writing Place, located in Room 142 of Thompson Hall, or call for an appointment (323-2700).

All students must be certain that their TSWE scores are on file in the Registrar's office (323-2141). TSWE became a regular component of the SAT examination during 1977; therefore, students who took the SAT in 1977 and after will have had their TSWE scores forwarded. Students who need to make arrangements for taking the TSWE (in order to proceed with registration) may do so by calling Academic Testing (323-2525).

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

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

Examinations in English, government, geography, mathematics, music, and foreign languages are usually announced by the appropriate departments. A satisfactory score on such an examination affords a student credit for the course in question. The foreign language placement test also serves as a proficiency examination.

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

1. Students may not earn credit by examination in courses in which they are enrolled beyond the time allotted for adding courses in that semester, or in courses already audited or failed at George Mason University.
2. Students may not earn by examination part of the 30 hours which transfer students are required to complete at George Mason University to earn a degree.

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

Foreign Language Testing and Placement

Foreign language test scores are used to place students at the appropriate level of study. All entering freshmen who have studied a foreign language for two or more years in high school are urged to take the College Entrance Examination Board (CEEB) Achievement Test in that language prior to admission, since the scores may be used both for admission and placement purposes.

For students who do not present College Board test scores in a foreign language, George Mason University administers placement tests in French, German, Latin, Russian, and Spanish. It is the student's responsibility to apply for and take the test prior to initial enrollment. The testing dates for 1980-81 are listed in the Academic Calendar at the front of this catalog. The application deadline is generally one month prior to the actual test date. These tests are administered by the Academic Testing Office. (Please call 323-2525 for further information and to apply for testing.) The placement test is mandatory for all entering freshmen with two or more years of foreign language study who wish to: (1) register for a language course at the 153 level or higher, and/or (2) fulfill the foreign language area requirement by examination and earn academic credit in the process.

Placement tests may be taken only once in each language. Students are not allowed to repeat an examination in the same language in an attempt to earn academic credit based on test scores.

Those entering students who have had some secondary school instruction in a foreign language, but who nonetheless feel that their proficiency is inadequate for successful participation in a course beyond the elementary level, may register for courses numbered 101, 141, or 151 without having taken a placement test.
Transfer students with no transfer credit for college-level foreign language study are subject to the same regulations that apply to entering freshmen, as outlined above. Transfer students receiving credit for college-level foreign language study completed elsewhere should consult the Department of Foreign Languages and Literatures to determine their correct placement. In some instances testing may be required to make this determination.

All students are urged to start foreign language study in their first year at George Mason University and to complete elementary and intermediate courses in immediate succession (for example: first semester—151, second semester—152, third semester—251; or first semester—153, second semester—251).

College Level Examination Program (CLEP)
The University currently does not recognize credits earned by CLEP General Examinations. As part of the Credit by Examination process, certain departments may utilize CLEP Subject Examination scores for total or partial credit in certain courses. Consult the individual department. The Testing Office is a certified CLEP Administration Center. Students interested in CLEP should consult the office (323-2525) regarding fees for this service.

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

Transfer Credit
A student transferring into the University may not assume that credit will be given for work at other institutions until an officially signed statement has been received from the dean of the college or school in which the student intends to major. It is the responsibility of the student to see that the Office of the Registrar receives an official transcript of work taken elsewhere before the record can be credited.

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

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

Credit to be Earned at Other Colleges
A student applies for admission to George Mason University to profit from the educational programs of the University and would not normally seek simultaneous credit enrollment at another collegiate institution. Therefore, a student must obtain written approval in advance from the dean of the appropriate George Mason college or school in order to take a course elsewhere (including the Northern Virginia Consor-

tium) for credit toward a degree at George Mason. Specific catalog numbers and descriptions of courses to be taken elsewhere must be submitted with the request for approval. The purpose of this regulation is to permit a student to enroll elsewhere in a desirable and suitable course which is unavailable at George Mason.

Study Abroad
The University encourages students to broaden and enrich their undergraduate education through approved programs of study abroad for a summer session, a semester, or a full academic year. Many programs exist for formal study within the arts and sciences at accredited foreign institutions. They offer students the advantages of foreign travel, diverse social and cultural experiences, and often the opportunity to live with a family native to the country selected.

Students desiring to study in Latin America are requested to contact Professor Frank Mac D. Spindler of the Department of History. Those interested in study in other parts of the world should contact the chairperson of the Department of Foreign Languages and Literatures. In either case, students are assisted in selecting a program that corresponds to their educational needs and interests. The program selected must be approved by the department chairperson supervising the student’s major field, and by the appropriate college dean or the dean’s designated representative.

The Reserve Officers Training Corps
George Mason University students may enroll in the Army ROTC program offered at Georgetown University or in the AFROTC program at the University of Maryland. To enroll, George Mason students may contact the ROTC enrollment officer at either university. Enrollment in the program normally occurs three weeks prior to academic registration dates at George Mason University. Although Army ROTC courses are offered on the George Mason University and Northern Virginia Community College campuses, military science credit is not transferable to George Mason University.

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

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

Schedule of Classes
A Schedule of Classes is available before registration for each semester. The number and variety of courses are increased as needed. No course listed in the Schedule of classes will be offered for which there is insufficient enrollment. The University reserves the right to change the class schedule and to adjust individual section enrollments as necessary.
Academic Advising

First- and second-semester freshmen, entering transfer students, students on academic probation, and students returning from academic suspension are required to obtain an adviser’s signature for registration. The Course Approval Form— included in the Schedule of Classes for each registration period— is used for this purpose. All students are encouraged to consult with their advisers concerning course registration.

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

Early Registration

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

Registration Procedure

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

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

Student Information

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

The University may release directory information (address, dates of attendance, major, etc.) to any outside party at its discretion except when a student requests in writing that some or all directory information be withheld.

Category I of directory information includes:

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

Category II of directory information includes:

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

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

Students may inspect their education records and obtain more information about the Family Educational Rights and Privacy Act of the Registrar and may obtain copies of most parts of their records for a nominal fee. Those desiring to do so should schedule an appointment with the Registrar or one of his designated assistants.

Student Identity Card

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

Change of Status and Address

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

Canceling Registration

Students unable to attend a semester for which they have registered should cancel their registration by written notice to the Office of the Registrar. Early cancelations allow the University to meet the needs of other students wishing to register.

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.

Change of Courses

In order to drop and/or add a course, a student must first obtain the written approval of the department in which the dropped or added course is taken. Forms for this purpose may be obtained from the departmental secretaries. All of the required signatures must be obtained on or before the deadlines shown in the Calendar.

Add

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

Drop

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

Withdrawal from a Semester

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

Upon withdrawal, the following notation is made on the student’s permanent record: “Withdrawn voluntarily for nonacademic reasons on _____________. “ A list of the student’s courses follows, together with W grades.

Auditing a Course

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

**Repeating a Course**

A student who has passed a course with a grade of C or better is not permitted to repeat the course. When a course is repeated, the following conditions apply:

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

**Special Types of Enrollment**

**Extended Studies Enrollment**

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

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

**Guest Matriculant Enrollment**

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

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

During the summer terms, however, both undergraduate and graduate guest matriculants should contact the Registrar's office to arrange for coursework.

**Senior Citizens Enrollment**

The Division of Continuing Education coordinates the Senior Citizens Higher Education Act of 1974, as amended and as applicable to the University. Under the terms of this act, eligible Virginia residents over 60 years of age with a taxable income of less than $5,000 are entitled to enroll, on a space-available basis without payment of tuition and fees, in the University course(s) offered for academic credit. Additionally, the act provides for audit of course(s) offered for academic credit and for enrollment in non-credit course(s) without payment of tuition and fees on a space-available basis. Tuition, however, may be charged for those courses which are designed exclusively for senior citizens groups. Interested senior citizens should contact the Division of Continuing Education (323-2436).

**Graduate Course Enrollment by Undergraduates**

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

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

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

Final Examinations Policies

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

Absence From Final Examinations and Special Examinations

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

Grading Policies

University coursework is measured in terms of quantity and quality.

Semester Hour

A semester hour normally represents one hour per week of lecture recitation or not less than two hours per week of laboratory work throughout a semester. Using the semester hour as the unit of credit, the number of semester hours is a measure of quantity.

A-B-C-D-F

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

A-B-C-No Credit

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

S-NC

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

IN (Incomplete)

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

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

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

IP (In Progress)

When the work of BIS 490 or of a course which is graded A-B-C-NC or S-NC is not completed within one semester, a mark of In Progress (IP) is entered on the record. IP is not treated as an unsatisfactory grade. 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 ten days after the date of regular examination if the delinquent testing has not been completed. The grade of SP is given by the dean of the appropriate college or designated representative to a student faced with a delinquency because of very special circumstances such as a major illness.

**Grade Point Average**

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

To compute a grade point average, grade points for each semester hour are assigned on a scale of four for A, three for B, two for C, one for D, and zero for F. A grade point score is computed by multiplying the value of the letter grade by the number of credits for the course. As an example, a student receiving an A in the first semester of English (a three-semester-hour course) earns 12 grade points. Dividing the number of grade points earned by the number of semester hours attempted gives the grade point average.

**Classification of Students**

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

**Grade Reports**

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

**Appeal of Grade**

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

**Academic Standing**

**Honors—The Dean's List**

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

**Satisfactory Performance**

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

**Academic Warning**

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

**Academic Probation**

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

**Suspension**

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

Suspension is included in a student's permanent record. Course credits earned at other colleges by a student during the period of suspension from George Mason are not accepted for the degree program. A student suspended for the first time may not enroll in the subsequent academic period. A student suspended for the second time is not considered for re-enrollment until two calendar years have elapsed. A third suspension results in dismissal.

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

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

**Dismissal**

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

**Good Academic Standing**

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

**Effect of Academic Standing on Student Activities**

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

The Undergraduate Major

Academic Advising

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

Individual departments establish their own advising processes; each student should check with the appropriate department.

Selection of a Major

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

Change of Major

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

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

Credit for More Than One Undergraduate Major

A student may graduate with a major in two or more programs leading to the same bachelor's degree. A student who desires to graduate from the University with a Bachelor of Arts degree or a Bachelor of Science degree in two or more subjects having established degree programs must meet departmental requirements for admission to the major in each field.

The applicant should present to the chairpersons of the departments involved a program showing in detail the curriculum to be pursued to graduation. This program must be approved by the department chairpersons involved and by the dean(s) of the appropriate college(s) or school(s). The department chairpersons and dean(s) must also approve all changes made thereafter.

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

The Baccalaureate Degree

Literacy

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

Core Requirements

In order to guarantee a substantial core from the arts and sciences, each undergraduate degree program requires credit for 24 semester hours in the three general areas listed below. Six semester hours must be in ENGL 101 (or 100), 102; of the remaining 18 hours, six must be in each of the following three areas:

<table>
<thead>
<tr>
<th>Area A</th>
<th>Area B</th>
<th>Area C</th>
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<tbody>
<tr>
<td>English</td>
<td>Astronomy</td>
<td>Anthropology</td>
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<tr>
<td>Fine, Performing</td>
<td>Biology</td>
<td>Economics</td>
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<td>Arts and Communication</td>
<td>Chemistry</td>
<td>Geography</td>
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<td>Foreign Languages</td>
<td>Computer Science</td>
<td>History</td>
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<td>Literature</td>
<td>Geology</td>
<td>Linguistics</td>
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<td>Mathematics</td>
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<td>Physics</td>
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<td>Speech</td>
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<td>Regional Cultures</td>
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<td></td>
<td></td>
<td>Sociology</td>
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Graduation

Catalog Requirements

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

Residence Requirements

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

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

Academic Requirements

To qualify for a degree, a student must have been admitted and must have fulfilled all stated requirements for the specific degree. To fulfill stated requirements for a specific degree, an undergraduate student may present all courses in which satisfactory grades have been received and up to 12 hours of courses in which D grades have been received. However, to fulfill the academic degree requirements a student may not use a grade of D in BIS 490 and may not use more than six hours of D grades in the major or in the BIS individualized core of study.
The 12 hours of D grades may be exceeded by an undergraduate student who has grades of D from before Fall 1979 provided that
(1) all the hours of D were earned prior to Fall 1979; and that
(2) the student achieves a cumulative grade point average of 2.000 at or after the beginning of Fall 1979.
For the purpose of computing the cumulative grade point average, all coursework attempted at George Mason University must be included except as provided under “Semester Excluded from GPA” in the 1978-79 catalog. An undergraduate student may petition to exclude from the calculations of the GPA only a semester which occurred prior to Fall 1979.
A Graduation Appeals Committee in each college or school considers written appeals from students short of meeting degree requirements and from students who have failed to meet certain area requirements.

Application for Degree
Students who expect to complete graduation degree requirements must secure an Application for Degree form from the Registrar’s office, complete it, and return it to the Office of the Registrar by the date designated on the Academic Calendar. A graduation fee is payable at the time the student submits the Application for Degree; fee payment is required each time a new application for graduation is submitted.
Any person who is undertaking any form of academic study with the University including supervised research must be registered as a student and must pay the prescribed charges.
Any student not in attendance at the University who is preparing a thesis under the active supervision of a member of the faculty, or who wishes to return to receive a degree or take an examination, pays a $15 registration fee for that semester and is exempt from all other fees.

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

Graduation with Distinction
A student graduates with distinction from George Mason University when
(1) at least 60 semester hours earned at the University are applied toward graduation,
(2) all grades applied toward graduation are satisfactory,
(3) more than two-thirds of the normally-graded semester hours earned at the University toward graduation are graded A, and
(4) the student is evaluated by the major department to be outstanding based upon a record of grades and two letters of recommendation from faculty members.
A BIS student presents a petition for graduation with distinction to the BIS Advisory Committee for evaluation rather than to the department of the faculty adviser.
Commencing with Fall Semester 1981, the Registrar will compile, by department, percentages of students graduating with distinction since Fall Semester 1979.

Graduation with Distinction and with Recognition
A student graduates with distinction and with recognition of a distinguished senior project if, in addition to meeting the criteria for graduation with distinction, the student completes a research project or other substantial piece of creative work directed by a member of the faculty and judged by the student’s department to be of distinguished quality. The departmental faculty establishes criteria by which a student graduating with distinction may also attempt to receive this recognition.
A BIS student attempting this recognition is evaluated by the department of the permanent adviser.
Commencing with Fall Semester 1981, the Registrar will compile, by department, percentages of students graduating with distinction and recognition since Fall Semester 1979.

Comprehensive Examinations
Undergraduate students who have passed with distinction a voluntary departmental comprehensive examination may have the following notation placed in the remarks section of the transcript: “Voluntary comprehensive examination in (area) passed with distinction, (date).”

Commencement
Commencement exercises provide an opportunity for students and their families to share in the experience of the conferral of academic degrees. This ceremony represents the culmination of a phase in the formal education of the individual. Degree candidates who do not desire to participate in the formal graduation ceremonies must notify the Office of the Registrar at least 24 hours prior to the date and time of the ceremony.
Graduate School Policies and Procedures
Graduate School

History

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

Organization

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

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

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

Administration

Thomas R. Williams, Dean
John C. Evans, Associate Dean

Graduate Council Members 1979-80

<table>
<thead>
<tr>
<th>Graduate Council Committee</th>
<th>Chairperson</th>
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<tr>
<td>Graduate Curricula Committee</td>
<td>Jay Abrams, Hans Bergmann</td>
</tr>
<tr>
<td>Scholarship and Student Appeals Committee</td>
<td>Carol Erdwins, John Miller</td>
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<tr>
<td>Graduate Publications Committee</td>
<td>Mark Goldin, Edward Machuga</td>
</tr>
<tr>
<td>Academic Policies and Procedures Committee</td>
<td>Larry Rockwood, Mark Spikell</td>
</tr>
</tbody>
</table>

Members

Jay Abrams
Hans Bergmann
Rita Carty
John Cooper
Carol Erdwins
Gloria Fauth
Klaus Fischer
Jane Flinn
Mark Goldin
Merle Holden
Edward Machuga

William McFarlane
John Miller
Larry Rockwood
Joseph Scimecca
Fred Siff
Mary Silva
Mark Spikell
Frank Spindler
Anita Taylor
Zita Tyer, Ex officio

Thomas Williams, Chairperson

Nature and Purpose of Graduate Study

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

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

1. Graduate course subject matter and course work should be at a level that directly reflects and builds upon the knowledge and intellectual maturity a student acquires during the undergraduate years.
2. The graduate experience should demand that students inquire searchingly and apply themselves fully in their scholarly activities.
3. Students should be in close and frequent contact with experienced scholar-teachers.
4. The graduate experience should be of such duration that there is time for reflection, absorption, and the emergence of intellectual independence and scholarly self-confidence.
5. Graduate teaching resources and educational environments should be sufficient to promote advanced learning and meet graduate-level educational objectives.
6. Provisions should exist within the Graduate School for regular evaluation of student performance to an extent that both students and their graduate teachers can be secure in the worth of their intellectual accomplishments.

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

Fields of Study

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

- Master of Arts
  - Economics
  - English
  - History
  - Psychology
  - Spanish
- Master of Science
  - Biology
  - Geographic and Cartographic Sciences
  - Mathematics
- Master of Arts in Teaching
  - History
- Master of Business Administration
- Master of Education
  - Elementary Education
  - Guidance and Counseling
  - Reading
  - School Administration and Supervision
  - Secondary Education
  - Special Education
- Master of Public Administration
- Master of Science in Nursing
- Doctor of Public Administration
- Doctor of Arts in Education

In addition to the degree programs listed above, a number of departments without graduate degree programs offer graduate-level courses for elective credit and for personal or professional enrichment. Graduate courses, but no graduate programs, are offered in American studies, astronomy, chemistry, foreign languages, fine arts, French, geography, health, music, philosophy, physical education, physics, and sociology. Undergraduate courses approved for graduate credit also are offered by a number of departments.

In Fall 1979, approximately 1,500 admitted graduate students were enrolled at George Mason, and more than 1,100 postbaccalaureate students were taking courses through Extended Studies Enrollment.

Graduate Degree Programs

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

Graduate Courses

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

Graduate School

Admissions Policies and Procedures

Admission Categories

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

Admission With a Degree Objective

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

The general University admission requirements for degree status are:
1. an earned baccalaureate degree from an accredited institution of higher education;
2. a 2.750 grade-point average (on a 4.00 scale) or better in the last two years of undergraduate study;
3. undergraduate preparation for the chosen field of graduate study;
4. submission of official transcripts and all other documents required by the Graduate School.

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

Provisional admission may be offered to a degree-seeking applicant, in appropriate instances, even though all requirements for degree status have not been met, if there is sufficient evidence to suggest a capacity to pursue graduate work. Students on provisional status must have as their initial objective the removal of any deficiencies and their advancement to degree status. After completing not less than 6 nor more than 12 hours of graduate work with a B average or higher and meeting any other academic requirements, the student may request degree status. The provisional student's admission is terminated if, upon completion of 12 hours, a B average has not been achieved. Graduate credits earned as a provisional student may be applied toward a graduate degree with the approval of the department concerned and the Graduate Dean. Graduate credit is not granted for courses taken to remove deficiencies.

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

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 may supply all admission credentials to the Graduate School Admissions Office and request to be considered for degree status. A student cannot be assured that all courses taken as a non-degree student will be credited toward a degree. With Graduate School approval, a student may apply to a master’s degree a maximum of 12 hours of graduate credit earned prior to acceptance in degree status. See Graduate School Degree Requirements.

Application Policies and Procedures

Submission of Application

Initial correspondence concerning application for admission to the Graduate School should be addressed to the Graduate School Admissions Office, George Mason University, 4400 University Drive, Fairfax, VA 22030; telephone (703) 323-2104. Applicants seeking admission as degree students to the Graduate School must submit the following:

1. Application form.
2. Transcripts (two official copies) from each institution attended, including George Mason University (undergraduate or Extended Studies Enrollment).
3. $10 application fee (non-refundable).
4. Virginia Domicile Classification Form.
5. Records of examinations (GRE, GMAT, etc.) as required by certain departments (see application instructions).
6. Letters of recommendation as required by certain departments (see Entrance Requirements under the appropriate program).
7. Supplementary Application Form for Foreign Students (non-U.S. citizens only).
8. Other forms and documents as may be required by individual departments (see application instructions).

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

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

Application Deadlines

Applications and all supporting documents for the admission category sought must be received by the Graduate School Admissions Office by no later than November 1 for Spring Semester 1981; March 1 for Summer Session 1981; and June 1 for Fall Semester 1981.

Submission of Transcripts

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

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

Graduate Admission Examinations (GRE and GMAT)

Although a number of graduate programs do not require the Graduate Record Examination (GRE), almost all will use such test scores as an additional measurement of an applicant’s qualifications. The GRE may be taken in either or both of two forms: 1) the Aptitude Test and 2) the Advanced Test. Some departments require scores for both the Aptitude and the Advanced Tests. During 1980-81 the Graduate Record Examination will be administered locally and nationally on the following dates:

- October 18, 1980
- December 13, 1980
- February 7, 1981
- April 25, 1981
- June 13, 1981

The Graduate Management Admission Test (GMAT), formerly known as the ATGSB, is required of all applicants seeking a degree in business administration. During 1980-81,
the GMAT will be administered locally and nationally on the following dates:
October 25, 1980               March 21, 1981
The Office of Academic Assistance Programs administers all academic examinations, including the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT). Information concerning the examinations and test applications may be obtained from the Office of Academic Assistance Programs, Trailer 105, George Mason University, 4400 University Drive, Fairfax, VA 22030. Telephone (703) 323-2128. Applicants may also write directly to Graduate Record Examination, Box 955; or Graduate Management Admission Test, Box 966, Educational Testing Service, Princeton, NJ 08540. A local telephone number in the Washington, DC area for ETS is (202) 659-0616.

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

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

Admission of Students
Not United States Citizens
George Mason University accepts applications for graduate admission from students who are not United States citizens. Students should apply directly to the Graduate School. Such students must meet each of the following conditions:
1. Students must meet all requirements and regulations of the University and their school or department.
2. Students must present with their application for admission documents certifying their previous educational training and attainments. Graduate student applicants' documents will show the award of either a bachelor's degree, or equivalent, or a graduate degree.
3. Students must have completed the Test of English as a Foreign Language (TOEFL) and normally attained the minimum scores set by George Mason University academic departments for graduate student applicants. Graduate student applicants may obtain from the Office of the Dean of the Graduate School the minimum scores required on the TOEFL test by different academic departments. Foreign student applicants with degrees from accredited universities in which the language of instruction is English are automatically exempted from this requirement.
   Information concerning the time and place of the TOEFL can be obtained from:
   TOEFL
   Education Testing Service
   Princeton, New Jersey 08549
4. After acceptance, the I-20 will be available upon request to those who wish to secure an F-1 student visa. Such students must enter the United States on a valid student or other visa; visitor or transit visas are not valid for enrollment at George Mason University.
5. Foreign students admitted on F-1 visas to study at George Mason University are required to register for the number of courses each semester (excluding summer sessions) that will qualify them as full-time students (nine credits for graduate students).
6. Students must meet and conform to all current regulations of the United States Immigration and Naturalization Service.

Admission of Graduate Degree Holders
An applicant holding a master's degree may earn a second master's degree in another discipline. For admission to a second master's degree program, the applicant should submit an application, transcripts, and other documents required.
Course credits used to satisfy the degree requirements for the first master's degree may not be used to satisfy the degree requirements of the second master's degree at George Mason University. For exceptional reasons, a maximum of six semester hours may be transferred and allowed, upon the recommendation of the department chairperson and with the approval of the Graduate Dean.

Offer of Admission to the Graduate School
A written offer of admission is made by the dean of the Graduate School to an applicant who meets all admission requirements and has been recommended for admission by the appropriate department. The offer specifies the effective date of admission (which normally coincides with the semester requested in the application), the category of admission being offered, and the name of the faculty adviser assigned to the applicant.
An individual whose offer of admission has lapsed must submit a new application and fee to be reconsidered for admission at a later date. The offer of admission lapses after the beginning of the semester for which the offer is made.

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

Records Maintenance and Disposal
All graduate admission documents, including academic records sent from other institutions, become part of the official University file and can neither be returned nor duplicated for any purpose. A student should maintain copies of official credentials for other personal requirements.
Admission credentials are retained for 24 months only and subsequently destroyed for applicants who (1) do not register for courses within the time period for which the offer of admission is valid, or (2) have been denied admission, or (3) do not respond to requests for additional information, or (4) fail to submit complete applications with respect to the receipt of all transcripts or test results.

Readmission to the Graduate School
A graduate student whose study at the University is interrupted for any reason 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 $10 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 approval by the department in which the student proposes to concentrate. Therefore, a student is not free to change graduate programs at will. A student who wishes to change from one program to another in a new field of study must submit a new application and fee for admission. Previous acceptance into one program does not guarantee acceptance into another.

Termination of Admission to Graduate Study
A student may be admitted to only one graduate program at any one time. Application for and acceptance of an offer of admission in a second graduate program automatically terminates admission to the first program. Admission also terminates when time limits have been exceeded or when other conditions for the continuation of admission have not been met.

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

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, degree students are given preference over non-degree students if the number of applicants exceeds the enrollment limits. Dual registration, e.g., as a graduate student and as an Extended Studies Enrollee, is not permitted.

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

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

Schedule of Classes and Course Approval Form

In developing a program of study with the adviser, the graduate student will need to consult the Schedule of Classes, distributed well in advance of each registration period by the Registrar’s office. It provides information about the times 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 registration the student, in consultation with the adviser, prepares a schedule of courses appropriate to departmental requirements and individual needs. This schedule is then entered on the Course Approval Form. For entering graduate students, the schedule of courses should be approved by the faculty adviser prior to registration.

Registration Procedures and Information

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

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

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

Student Information

Before or during each registration period, all students are asked to provide directory and other types of information which are used in preparing the student’s education record and numerous statistical reports. Such data 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 (address, dates of attendance, major, etc.) to any outside party at its discretion except when a student requests in writing that some or all directory information be withheld.

Category I of directory information includes:

- student’s dates of attendance
- major(s)
- full or part-time status
- awards received

Category II of directory information includes:

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

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

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

Academic Load

Graduate students are urged to register each semester for only that number of hours which they can successfully complete. The minimum full-time academic load is nine hours per semester during the regular academic year. A normal full-time academic load is 12 semester hours. During the summer, a normal full-time academic load is nine 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. Graduate students also are expected to meet all course requirements set by graduate faculty as these are scheduled for a class or seminar.

Completion of Undergraduate Prerequisite Courses

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

Undergraduates Registering for Reserve Graduate Credit

A student may seek to take a graduate course either for undergraduate credit or for reserve graduate credit. Approval to register for reserve graduate credit (earned credit held in reserve to apply later toward a graduate degree) is normally given only to George Mason seniors who are within 15 hours of completion of undergraduate study. In addition, this privilege is normally extended only to seniors who have completed a minimum of 12 semester hours at George Mason University, have a cumulative grade point average of 3.000 or better, have successfully completed all prerequisite courses, and have a major in the department in which the courses are offered. Permission must be obtained in writing prior to registration. Forms for this purpose are available in...
the Graduate School Office. It is the student's responsibility
to obtain all signatures required and to submit a current
transcript with the request.

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

Graduate Course Enrollment by Undergraduates

Undergraduates may enroll in graduate courses only if they
have exhausted all the upper-level undergraduate courses
relevant to their educational objective and if they can
demonstrate a level of maturity required for graduate-level
courses. In these circumstances undergraduates may, with
the written permission of the course instructor and the
chairperson of the department offering the course, register
for some graduate courses (those numbered 500-599) and ap-
ply the credit earned toward the undergraduate degree.
Undergraduate students electing this option must have com-
pleted all prerequisite hours and courses for the graduate
course in which they wish to enroll.

Adding and Dropping Courses

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

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

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

Withdrawal From a Semester

A graduate student who is enrolled in one or more courses
is considered in attendance until formally withdrawn by sub-
mitting an official withdrawal form. A graduate student who
drops all courses in any semester must also submit an official
withdrawal form.

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

Upon withdrawal, the following notation is made on the stu-
dent's permanent record: "Withdrew 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 examina-
tions 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 dis-
   missal.

2. The transcript will show both the original and repeat
   grades.
3. Only one grade per course may be presented on the
degree application.

Auditing a Course

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

Final Examinations Policy for
Graduate Courses

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

In certain graduate courses the assessment of student per-
formance 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 ap-
pear appropriate to provide a degree of flexibility in connec-
tion with graduate examinations. Therefore, after consulta-
tion 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 sick-
ness on the day of the examination, or for other cause ap-
proved 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 ex-
amination is excused may take a special examination within
the ten-day period on a date to be arranged between the student and the instructor in charge of the examination. A request to take an examination late should be made on a Student Request Form and submitted by the graduate professor to the Graduate School Office.

Grading System

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

To compute a grade point average, grade points for each semester hour are assigned on a scale of four for A, three for B, two for C, and zero for F. A grade point score is computed by multiplying the value of the letter grade by the number of credits for the course. As an example, a student receiving an A in a three-semester-hour course earns 12 grade points. Dividing the number of grade points earned by the number of semester hours attempted gives the grade point average.

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

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

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

Change of Grade

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

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

It is the student's responsibility to submit the work to the instructor with sufficient time for its evaluation prior to the deadline. While the mark of IN remains on the transcript, it is treated as an unsatisfactory grade and may contribute to probation or dismissal. Removal of IN's from the transcript may result in retroactive elimination of probation or dismissal. When a thesis is not completed within one semester, a mark of In Progress (IP) is entered on the record. IP is not treated as an unsatisfactory grade, nor is it subject to the time limit prescribed for IN.

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

Challenge of Grade

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

Academic Probation and Dismissal

A graduate student performs satisfactorily during any academic period (semester or summer session) in which the student receives satisfactory grades in more than two-thirds of the credit hours undertaken during that period. A graduate student is placed on probation at the end of any academic period in which the student fails to perform satisfactorily. 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 or Non-Degree to Degree Status

In order for a change from provisional or non-degree status to be considered, a graduate student must submit a written request for change of status. Forms for this purpose are available in each department. It is the responsibility of the student to supply an up-to-date George Mason University transcript in support of the request. Appropriate documentation, such as transcripts, letters of recommendation, or test scores needed to support the request for change of status, must be submitted to the Graduate School Admissions Office.
Credits earned in the provisional or non-degree status may be used subsequently in meeting degree requirements if recommended by the faculty adviser and department chairperson, and approved by the dean of the Graduate School. However, a maximum of 12 graduate credits earned in non-degree status may be applied toward a master's degree. Students admitted in these categories are therefore strongly urged to obtain faculty guidance before beginning coursework. Credits cannot be applied toward a master's degree unless they are specifically approved for that purpose.

Transfer of Credit

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

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

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

Criteria for Transferable Credit

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

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

Permission to Take a Course Elsewhere

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

Student Requests and Appeals

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

A graduate student who wishes to present a personal grievance involving his or her study may send a written petition directly to the chairperson of the Graduate Council Scholarship and Student Appeals Committee. (The name and address of the chairperson can be obtained from the Graduate School Office; telephone 323-2123, or write.) A petition should present the essentials of the grievance and should be dated and signed by the student submitting it. The Graduate Council Scholarship and Student Appeals Committee will arrange a meeting to consider the student petition; the student may be asked to attend. While such meetings are academic, collegial meetings and not legal hearings, a student is welcome to present relevant supporting documents. No appeal can be made from the decision of the Committee.

Graduate students should be aware that most graduate departments provide a means for student grievances to be heard within the departmental setting. Contact the chairperson of the appropriate department for the use of such a procedure. Submission of a grievance to a departmental hearing may solve a problem; if not, then students should submit a petition to the Graduate Council Scholarship and Student Appeals Committee for a hearing and decision.

Requirements Applicable to All Graduate Degrees

Degree Requirements

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

1. acquire a minimum of 30 semester hours of master's degree graduate credit, or 90 hours for a doctoral degree;
2. present only courses in which satisfactory grades have been received, except that a master's degree graduate student may apply up to six hours of C grades in graduate-level courses;
3. complete at least 18 semester hours after having been admitted to degree status, for master's degree study;
4. complete at least 24 semester hours at George Mason University of which (for a master's degree only);
   a. a maximum of two courses or six semester hours may be upper-level undergraduate courses approved for graduate credit;
   b. no more than 12 semester hours may have been earned through enrollment in non-degree status or
through Extended Studies Enrollment prior to acceptance in a degree program; 
c. no more than six semester hours may be transfer credit with the amount of applicable credit earned in non-degree status or through Extended Studies Enrollment reduced accordingly (exceptions are noted under "Transfer of Credit" and individual degree programs);
5. complete all courses submitted for the degree within a period of six years.
The maximum hours (6) of C or D (unsatisfactory) grades may be exceeded by a master's degree graduate student who has unsatisfactory grades from before Fall 1979 provided that
1. all the hours of unsatisfactory grades were earned prior to Fall 1979; and that
2. the graduate student achieves a cumulative grade point average of 3.000 at, or after, the beginning of Fall 1979.
For the purpose of computing the cumulative grade point average, all work attempted at George Mason University for graduate credit must be included.
Degree candidates are subject to those academic regulations 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 academic regulations in force at the time of their initial registration following readmission. All degree candidates have the option of graduating under the academic regulations in force at the time the degree is to be awarded.
Residence
Normally, at least 24 semester hours must be completed at George Mason University. A completed master's degree program must include a minimum of 18 semester hours of coursework taken by the candidate at George Mason University as a degree student. Exceptions are noted under Transfer of Credit and under individual degree programs.

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

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

Master's Thesis
When a thesis proposal has been approved by the appropriate department, the chairperson of the department sends to the dean of the Graduate School a copy of the thesis proposal, including the names of the members of the thesis committee. The student may then enroll in the thesis research course at the beginning of the next semester.
The thesis committee is named by the chairperson of the candidate's department, who designates the committee chairperson. The committee will be appointed after consultation with the candidate and the adviser, and it normally will consist of three persons, one of whom may be chosen initially, or at a later date, from outside the department.
The chairperson of the thesis committee is primarily responsible for directing and guiding the candidate's research and writing activities. It is the responsibility of the student to keep all members of the committee informed of the
scope, plan, and progress of both the research and the thesis. Any student wishing to elect the thesis option should consult the section, "Guide for Preparing the Master's Thesis and the Doctoral Dissertation." The student will be permitted to register in the Thesis course only after a thesis proposal has been submitted and approved as prescribed in the guide.

Doctoral Dissertation

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

Guide for Preparing the Master's Thesis and the Doctoral Dissertation

The thesis or dissertation is expected to demonstrate a candidate's capacity to carry out independent research. The research project is to be closely related to the candidate's general educational objectives, providing an opportunity to contribute creatively to knowledge rather than constituting mere fulfillment of an academic requirement.

The candidate's research topic should be in view as early as possible in the graduate career. The candidate should consult with the program adviser on the choice of a thesis or dissertation topic. The choice of topic should take into consideration the candidate's background and interests, ability to handle the problem, accessibility of course materials, and the probable worth of the study. Early formulation of the topic will enable the student to acquire the necessary tools of research, such as languages, statistics, or some other procedures. The student can then plan with the program adviser more purposefully the courses to be included in a program that will best prepare the student for the comprehensive examinations related to the major interest. All of these requirements should be embodied in a well-conceived plan of graduate study.

Regulations that are contained in this Guide apply to all theses and dissertations submitted in fulfillment of requirements for the master's or doctoral degree at George Mason University.

Procedure for Submitting the Thesis or Dissertation Proposal. The candidate should submit six copies of a typewritten proposal to the chairperson of the department of academic study. A model title page for the proposal follows. The proposal must include the following items:

1. The candidate's full name.
2. The date of submission of the thesis or dissertation proposal.
3. The department of academic specialization.
4. The degree sought by the candidate.
5. The tools of research, if required for the degree, together with certification.
6. The tentative title of the thesis or dissertation (subject to modification in consultation with the committee).
7. The signatures of the members of the thesis or dissertation committee.
8. The approval of the department chairperson.
9. A cogent and concise statement of the major problem of research and supporting problems, not to exceed six double-spaced pages. This statement might well include a selected bibliography pertinent to the subject.

Upon approval of the proposal by the chairperson of the department, copies of the proposal will be distributed to the dean of the Graduate School, the chairperson of the department, the chairperson and members of the thesis or dissertation committee, and to the candidate.

Acceptance and approval of the proposal indicates that the topic is considered to be a suitable one, and that the thesis or dissertation, if developed, will be accepted. The chairperson of the department will notify the candidate of the action taken on the proposal.

The student will be permitted to register for Thesis or Dissertation courses and pursue research only after a proposal has been submitted and approved as prescribed above.

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

Preparation of Copy of Thesis or Dissertation. The candidate is expected to prepare the text of the thesis or dissertation in accordance with the usual practices of good English. The candidate is also expected to provide copies of the manuscript (either in draft or final form) for all members of the committee to examine.

Following acceptance of the thesis or dissertation by the committee, the candidate will prepare an original and two copies of the final text. The two copies may be either carbon or photo copies. One copy must be deposited with the chairperson of the candidate's department. The original manuscript and one copy must be deposited with the Graduate Dean. The dean forwards the original manuscript and the copy to the University Library for binding and permanent reference.

The following regulations govern preparation of the thesis or dissertation:

1. The manuscript must be typed on bond paper of either 16 or 20 pound weight. The paper used must be uniform in weight throughout the thesis. Paper must measure 8 1/2 x 11 inches.
2. The title page must be prepared in correspondence with the sample shown.
3. Only pica, elite, or bookface type is acceptable. The typeface chosen should be used consistently throughout the thesis or dissertation. A black ribbon must be used to produce a clear, dense copy suitable for microfilming. Clean type is essential to good reproduction of the manuscript. Diagrams and charts must be prepared in India ink. All errors must be corrected in type; ink corrections are unacceptable. Professional appearance is required of the finished manuscript.
4. Unless departments specify otherwise, candidates are advised to consult the current edition of William G. Campbell's Form and Style in Thesis Writing (Houghton, Mifflin Co.) for guidance concerning style.
5. The manuscript must contain a table of contents; a list of references used; and, if appropriate, a list of tables, maps or illustrations.
6. The text must be typed double-spaced, with footnotes single-spaced. Footnotes must appear on the page to which they relate. Margins of the text must be: one and one-half inches on the left, one inch on the right, and approximately one and one-quarter inches at the top and bottom of the page.
7. In footnotes, lists of references or other bibliographic entries, the titles of books, pamphlets, and journals should be underlined (words only—not spaces). Titles of articles or chapters in books should appear in quotation marks.
8. Two copies of an Abstract of the thesis or dissertation, consisting of no more than 150 words, must be submitted with the thesis or dissertation.
9. The title page of the original copy must be signed by the members of the committee and approved by the chairperson of
the department before it is submitted (together with the original copy) by the candidate to the dean of the Graduate School for signature.

10. The original and one copy should be clamped or clipped by a folded stiff cover or spring-back binder, but it must not have holes or staples in any margin since it must be processed for binding.

11. Copyright: It is the candidate's responsibility to obtain written permission of the copyright owners for the use of copyrighted material beyond brief excerpts in the thesis or dissertation. The candidate must sign an agreement with the University which certifies that permission has been obtained and that the candidate will "save and hold harmless George Mason University from any damages which may arise from the copyright violations." This agreement must be filed with the Registrar's office before the thesis will be accepted.

12. The candidate must decide whether or not to copyright the thesis or dissertation. Information on copyright protection may be obtained at the reference desk in the library.

**Due Date and Fee.** Copies 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.

**Binding.** The original and one copy of each thesis or dissertation are sent to the University Library where they are processed, bound, and placed in the Library for reference and scholarly research.

**Degree Application**

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

**Commencement**

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

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**Sample of Cover Page of Thesis or Dissertation Proposal**

<table>
<thead>
<tr>
<th>George Mason University</th>
<th>Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>THESIS OR DISSERTATION PROPOSAL FOR MASTER'S OR DOCTORAL DEGREE</td>
<td></td>
</tr>
<tr>
<td>Student's Name:</td>
<td>Date:</td>
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<tr>
<td>Department/Program:</td>
<td></td>
</tr>
<tr>
<td>Degree:</td>
<td></td>
</tr>
<tr>
<td>Tentative Title:</td>
<td></td>
</tr>
<tr>
<td>Names of Committee Members:</td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>Date</td>
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<td>Signature</td>
<td>Date</td>
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<tr>
<td>Signature</td>
<td>Date</td>
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<tr>
<td>Approved by Department Chairperson</td>
<td></td>
</tr>
</tbody>
</table>

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**Sample Title Page of Thesis or Dissertation**

<table>
<thead>
<tr>
<th>DISSERTATION/THESIS TITLE HERE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE-SPACED IN CAPITALS AND UNDERLINED by</td>
</tr>
<tr>
<td>John William Doe</td>
</tr>
<tr>
<td>A Thesis (Dissertation) Submitted to the Faculty of the Graduate School of George Mason University in Partial Fulfillment of the Requirements for the Degree of [Master of Arts] [Doctor of Public Administration] [Field]</td>
</tr>
<tr>
<td>Signature of Committee: (Chairperson)</td>
</tr>
<tr>
<td>Dean of the Graduate School</td>
</tr>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

*Semester 19__*  
George Mason University  
Fairfax, Virginia  

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

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

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

Administration
Dorothy I. MacConkey, Acting Dean
Amelia A. Rutledge, 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:

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>C. Foreign Language</th>
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<tbody>
<tr>
<td></td>
<td>The student must demonstrate proficiency in one foreign language through the intermediate level, either by examination or by completion of coursework.</td>
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<thead>
<tr>
<th>II. Analytical Reasoning</th>
<th>Logic (PHIL 173 or 273) or mathematics</th>
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<tr>
<th>III. Humanities</th>
<th>A. Literature</th>
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<tbody>
<tr>
<td></td>
<td>Any course in literature at the 200 level or above in English or 200 level or above in foreign languages and literatures.</td>
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<thead>
<tr>
<th>B. Fine Arts</th>
<th>Art, dance, film, music, or theatre (lecture or studio)</th>
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<tbody>
<tr>
<td>C. Philosophy or religion</td>
<td>A logic course does not satisfy this requirement.</td>
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</table>

<table>
<thead>
<tr>
<th>IV. Social Science</th>
<th>A. Economics, geography, government, history</th>
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<tbody>
<tr>
<td>V. Natural Science</td>
<td>A two-semester laboratory science sequence in astronomy, biology, chemistry, geology, or physics.</td>
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<table>
<thead>
<tr>
<th>VI. Non-Western Culture</th>
<th>Six credits must be earned in courses devoted to non-Western culture. This requirement is waived for a student who has attended for more than four years an indigenous school in a non-Western country. The following courses, which are designated as meeting this requirement, may also be presented in partial fulfillment of requirements stated in sections I, III, and IV:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. ANTH 114: Introduction to Cultural Anthropology</td>
<td>ANTH 332: Cultures in Comparative Perspective</td>
</tr>
<tr>
<td>B. THR 251: Theatre of India and Southeast Asia</td>
<td>THR 252: Theatre of East Asia</td>
</tr>
<tr>
<td>C. ENGL 393: Selections From the Literatures of the Indian Continent</td>
<td>ENGL 394: Japanese Literature in Translation</td>
</tr>
<tr>
<td>D. GEOP 230: Geography of the Soviet Union</td>
<td>ENGL 395: Chinese Literature in Translation</td>
</tr>
<tr>
<td>G. HIST 328: Rise of Russia</td>
<td>HIST 329: Modern Russia and the Soviet Union</td>
</tr>
<tr>
<td>H. HIST 353: History of Traditional China</td>
<td>HIST 354: Modern China</td>
</tr>
<tr>
<td>I. HIST 356: Modern Japan</td>
<td>HIST 363: Modern India and Pakistan Subcontinent</td>
</tr>
<tr>
<td>J. HIST 463: Traditional and Modern India and Pakistan</td>
<td>HIST 464: Modern India and Pakistan</td>
</tr>
<tr>
<td>K. MUSI 103: Folk and Traditional Music of the World</td>
<td>MUSI 231: Survey of World Music</td>
</tr>
<tr>
<td>L. RELI 211: Religions of the Near East</td>
<td>RELI 212: Religions of the Orient</td>
</tr>
<tr>
<td>M. RELI 213: Hindu Religion and Philosophy</td>
<td>RELI 336: Religion and Art of Asia</td>
</tr>
<tr>
<td>N. RUSS 311: Contemporary Soviet Short Fiction</td>
<td>RUSS 353: Russian Civilization</td>
</tr>
<tr>
<td>O. RUSS 354: Contemporary Soviet Life</td>
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</table>

<table>
<thead>
<tr>
<th>VII. Major</th>
<th>30-42</th>
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</thead>
<tbody>
<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 and 400 level must be completed at George Mason University.</td>
<td></td>
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<tr>
<th>VIII. Total minimum semester hours</th>
<th>120</th>
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</table>

Bachelor of Science Degree Requirements

I. Fulfillment of the requirements for the major as listed under the respective departments: biology, chemistry, economics, mathematics, physics, psychology, public administration, and sociology. A Bachelor of Science degree is also offered in law enforcement.

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

A. 12 hours outside the fields of economics, geography, government, or history if the degree is in one of these fields; six of these hours must be chosen from these
Bachelor of Music Degree Requirements

I. General Education ........................................ 32
   A. ENGL 101 and 102 .................................... 6
   B. Literature
      This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures.

II. Basic Musicianship ........................................ 58
   III. Music Electives ....................................... 18

IV. Free Electives ............................................. 22

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

American Studies

Committee

David Kuebrich, Committee Chairman, (Department of English)
Arnold Anderson-Sherman (Department of Sociology)
Ernest Cassara (Department of History)
Stephen T. Early (Department of Public Affairs)
Allen Mattes (Department of Economics)
Percy North (Department of Fine, Performing Arts and Communication)
Norman Yance (Department of Philosophy and Religion)

Inquiries concerning this program should be directed to David Kuebrich, Chairman, American Studies Committee, Department of English, George Mason University, Fairfax, VA 22030, Telephone (703) 323-2220.

Requirements for the Major

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

1. Nine semester hours in interdisciplinary seminars:
   AMST 302: Introduction to American Studies (3)
   AMST 401: Themes in American Civilization (3)
   AMST 402: Readings in American Studies (3)

2. A minimum of six semester hours in English selected from the following courses:
   ENGL 330: American Folklore (3)
   ENGL 331: Literary Approaches to Popular Culture (3)
   ENGL 380: Recent American Fiction (3)
   ENGL 381: Colonial and Federalist American Literature (3)
   ENGL 382: Literature of the American Renaissance (3)
   ENGL 383: American Jewish Writers (3)
   ENGL 384: Literature of the Modern South: 1920 to the Present (3)
   ENGL 385: American Poetry of the Twentieth Century (3)
   ENGL 386: Literature of Black America (3)
   ENGL 387: Development of the American Novel to 1914 (3)
   ENGL 388: Development of the American Novel since 1914 (3)
   ENGL 389: American Drama of the Twentieth Century (3)
   ENGL 390: Recent American Poetry (3)
   ENGL 441: Studies in English and American Literary Topics, Periods, or Genres (3)
   ENGL 442, 444, 446: Selected Studies and Writers (in semesters when selections deal with American Literature) (3, 3, 3)
3. A minimum of six semester hours in history selected from the following courses:
   HIST 333: Westward Movement in the United States (3)
   HIST 335: The Afro-American Experience in the United States; or
   336, continuation of The Afro-American Experience in the United States (3)
   HIST 341, 342: U.S. Constitutional History (3, 3)
   HIST 346: From Colonies to World Power: A History of American Foreign Relations (3)
   HIST 351: History of the Old South; or 352, South since 1865 (3)
   HIST 390: Topics in History (in semesters when topics deal with American History) (3)
   HIST 391: History of Virginia; or 392, continuation of History of Virginia (3)
   HIST 401: Colonial America (3)
   HIST 403: Early National Period in American History, 1783-1820 (3)
   HIST 406: Civil War and Reconstruction (3)
   HIST 409: Between the Wars: The United States, 1919-1941 (3)
   HIST 410: The United States Since World War II: Nation and Empire (3)
   HIST 411, 412: Cultural and Intellectual History of the United States (3, 3)
   HIST 413: War and the Military in American Life; or 414, continuation of War and the Military in American Life (3)
   HIST 415: United States Urban History; or 416, continuation of United States Urban History (3)
   HIST 420: Topics in Twentieth-Century U.S. Diplomacy (3)
   HIST 495: Racism in the United States (3) (Open only to American studies and history majors.)

4. A minimum of nine semester hours selected from the courses listed below:
   AMST 201, 202: Studies in Popular Culture (3, 3)
   AMST 403: Independent Study (1-3)
   ANTH 341: Issues in Anthropology: Native North Americans (3)
   ART 330: History of American Art (3)
   ECON 150: The Urban Economy (3)
   ECON 310: Money and Banking (3)
   ECON 320: Labor Problems (3)
   ECON 365: Topics in Economic History (3)
   GEOG 215: Geography of the United States and Canada (3)
   GEOG 301: Political Geography (3)
   GEOG 302: Urban Geography (3)
   GEOG 304: Geography of Population (3)
   GOVT 204: American State and Local Government (3)
   GOVT 241: Introduction to Public Administration (3)
   GOVT 309: Government and Politics of Metropolitan Areas (3)
   MUSI 105: Music in the United States (3)
   MUSI 107: Theatre: From Colonial to World Power: A History of American Foreign Relations (3)
   RELI 331: Civil Religion in America: The Americanization of God (3)
   RELI 332: American Religion in Social Thought and Action (3)
   RELI 333: Contemporary Religion in America: Diversity and Dissent (3)
   SOCI 152: Modern Social Problems (3)
   SOCI 308: Sociology of Race Relations and Minorities (3)
   SOCI 332: Sociology of Urban Communities (3)
   SOCI 350: The Sociology of the Life Cycle (3)
   SOCI 373: The Community (3)
   SOCI 401: Social Stratification: The Study of Inequality (3)
   THR 253: Black Theatre in the United States (3)
   THR 352: Survey of the History of the Theatre (in America) (3)

5. An additional 12 semester hours must be selected from courses satisfying requirements (2), (3), (4), or from other related courses to be selected by the student after consultation with adviser.
   a. The additional 12 semester hours may also be selected from the following courses by the student after consultation with adviser:
      CS 261: Computers and Their Uses (3)
      DESC 202: Applied Statistical Analysis (3)
      DESC 301: Business Decision Models (3)
      ECON 345: Introduction to Econometrics (3)
      ENGL 310: Technical and Report Writing (3)
      ENGL 503 (403): Theory and Practice of Editing (3)
      ENGL 467: Advanced Expository Writing (3)
      GOVT 309: Government and Politics of Metropolitan Areas (3)
      GOVT 355: Public Personnel Administration (3)
      GOVT 356: Public Budgeting and Finance (3)
      GOVT 357: Introduction to Public Planning (3)
      GOVT 401: Public Policy Making (3)
      GOVT 451: Administrative Management and Behavior (3)
      GOVT 452: Administrative Law and Procedures (3)
      INF 201 (formerly DESC 201 or BUAD 212): Computer Information Systems (3)
   *MATH 252: Introductory Statistics (2)
   *MATH 254: Applications of Statistics in Health Care (1)
   *MATH 255: Applications of Statistics in Public Administration (1)
   *SOCI 221: Statistics for the Behavioral Sciences (4)
   *SOCI 410: Social Surveys and Attitudes and Opinion Measurements (3)
   Courses in a modern foreign language on the 300 level or above taught in that language.
   *Courses in the area of statistics must be taken either in the Department of Mathematical Sciences or the Department of Sociology to avoid overlap in content.

American Studies Coursework
The American Studies Committee offers all coursework designated AMST in the Course Dictionary of this catalog, including the following graduate course offered in support of other graduate programs:
AMST 502: Problems in American Culture

American Studies in a Double Major
Many students elect to double major in American studies and another discipline. Since courses from 12 different departments count toward the major in American studies, it is often possible to fulfill the requirements for both majors with the minimum 120 semester hours required for all degrees awarded by the College of Arts and Sciences. Two sample schedules for double majors are presented below. Students wishing to design a double major should discuss their plans with their departmental advisers and with the chairperson of the American Studies Program.

<table>
<thead>
<tr>
<th>Sample Schedule for a Double Major in American Studies and English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>ENGL 101</td>
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<tr>
<td>HIST 121</td>
</tr>
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<tr>
<td>Natural science</td>
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<td><strong>Second Semester</strong></td>
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<tr>
<td>ENGL 102</td>
</tr>
<tr>
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<tr>
<td>HIST 122</td>
</tr>
<tr>
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</tr>
<tr>
<td>Natural science</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
</tr>
<tr>
<td>ENGL 205</td>
</tr>
<tr>
<td>RELI 231</td>
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<tr>
<td>SOCI 308</td>
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<tr>
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</tr>
<tr>
<td>Foreign language</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Fourth Semester</strong></td>
</tr>
<tr>
<td>ENGL 206</td>
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<tr>
<td>AMST 202</td>
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<tr>
<td>RELI 332</td>
</tr>
<tr>
<td>COMM 100</td>
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<td><strong>Fifth Semester</strong></td>
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<tr>
<td>ART 330</td>
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<td>ENGL 381</td>
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<tr>
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59
Sample Schedule for a Double Major in American Studies and History

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<tr>
<th>First Semester</th>
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<tbody>
<tr>
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<thead>
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<td>HIST 300</td>
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<td>PHIL 331</td>
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<td>ENGL 385</td>
<td>HIST 351</td>
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<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<td>AMST 402</td>
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<td>MUSI 105</td>
<td>Elective</td>
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Area Studies

During the 1970's, 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 or Latin American studies. European studies is supervised by a committee chaired by Dr. Esther N. Elstun of the Department of Foreign Languages and Literature, and Latin American studies by a committee chaired by Dr. John P. Soder of the Department of History.

European Studies Committee

Esther N. Elstun, Committee Chairman (Department of Foreign Languages and Literature)
Debra B. Bergoffen (Department of Philosophy and Religion)
Thomas M. Brawley (Department of Fine, Performing Arts and Communication)
Vernon W. Gras (Department of English)
Larry K. Houck (European Studies Student)
Ronald J. Jensen (Department of History)
Aliza Kolker (Department of Sociology)
Kate Nemser (European Studies Student)
Jean-Claude Thomas (Department of Public Affairs)
Karen I. Vaughn (Department of Economics)

Requirements for the BA with a Major in Area Studies

European Studies

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

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

2. 3 semester hours of European geography: GEOG 220: Geography of Europe

3. 30 semester hours in an area of concentration consisting of two related disciplines, selected from the following list. At least nine of the hours in each discipline must be earned at the 300 level or above.
   - a. language (English, French, German, or Spanish) and the fine arts
   - b. language and history
   - c. language and government
   - d. language and philosophy
   - e. history and the fine arts
   - f. history and philosophy
   - g. history and government
   - h. government and philosophy

European Studies Coursework

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

Departmental Courses Approved for European Studies

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

Department of English
- ENGL 203, 204: Western Literary Masterworks (3, 3)
- ENGL 251, 252: Survey of English Literature (3, 3)
- ENGL 300: Introduction to Film (3) by permission, when the content is predominantly European
- ENGL 301: Special Topics in Film (3) by permission, when the content is predominantly European
- ENGL 313: Critical Approaches to Literature (3)
- ENGL 320: Myth and Symbol in Western Literature (3)
- ENGL 341: Chaucer (3)
- ENGL 342: Literature of the Middle Ages (3)
- ENGL 345: English Poetry and Prose of the Sixteenth Century (3)
- ENGL 346: Spenser (3)
- ENGL 351, 352: Shakespeare (3, 3)
- ENGL 353: English Renaissance Drama (3)
- ENGL 354: English Poetry and Prose of the Seventeenth Century (3)
- ENGL 355: Milton (3)
- ENGL 356: Restoration and Eighteenth-Century Drama (3)
- ENGL 357: The Augustan Age (3)
- ENGL 358: The Age of Johnson (3)
- ENGL 361: English Poetry of the Romantic Period (3)
- ENGL 362: English Poetry of the Victorian Period (3)
- ENGL 365: English Poetry of the Twentieth Century (3)
- ENGL 370: English Novel of the Eighteenth Century (3)
- ENGL 371: English Novel of the Nineteenth Century (3)
- ENGL 372: English Novel of the Twentieth Century (3)
- ENGL 373: Literary Modes (3)
- ENGL 374: English and Irish Drama of the Twentieth Century (3)
- ENGL 375, 376: Contemporary Drama (3, 3)
- ENGL 377, 378: Selected Continental Novels in Translation (3, 3)
- ENGL 392: History of the English Language (3)
- ENGL 421: Film History and Theory (3)
- ENGL 431: Medieval Intellectual Topics (3)
- ENGL 551: Literary Criticism (3)

Department of Fine, Performing Arts and Communication
- ART 221, 222: Survey of Western Art (3, 3)
- ART 223, 224: Comparative Arts (3, 3)
- ART 225: History of Modern Architecture (3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART 327</td>
<td>High Renaissance Art (3)</td>
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<tr>
<td>ART 322</td>
<td>Roman Art (3)</td>
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<tr>
<td>ART 325, 326</td>
<td>Medieval and Early Renaissance Art (3, 3)</td>
</tr>
<tr>
<td>ART 328</td>
<td>History of Design (3)</td>
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<tr>
<td>ART 497</td>
<td>Greek Sculpture (3)</td>
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<tr>
<td>DAN 101</td>
<td>Dance Appreciation (3)</td>
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<tr>
<td>MUSI 101</td>
<td>Music Appreciation (3)</td>
</tr>
<tr>
<td>MUSI 181, 381</td>
<td>University Chorus (see * below)</td>
</tr>
<tr>
<td>MUSI 187, 387</td>
<td>Chamber Orchestra (see * below)</td>
</tr>
<tr>
<td>MUSI 335, 336, 337, 339</td>
<td>Historical, Theoretical, and Analytical Study of Music I (3)</td>
</tr>
<tr>
<td>MUSI 336</td>
<td>Historical, Theoretical, and Analytical Study of Music II (3)</td>
</tr>
<tr>
<td>MUSI 382</td>
<td>Piano Ensemble (see * below)</td>
</tr>
<tr>
<td>MUSI 385</td>
<td>Collegium Musicum (see * below)</td>
</tr>
<tr>
<td>MUSI 435, 436, 437</td>
<td>Historical, Theoretical, and Analytical Study of Music III (3)</td>
</tr>
<tr>
<td>MUSI 436</td>
<td>Historical, Theoretical, and Analytical Study of Music IV (3)</td>
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<tr>
<td>MUSI 437</td>
<td>Choral Literature (3)</td>
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<tr>
<td>MUSI 438</td>
<td>Operatic Literature (3)</td>
</tr>
<tr>
<td>MUSI 439</td>
<td>Piano Literature (3)</td>
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<td>MUSI 440</td>
<td>Orchestral Literature (3)</td>
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<tr>
<td>MUSI 445, 446</td>
<td>Bibliography and Research Techniques (3)</td>
</tr>
<tr>
<td>MUSI 496</td>
<td>Ethnomusicological Area Studies (3)</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>THR 160</td>
<td>Introduction to the Theatre Experience (3)</td>
</tr>
<tr>
<td>THR 351, 352</td>
<td>Survey of Theatre History (3, 3)</td>
</tr>
<tr>
<td>THR 401</td>
<td>Theories of the Theatre (3)</td>
</tr>
</tbody>
</table>

**Department of Foreign Languages and Literatures**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CLAS 250</td>
<td>Classical Myths and Legends (3)</td>
</tr>
<tr>
<td>CLAS 300</td>
<td>Homer and Greek Tragedy (3)</td>
</tr>
<tr>
<td>FREN 151, 152</td>
<td>Elementary French (4, 4)</td>
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<tr>
<td>FREN 153</td>
<td>Review of Elementary French (4)</td>
</tr>
<tr>
<td>FREN 251</td>
<td>Intermediate French (4)</td>
</tr>
<tr>
<td>FREN 252</td>
<td>French Conversation (3)</td>
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</table>

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

**Department of History**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>HIST 101, 102</td>
<td>Western Civilization (3, 3)</td>
</tr>
<tr>
<td>HIST 301</td>
<td>Classical Greece and Rome (3)</td>
</tr>
<tr>
<td>HIST 302</td>
<td>Imperial Rome and Byzantium (3)</td>
</tr>
<tr>
<td>HIST 303</td>
<td>Western Europe in the Middle Ages (3)</td>
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</table>

**Notes:**

- ART 227: History of Design (3)
- ART 321: Greek Art (3)
- ART 322: Roman Art (3)
- ART 325, 326: Medieval and Early Renaissance Art (3, 3)
- ART 327: High Renaissance Art (3)
- ART 328: History of Baroque Art (3)
- ART 321: Greek Art (3)
- ART 497: Greek Sculpture (3)
- DAN 101: Dance Appreciation (3)
- MUSI 101: Music Appreciation (3)
- MUSI 181, 381: University Chorus (see * below)
- MUSI 187, 387: Chamber Orchestra (see * below)
- MUSI 335, 336, 337, 339: Historical, Theoretical, and Analytical Study of Music I (3)
- MUSI 336: Historical, Theoretical, and Analytical Study of Music II (3)
- MUSI 382: Piano Ensemble (see * below)
- MUSI 385: Collegium Musicum (see * below)
- MUSI 435, 436, 437: Historical, Theoretical, and Analytical Study of Music III (3)
- MUSI 436: Historical, Theoretical, and Analytical Study of Music IV (3)
- MUSI 437: Choral Literature (3)
- MUSI 438: Operatic Literature (3)
- MUSI 439: Piano Literature (3)
- MUSI 440: Orchestral Literature (3)
- MUSI 445, 446: Bibliography and Research Techniques (3)
- MUSI 496: Ethnomusicological Area Studies (3)

**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 160: Introduction to the Theatre Experience (3)
- THR 351, 352: Survey of Theatre History (3, 3)
- THR 401: Theories of the Theatre (3)

**Department of Foreign Languages and Literatures**

- CLAS 250: Classical Myths and Legends (3)
- CLAS 300: Homer and Greek Tragedy (3)
- FREN 151, 152: Elementary French (4, 4)
- FREN 153: Review of Elementary French (4)
- FREN 251: Intermediate French (4)
- FREN 252: French Conversation (3)

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

John P. Soder, Jr., Chairman (Department of History)
Peter W. Black (Department of Sociology)
Howard R. Bloch (Department of Economics)
Jose A. Bufill (Department of Foreign Languages and Literatures)
Alejandro F. Castro (Department of Fine, Performing Arts, and Communication)
Robert P. Clark (Department of Public Affairs)
Michael J. McDermott, Jr. (Department of Philosophy and Religion)

Requirements for the BA with a Major in Area Studies

Latin American Studies

The student must present a minimum of 120 semester hours of coursework for graduation, including satisfaction of general requirements for the Bachelor of Arts degree. In addition, the student must present 36 semester hours of coursework divided to include (a) 18 semester hours upper division courses (300-400 level) in a core discipline—any discipline in which a major is possible, except other interdisciplinary studies majors; and (b) 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 (b) above is provided below. Proficiency in Spanish or Portuguese must be demonstrated either by examination or by completion of the requisite 251 foreign language courses. Students are encouraged to take the following six hours of language study: SPAN 252, 257.
Latin American Studies Course
LAS 491 Contemporary Latin America (3)
Required of senior majors in Latin American studies. Open
to other students by permission. A study of the interrelation-
ship of economic, political, social, and cultural factors in ex-
plaining current Latin American reality.

Latin American-Oriented Courses
The following courses may be presented to meet require-
ment (b) above. Students are advised to consult the Course
Dictionary in this catalog for prerequisites for these courses.

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

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

Department of Foreign Languages and Literatures
PORT 251: Intermediate Portuguese (4)
SPAN 251: Intermediate Spanish (4)
SPAN 252: Spanish Conversation and Composition (3)
SPAN 303, 304: Advanced Conversation and Composition (3, 3)
SPAN 317: The Literature of Spain (3)
SPAN 318: The Literature of Spanish America (3)
SPAN 325: Major Hispanic Writers (3)
SPAN 331, 332: Literature of the Golden Age (3, 3)
SPAN 333, 334: Spanish Literature of the Nineteenth Century (3, 3)
SPAN 341: Spanish American Short Story (3)
SPAN 353: Commercial Spanish (3)
SPAN 359: Translation of Texts in Specialized Fields (3)
SPAN 361: Spanish Civilization and Culture (3)
SPAN 366: Latin American Civilization and Culture (3)
SPAN 412: Special Studies in Literature (3)
SPAN 420: Studies in Spanish Linguistics (3)
SPAN 432: Cervantes (3)
SPAN 433, 434: Contemporary Spanish Literature (3, 3)
SPAN 441: Spanish American Poetry (3)
SPAN 443, 444: Spanish American Novel (3, 3)

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

Department of Philosophy and Religion
PHIL 231, 232: History of Western Philosophy (3, 3)
PHIL 334: Latin American Thought (3)

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

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

Sample Schedule for a BA in Area Studies
Latin American Studies

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<td>ENGL 102</td>
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<td>PORT or SPAN 152</td>
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<td>HIST 272*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Core discipline (400)</td>
<td>LAS 491</td>
</tr>
<tr>
<td>Anthro., Psych. or soc.</td>
<td>Core discipline (400)</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td></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.
Sample Schedule for a BA in Area Studies
Latin American Studies and History

<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 271</td>
<td>HIST 272</td>
</tr>
<tr>
<td>HIST 101</td>
<td>HIST 102</td>
</tr>
<tr>
<td>PORT or SPAN 151</td>
<td>PORT or SPAN 152</td>
</tr>
<tr>
<td>Anthro., psych. or soc.</td>
<td>Anthro., psych. or soc.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>HIST 363</td>
<td>History elective</td>
</tr>
<tr>
<td>Latin Amer.-oriented elect.</td>
<td>HIST 443</td>
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<tr>
<td>PORT or SPAN 251</td>
<td>Spanish</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 300</td>
<td>HIST 475</td>
</tr>
<tr>
<td>HIST 470</td>
<td>History elective</td>
</tr>
<tr>
<td>Logic or math</td>
<td>Latin Amer.-oriented elect.</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Electives</td>
</tr>
<tr>
<td>GEOG 201</td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 499 or hist. elect.</td>
<td>HIST 499 or hist. elect.</td>
</tr>
<tr>
<td>HIST 478</td>
<td>Philosophy or religion</td>
</tr>
<tr>
<td>MUSI 106</td>
<td>LAS 491 or elective</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Electives</td>
</tr>
<tr>
<td>LAS 491 or elective</td>
<td></td>
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</tbody>
</table>

Sample Schedule for a BA in Area Studies
Latin American Studies and Spanish

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 151</td>
<td>SPAN 152</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Anthro., psych. or soc.</td>
<td>Latin Amer.-oriented elect.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 251</td>
<td>SPAN 252</td>
</tr>
<tr>
<td>HIST 271</td>
<td>SPAN 255 (257)</td>
</tr>
<tr>
<td>Logic or math</td>
<td>HIST 272</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>SPAN 325</td>
</tr>
<tr>
<td>MUSI 106</td>
<td>GEOG 201</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro., psych. or soc.</td>
<td>Latin Amer.-oriented elect.</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>SPAN 303</td>
<td>SPAN 304</td>
</tr>
<tr>
<td>SPAN 307</td>
<td>SPAN 308</td>
</tr>
<tr>
<td>SPAN 300-400</td>
<td>SPAN 401</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>SPAN 407</td>
<td>LAS 491</td>
</tr>
<tr>
<td>SPAN 300-400</td>
<td>SPAN 408</td>
</tr>
<tr>
<td>Electives</td>
<td>Latin Amer.-oriented elect.</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

Biology

Faculty

Professors: Tombes (Chairman), Emsley, C. Ernst, M. Stanley, Taub, Wall
Associate Professors: Andrykovitch, Auclair, Bradley, Hart, Joyce, Kaplan, Kelso, Rockwood, Shaffer, Skog, Wilson
Assistant Professors: Adamkewicz, Brown, Hammond, Kowalski, Lawrey, O’Melia, Royt, Sherald, Torzilli
Instructors: E. Ernst, Yanosky
Lecturers: Audilet, Phipps, Workman

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, eight hours of general chemistry, and two semesters of mathematics. The 32 hours of biology must include BIOL 113, 114: Biological Science; BIOL 301: Cell Biology; BIOL 311: General Genetics; and BIOL 307: Ecology. The mathematics requirement may be satisfied by any of the following combinations: MATH 113-114; 113-103; 103-113; 103-104. 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 general (8) and organic (6) chemistry and at least eight hours from Group I and nine hours from Group II. The nine hours in Group II must include two (** courses), and a course in computer science is required.

Group I. Natural Science

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 206</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 341-342</td>
<td>8**</td>
</tr>
<tr>
<td>ASTR 103</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 202</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 371</td>
<td>3</td>
</tr>
<tr>
<td>GEO 101</td>
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<tr>
<td>GEO 102</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 222</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 321</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 331, 332</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 335</td>
<td>3</td>
</tr>
</tbody>
</table>

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

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

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

Category A

- Comparative Chordate Anatomy
- Vertebrate Zoology
- Phycology
- Mycology
- Microbiology
- Ornithology
- Vertebrate Paleontology

Category B

- Invertebrate Zoology
- Insect Biology
- Plant Morphology
- Taxonomy of Flowering Plants
- Ichthyology
- Mammalogy
- Herpetology

http://catalog.gmu.edu
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) and a year of physics (PHYS 341-342). A course in calculus is required by some and highly recommended by others. Some schools prefer students with more extensive backgrounds in biological or physical sciences, while others indicate that the undergraduate years are better devoted to humanistic pursuits that are unavailable in professional schools. Because these schools vary both in their philosophies and in their specific requirements, it is wise for the student to become aware of such information well before the application for admission. A member of the Department of Biology Health Sciences Committee may be contacted for additional information.

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

Natural Science Requirements

Students not majoring in science or mathematics should fulfill the natural science requirement with the two-semester laboratory sequence 103-104. Students who have passed 103, or 103 and 104, and subsequently decide to become biology majors should consult the chairperson of the Department of Biology. If a one-year course in biology has been completed, students are encouraged to achieve credits through taking the CLEP exam. (See the section of this catalog under College Level Examination Program.) If it is deemed necessary to complete the sequence 113, 114, then only two semester hours of credit for each of the completed courses 103, 104 will be permitted to be offered toward the major; however, these hours may be applied toward the bachelor's degree.

Other Courses Available for Undergraduate Biology Major Credit:

- GEOL 202: Invertebrate Paleontology (3)
- CHEM 461, 462: Biochemistry (3, 3); 463, 464: Biochemistry Laboratory (2, 2)

Transfer Students Residence Requirement

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

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. Similarly, grades of C or better in biology courses are required for student teaching in biology. Students not majoring in science or mathematics should complete the sequence 113, 114, then only two semester hours of credit for each of the completed courses 103, 104 will be permitted to be offered toward the major; however, these hours may be applied toward the bachelor's degree.

Department of Biology Coursework

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

BS Degree with a Major in Medical Technology

This program requires the equivalent of three years full-time study at the University, which precedes a year of clinical training at an accredited school of medical technology. On receiving notification from the school of medical technology of successful completion of the clinical year, the University awards transfer credit equivalent to GHS 401 and awards the degree. The responsibility for applying to a school of medical technology and gaining admission rests with the student; however, applications should be coordinated through the Department of Biology, which has established contact with a number of schools. Graduation from the Medical Technology Program usually occurs at the end of the Summer Session. At the time the medical technology student makes application for a degree (see Calendar), the student must initiate the process of certification of the GHS 401 credits by paying the University's Special Registration Fee. Certification of the

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More text from the catalog.
Graduate

Master of Science in Biology

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

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

Students may specialize in Environmental Biology; Systematic, Evolutionary and Population Biology; Molecular, Cellular, and Organismal Biology; Interpretative 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.

Department Entrance Requirements

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

1. Hold a baccalaureate degree in biology, or the equivalent, with a grade point average of 3.000 (B) or better in all biology courses taken;
2. Have three letters of recommendation submitted;
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.

Departmental Degree Requirements

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

1. Acquire two or more semester hours of credit in seminar—BIOL 591: Current Topics in Biology (1); BIOL 592: Seminar in Environmental Biology (1); BIOL 595: Seminar in Molecular, Cellular, and Organismal Biology (1). For all students, at least one of these credits must be in BIOL 591. In the case of students enrolled in the Environmental Biology specialization, at least one of these credits must be BIOL 592. Those students in the Molecular, Cellular, and Organismal Biology specialization must complete three hours of BIOL 595 and one hour of BIOL 591.
2. Complete at least 30 semester hours of graduate work with not more than two approved undergraduate courses. Students in the Molecular, Cellular, and Organismal Biology specialization may be required to take more than 30 hours.
3. Satisfy the departmental examiners in a comprehensive examination to be taken at the conclusion of all formal coursework and a thesis defense when appropriate.
4. In consultation with the academic adviser form a graduate committee, consisting of three individuals, within the first 15 hours of graduate work.
Specializations

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

Specialization in Environmental Biology. Students electing the Environmental Biology specialization must take BIOL 540: Environmental Biology I (3), and BIOL 541: Environmental Biology II (3), as well as the minimum of two semester hours of credit in seminar as previously described. The balance of the program will then be chosen from one of the following areas:

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

Courses available within each of these elective areas appear in the table below. A double asterisk (**) indicates a required course and a single asterisk (*) indicates an elective course. Estuarine and Coastal Ecology may be substituted for the Freshwater Ecology requirement in the first two elective areas. Up to six semester hours of credit in BIOL 593: Independent Study in Biology (1-3) and/or BIOL 599: Thesis (3-6) may be submitted for electives in any of the three areas. No more than two courses may be taken from the supporting courses allowed outside the Department of Biology.

<table>
<thead>
<tr>
<th>Undergraduate-Graduate Courses in Biology</th>
<th>Pollut. Assessment &amp; Management</th>
<th>Natural Ecosystem Management</th>
<th>Environmental Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 447: Microbial Ecology (4)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Graduate Courses in Biology

| BIOL 512: Experimental Design and Analysis for the Life Sciences (3) | *                                | *                            | *                      |
| BIOL 531: Food, Energy and Insects (3)                                 |                                 |                              |                        |
| BIOL 545: Freshwater Ecology (4)                                       |                                 |                              |                        |
| BIOL 546: Estuarine and Coastal Ecology (4)                            |                                 |                              |                        |
| BIOL 547: Analysis of Terrestrial Ecosystems (4)                       |                                 |                              |                        |
| BIOL 548: Population Ecology (3)                                       |                                 |                              |                        |
| BIOL 549: Biological Resource Management (3)                           |                                 |                              |                        |
| BIOL 558: Tropical Ecosystems (4)                                      |                                 |                              |                        |
| BIOL 565: Environmental Hazards to Human Health (3)                    |                                 |                              |                        |

Supporting Courses in Other Departments

| BIAD 511: Computer Systems for Management (3)                          |                                 |                              |                        |
| BIAD 551: Quantitative Methods of Managerial Analysis (3)             |                                 |                              |                        |
| ECON 552: Urban and Regional Economics (3)                             |                                 |                              |                        |
| ECON 555: Resource Economics (3)                                      |                                 |                              |                        |
| ECON 575: Economics of Urban Transportation (3)                       |                                 |                              |                        |

Specialization in Systematic, Evolutionary, and Population Biology. Students electing the Systematic, Evolutionary, and Population Biology specialization must have previously passed a course in basic evolutionary theory equivalent to BIOL 471: Evolution. Students are required to take BIOL 512: Experimental Design and Analysis for the Life Sciences (3); BIOL 546: Population Ecology (3); and BIOL 527: Current Problems in Evolutionary Theory (3). The departmental requirement of at least two semester hours in seminar must also be satisfied. Students in this specialization are also encouraged to complete three hours in BIOL 593: Independent Study in Biology, or three to six hours of BIOL 599: Thesis. Students who do not complete three hours in either 593 or 599 are required to complete a written as well as an oral comprehensive examination at the conclusion of their coursework. The balance of the semester hours needed to complete the 30 hours required for the MS degree are selected—with the approval of the student’s graduate committee—from the following approved graduate courses:

- BIOL 521: Origin of Cultivated Plants and Their Impact on Man and Society (3)
- BIOL 522: Methods and Principles of Animal Taxonomy (Insects) (3)
- BIOL 523: Reproductive Strategies (3)
- BIOL 524: Coevolution of Plants and Animals (3)
- BIOL 525: Animal Navigation (3)
- BIOL 526: Paleoecology (4)
- BIOL 531: Animal Behavior (3)
- BIOL 534: Speciation and Field Studies in Flowering Plants (3)
- BIOL 544: Systematics in Complex Angiosperm Families (3)
- BIOL 545: Freshwater Ecology (4)
- BIOL 546: Estuarine and Coastal Ecology (4)
Specialization in Molecular, Cellular, and Organismal Biology. Students electing the Molecular, Cellular, and Organismal Biology specialization must complete 20 hours in one of four areas (genetics, microbiology, molecular biology, physiology), including all courses marked (**), write and successfully defend a thesis based on experimental research in that area, and satisfy the departmental seminar requirement with one hour in BIOL 591 and three hours in BIOL 595. Additional hours to complete the 30 semester hours of graduate credit required for the Master of Science degree will be chosen from electives (*) on the area list. Substitutions may be made only with the approval of a student’s graduate committee and the graduate coordinator in the Department of Biology.

Students who as undergraduates have completed any required (***) courses, or their equivalent as determined by the department, are excused from those courses but must still present a total of 20 hours of graduate credit from the area list. Graduate School regulations permit no more than two approved undergraduate courses to be taken for graduate credit. It is expected that most individuals electing this specialization will have completed some of the required (**) undergraduate-graduate courses in their undergraduate programs. Students who are compelled by their area requirements to take undergraduate-graduate courses in excess of two are required to complete the excess without receiving graduate credit.

Qualification for this specialization requires prior completion of all prerequisites indicated (#) for the area chosen. Individuals without these prerequisites and provisional or non-degree admissions may enroll in courses in their area only if their graduate committee approves such enrollment based on proof of prerequisites satisfactory to the committee.

Areas

<table>
<thead>
<tr>
<th>Prerequisites to Area</th>
<th>Genetics</th>
<th>Molecular Biology</th>
<th>Physiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 301: Cell Biology (4)</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>BIOL 311: Genetics (4)</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>BIOL 326: Animal Physiology (4)</td>
<td>#</td>
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</tr>
<tr>
<td>BIOL 361: Microbiology (4)</td>
<td>#</td>
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<td>#</td>
</tr>
<tr>
<td>CHEM 211-212: General Chem. (8)</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>CHEM 313-314: Organic Chem. (10)</td>
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<td>#</td>
<td>#</td>
</tr>
<tr>
<td>MATH 113: Calculus (4)</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
</tbody>
</table>

Graduate Courses

| BIOL 511: Human Genetics (3) | * |
| BIOL 512: Experimental Design and Analysis for the Life Sciences (3) | * |
| BIOL 517: Developmental Genetics (3) | * |
| BIOL 523: Reproductive Strategies (3) | * |
| BIOL 560: Biological Ultrastructure (4) | * |

BIOL 561: Comparative Animal Physiology (3) * *
BIOL 562: Problems in Development (3) * *
BIOL 565: Environmental Hazards (3) * *
BIOL 567: Molecular Genetics (3) * *
BIOL 568: Adv. Tech. Mol. Biol. (4) * *
MATH 501: Topics Comp. Sci. (3) *

Undergraduate Courses for Graduate Credit

Students may receive graduate credit for only two such courses.

BIOL 412: Microbial Genetics (3) * *
BIOL 413: Selected Topics in Genetics (3) * *
BIOL 415: Population Genetics (3) * *
BIOL 425: Mammalian Physiology (4) * *
BIOL 446: Environmental Physiology (3) * *
BIOL 447: Microbial Ecology (4) * *
BIOL 451: Virology (3) * *
BIOL 452: Immunology (4) * *
BIOL 453: Parasitology (4) * *
BIOL 464: Plant Physiology (4) * *
BIOL 465: Histology (4) * *
CHEM 331: Physical Chem. (6) * *
CHEM 422: Inst. Analysis (4) * *
CHEM 431: Chem. Thermodyn. (3) * *
CHEM 432: Atomic Mol. Struct. (3) * *
CHEM 461, 462: Biochem. (6) * *

Specialization in Interpretative Biology. This specialization, leading to a terminal degree in science, is intended for individuals currently or recently employed in interpretative 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.

I. At least 21 hours must be taken from approved undergraduate- or graduate-level biology courses accepted by the student’s committee, including at least two seminar hours.

II. As a characteristic of this specialization, students complete degree requirements by selecting, with the approval of their graduate committee, nine hours from the following (only two of the three biology courses) or from any other non-biology graduate or undergraduate course approved for graduate credit:

| BIOL 501: Advanced General Biology: Classical Principles and Modern Views I (3) |
| BIOL 502: Advanced General Biology: Classical Principles and Modern Views II (3) |
| BIOL 503: Field Studies for Interpretative Biologists (3) |
| EDUC 563: Teaching Science in the Elementary School (3) |
| EDUC 573: Teaching Science in the Secondary School (3) |
| EDUC 591: Educational Statistics (3) |
| ENGL 403: Theory and Practice of Editing (3) |
| ENGL 517: The Writing of Nonfiction (3) |
| HIST 401: Colonial America (3) |
| HIST 403: Early National Period in American History (3) |
| HIST 406: Civil War and Reconstruction (3) |
| HIST 478: Spanish Borderlands (3) |
| HIST 500: The Study and Writing of History (3) |
| MATH 501: Topics in Computer Science (1-3) |
| ASTR 505: Fundamentals of Astronomy (3) |
CHEM 500: Selected Topics in Modern Chemistry (3)
CHEM 501: Laboratory Demonstration Techniques in the Teaching of Chemistry (3)
GEOG 520: Geography for Teachers (3)
GEOI 500: Selected Topics in Modern Geology (3)
GEOI 501: Selected Topics in Modern Geology (3)
PHED 510: Advanced Exercise Physiology (3)
PHYS 500: Physics for High School Teachers (3)
PHYS 501: Physics Laboratory Techniques for High School Teachers (3)

NOTE: Students may take no more than two undergraduate courses approved for graduate credit in categories I and II combined.

Undergraduate-Graduate Courses
The following undergraduate courses have been approved for graduate credit. No more than two of these may apply to a master's degree. Course descriptions appear in the Course Dictionary of this catalog.

BIOL 412: Microbial Genetics (3)
BIOL 413: Selected Topics in Genetics (3)
BIOL 415: Population Genetics (3)
BIOL 425: Mammalian Physiology (4)
BIOL 441: Plant Anatomy (4)
BIOL 444: Paleobotany (4)
BIOL 446: Environmental Physiology (3)
BIOL 447: Microbial Ecology (4)
BIOL 449: Mammalogy (4)
BIOL 464: Plant Physiology (4)
BIOL 465: Histology (4)
BIOL 471: Evolution (3)
BIOL 480: Ichthyology (4)
BIOL 482: Ornithology (4)
BIOL 483: Mammalogy (4)
BIOL 484: Vertebrate Paleontology (4)
BIOL 485: Herpetology (4)

Department of Biology Coursework
This department offers all coursework designated BIOL and GHS in the Course Dictionary of this catalog.

Chemistry

Faculty

Professors: Walter (Chairman), Cozzens,
Mushrush

Associate Professors: Mose (Geology), Stalick

Assistant Professors: Blackburn, Chen, Davies, Davis,
Deanhardt, Machuga, Nakadomari, Neece, Nohr, Roth,
Slayden, Turner (Geology)

Acting Assistant Professor: Govoni (Geology)

Lecturers: Trzaskoma, Zarur

(italics indicate graduate faculty.)

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 36 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, 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:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>48</td>
</tr>
<tr>
<td>English</td>
<td>12</td>
</tr>
<tr>
<td>Mathematics</td>
<td>14</td>
</tr>
<tr>
<td>Physics</td>
<td>8 or 12</td>
</tr>
<tr>
<td>Electives</td>
<td>38 or 34</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
</tr>
</tbody>
</table>

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.

Sample Schedule for BA in Chemistry

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>Elective (e.g. BIOL 113)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>CHEM 313</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 315</td>
<td>2</td>
</tr>
<tr>
<td>MATH 213</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 341</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>CHEM 321</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 331</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 336</td>
<td>2</td>
</tr>
<tr>
<td>Foreign language</td>
<td>4</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>CHEM 451</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
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<tr>
<td></td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>69</td>
</tr>
</tbody>
</table>
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>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113</td>
<td>MATH 114</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>PHYS 250</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>CHEM 212</td>
</tr>
<tr>
<td>Elective</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>MATH 213</td>
<td>MATH 304</td>
</tr>
<tr>
<td>PHYS 350</td>
<td>PHYS 352</td>
</tr>
<tr>
<td>PHYS 351</td>
<td>CHEM 222</td>
</tr>
<tr>
<td>CHEM 313</td>
<td>CHEM 314</td>
</tr>
<tr>
<td>CHEM 315</td>
<td>CHEM 318</td>
</tr>
<tr>
<td>Elective</td>
<td>CHEM 320</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>CHEM 331</td>
<td>CHEM 332</td>
</tr>
<tr>
<td>CHEM 336</td>
<td>CHEM 337</td>
</tr>
<tr>
<td>CHEM 321</td>
<td>CHEM 422</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>CHEM 441</td>
<td>CHEM 445</td>
</tr>
<tr>
<td>Chemistry elective</td>
<td>Chemistry elective</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

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

Courses in Support of Graduate Programs
Course descriptions appear in the Course Dictionary of this catalog.

Undergraduate-Graduate Courses
The following undergraduate courses have been approved for graduate credit:
CHEM 331: Physical Chemistry I
CHEM 332: Physical Chemistry II
CHEM 413: Special Topics in Organic Chemistry
CHEM 422: Instrumental Analysis
CHEM 431: Chemical Thermodynamics
CHEM 432: Atomic & Molecular Structure
CHEM 441: Properties and Bonding of Inorganic Compounds
CHEM 445: Inorganic Preparations & Techniques
CHEM 461, 462: Biochemistry

Graduate Courses
CHEM 500: Selected Topics in Modern Chemistry
CHEM 501: Laboratory Demonstration Techniques in the Teaching of Chemistry
CHEM 561: Protein Biochemistry
GEOL 500, 501: Selected Topics in Modern Geology

BS Degree with a Major in Geology
The University is planning to offer a Bachelor of Science (BS) degree with a major in geology beginning in fall of 1981. Details concerning the degree program can be obtained from the Department of Chemistry or from the faculty of geology.

Economics

Faculty
Professors: Snively (Chairman), Bennett, Bloch, Phillips
Associate Professors: Chung, Holden, Vaughn, Wiest
Assistant Professors: Alford, Anders, M. Johnson, Lareau, Pennington, Vinh
Acting Assistant Professors: Hainer, Hasan, Mattes, Pupp
Lecturers: Arafat, Attanasi, Back, Barsby, Bender, Boltz, Dolan, Ellsworth, Enin, Hanweck, T. Johnson, Kariotis, Lamm, Park, Prato, Preston, Rossiter, Scandizzo, Sheldon, Thomas, Thorpe, Uri
(Italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Economics
Students majoring in economics must satisfy general requirements set for the Bachelor of Arts degree at George Mason University. In addition they must present 33 hours of work in economics, to include ECON 306 and 311, and six hours of statistics.
Credit hours in economics may be earned in excess of 42, but the surplus hours must be listed as elective hours on the degree application form.

BS Degree with a Major in Economics
In addition to general requirements for a Bachelor of Science degree listed in the catalog, the BS with a major in economics requires 39 hours of credit in economics, to include ECON 306, 311, and 345. In addition to the 39 hours of credit in economics, students must also complete ACCT 201 (formerly BUAD 201); MATH 109 and DESC 202; MATH 113, 114, and CS 261 or 263; and a two-semester sequence in a laboratory science.
Students who contemplate graduate study in economics are advised to complete at least one course in calculus beyond MATH 114.
Secondary Teacher Certification

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

Sample Schedule for BA with Major in Economics

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication, Group A</td>
<td>Communication, Group A</td>
</tr>
<tr>
<td>Communication, Group C</td>
<td>Communication, Group C</td>
</tr>
<tr>
<td>Natural science</td>
<td>Natural science</td>
</tr>
<tr>
<td>Social science Group A (ECON 103 or 104)</td>
<td>Social science Group A (ECON 104 or 103)</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>4</td>
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<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Humanities, Group A</td>
<td>Humanities, Group A</td>
</tr>
<tr>
<td>Communication, Group C</td>
<td>MATH 108</td>
</tr>
<tr>
<td>Analytical Reasoning (MATH 103)</td>
<td>Humanities, Group C</td>
</tr>
<tr>
<td>ECON 311</td>
<td>Humanities, Group B</td>
</tr>
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<td>Communication, Group B</td>
<td>ECON 306</td>
</tr>
<tr>
<td>3</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>Economics electives</td>
<td>Economics electives</td>
</tr>
<tr>
<td>MATH 109</td>
<td>DESC 202</td>
</tr>
<tr>
<td>Social science, Group B</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>Elective</td>
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<tr>
<td>6</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics electives</td>
<td>Economics elective</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
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<td>3</td>
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</table>

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>
</tr>
<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>3</td>
<td>3</td>
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<table>
<thead>
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<th>Fourth Semester</th>
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<tbody>
<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>BUAD 201</td>
<td>Economics elective</td>
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<td>Elective</td>
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<td>3</td>
<td>3</td>
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<td>4</td>
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<tr>
<td>16</td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics elective</td>
<td>Economics electives</td>
</tr>
<tr>
<td>ECON 345</td>
<td>Electives</td>
</tr>
<tr>
<td>CS 281 or 283</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
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<tr>
<td>16</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics electives</td>
<td>Economics electives</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Department of Economics Coursework

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

Graduate

Master of Arts in Economics

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

Departmental Entrance Requirements

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

Departmental Degree Requirements

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

Faculty
Professors: Cohn (Chairman), Baxter, S. Brown, Garson, Gras, Jackson, Kelley, Molin*, Sundell**, Walls**
Associate Professors: Bergman, L. Brown, Brunette, Foreman, Gallehr, Karlson, Keaney, Keith-Tsukui, Kuebrich, Nadeau, O'Conor**, Palmieri, Radner***, Shreve**, Story
Visiting Associate Professor: Goodwin
Acting Assistant Professor: Adamson
Instructors: Fawcett****, Jacobs, Johnson
Lecturers: Argoff, Bachorik, Brent, Christy, Evans, Gardiner, Goldsmith, Laurent, Lawson, O'Connell, Oliver, M. Owens, Rockwell, Rubin, Seidel, Tombes, Watson

*On leave of absence Fall, 1979; **on leave of absence 1979-80; ***on leave of absence Spring, 1980; ****Spring, 1980. (Italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate
BA Degree with a Major in English

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

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

1. One three-semester hour course from the following: ENGL 391, 392, 397, 398, 467, 469, 485, 555 (455), and 580 (480). This requirement gives students the opportunity 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 (457), 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, 469, 503 (403).

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.

Undergraduates in Graduate English Courses
The English department permits qualified undergraduates to enroll in its graduate courses numbered 500-599 either for undergraduate or for reserved graduate credit. Students must meet the following requirements: senior status, 15 hours in English or special permission of the chairperson, a grade point average of 3.00 in advanced English courses, and permission of the instructor. The same quality of work is expected from undergraduates as from graduate students.

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

For Classicism and Romanticism (EUST 350) see European Studies Courses in the Course Dictionary of this catalog. This course does not count for credit in English.

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>Econ., govt., geog., or hist.</td>
<td>Econ., govt., geog., or hist.</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>ENGL 251 (or 203 or 205)</td>
<td>ENGL 252 (or 204 or 206)</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Anth., psyc., or soci.</td>
</tr>
<tr>
<td>Logic or mathematics</td>
<td>Philosophy or religion</td>
</tr>
<tr>
<td>Anth., psyc., or soci.</td>
<td>Electives</td>
</tr>
<tr>
<td>Oral communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Advanced English courses</td>
<td>Advanced English courses</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td>Elective</td>
<td>Art, dance, film, music, or theatre</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Advanced English courses</td>
<td>Advanced English courses</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
</tbody>
</table>

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

Graduate
The Department of English offers graduate study designed to provide professional training in the study and practice of
writing and literature to students with widely differing aims. The Master of Arts in English (30 semester hours) provides concentrations in literature, in professional writing and editing, in the writing of fiction or poetry, and in the teaching of writing and literature. The department also offers a Master of Arts in English (48 semester hours) with a special concentration in creative writing; a certificate in the teaching of English as a second language (15 semester hours); and courses as part of the Doctor of Arts in Education degree.

Master of Arts in English...

... with Concentration in Literature

... with Concentration in Professional Writing and Editing

... with Concentration in the Writing of Fiction or Poetry

... with Concentration in the Teaching of Writing and Literature

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants are asked to submit a writing sample of approximately 1,000 words and two letters of recommendation. Applicants may submit scores on the Graduate Record Examination when they believe those scores will lead to a clearer presentation of their qualifications. Those with undergraduate majors in disciplines other than English are encouraged to apply, but they may be required to make up deficiencies by taking appropriate undergraduate courses without graduate credit.

Departmental Degree Requirements

A. Successfully complete 30 semester hours of credit in graduate English courses. With the approval of the department, up to six hours of graduate credit in courses in related disciplines may be substituted for six hours in English.

B. General Requirements for all Concentrations

1. ENGL 701 (501): Literary Scholarship, normally in the first semester of study.
2. Nine hours in literature courses, including:
   a. three hours in English or American literature written before 1900.
   b. three hours in the major figures series (ENGL 765-781).
      The hours used to fulfill this requirement may not be used to satisfy 2a.
   c. for the Concentration in the Teaching of Writing and Literature only, ENGL 610 may be used to fulfill part of the literature requirement.
3. Students who have not already successfully completed 12 hours of undergraduate credit in a foreign language must either do so or demonstrate equivalent proficiency by passing an examination.

C. Concentration Requirement (one Concentration must be completed)

1. Concentration in Literature.
   a. three hours in ENGL 705 (505): Literary Theory and Criticism.
   b. nine hours in a core program organized by period, genre, theme, or some other principle approved by the student’s adviser and the director of graduate studies in English.
   c. six hours of electives.
   d. optional: six hours of thesis may be substituted for the core program
2. Concentration in Professional Writing and Editing.
   a. three hours in nonfiction writing.
   b. nine hours in professional courses: e.g., editing, technical writing, or Northern Virginia Writing Project.
   c. three hours in creative writing.
   d. three hours of thesis.
3. Concentration in the Writing of Fiction or Poetry.
   a. three hours in Form of Poetry or Form of Fiction.
   b. six hours of workshop in fiction or poetry.
   c. six hours of electives in writing or literature.
   d. three hours of thesis.
4. Concentration in the Teaching of Writing and Literature.
   a. six hours in writing courses.
   b. three hours in linguistics.
   c. six hours of electives from literature or writing.
   d. three hours in the teaching of writing and three hours in the teaching of literature.
   e. optional: a thesis may be arranged through the student’s adviser and the director of Graduate Studies in English.

Master of Arts in English...

... with a Special Concentration in Creative Writing

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants are asked to submit two letters of recommendation and a portfolio of fiction and/or poetry.

Departmental Degree Requirements

A. Successfully complete 48 semester hours of graduate credit.

B. The 48 hours must be distributed as follows:
   1. Three hours in ENGL 701 (501).
   2. 12 hours in literature.
   3. 12 to 18 hours of writing seminars in one genre.
   4. Three to nine hours in other genres.
   5. Three to six hours in nonliterary art.
   6. Zero to three hours in internship.
   7. Six hours in thesis.

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

Departmental Entrance Requirements

A. Application Material. In addition to material requested by the Graduate School and the Department of Education, applicants planning a Basic Discipline in English must present:
   1. Scores from the aptitude section of the Graduate Record Examination.
   2. A writing sample of approximately 1,000 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 credits of graduate or upper-division undergraduate work in English or American literature.
   2. Three credits in graduate or upper-division undergraduate work in Linguistics or History of the Language.
   3. Three credits of graduate coursework in Bibliography and Research, and three credits of graduate coursework in Critical Theory.

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

Certificate in the Teaching of English as a Second Language

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 Educa-
The Certificate may be pursued concurrently with any of several degree programs offered through the Department of Education, the Department of English, and the Department of Foreign Languages and Literatures, and part of the work toward the Certificate may be applicable toward degrees in those departments.

Departmental Certificate Requirements

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

1. ENGL 522: Modern English Grammar
2. ENGL 580 (480): Applied Linguistics
3. ENGL 581 (482): Psycholinguistics or ENGL 615 (515): Proseminar in Composition Instruction
4. ENGL 620 (520): Descriptive Linguistics
5. ENGL 621 (521): Teaching English as a Second Language Methodology

Undergraduate-Graduate Courses

The following undergraduate courses have been approved for graduate credit. Course descriptions appear in the Course Dictionary of this catalog.

ENGL 431: Medieval Intellectual Topics

Department of English Coursework

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

Fine, Performing Arts and Communication

Faculty

Professors: Taylor (Speech) (Chairman), diBonaventura (Music)

Associate Professors: Burton (Music), Hill (Music Education), Kanyan (Music), King* (Music), Kravitz (Art), Manchester (Speech), Swann (Dramatic Arts)

Assistant Professors: Brawley (Music), Castro (Art), Decker (Speech), Hollitt (Art), Friedley (Speech), Mattusch (Art), Murphey (Dance), Nichols* (Dramatic Arts), North (Art), Powell (Dramatic Arts), Smith (Music), Ward (Art)

Active Assistant Professors: Rainey (Speech), Werness (Art)

Instructor: O'Dor (Speech)

Lecturers: Badgley (Art), Beatty (Music), Boley (Music), Coughlin (Speech), Elgcrna (Music), Elson (Art), Gabriel (Speech), Halstead (Theatre), Hammel (Speech), Joselovitz (Drama), Kendall (Art), Lukasavich (Speech), Mahoney (Art), McCarty (Art), Perlo (Dance), Quinn (Speech), Schmitt (Music), Seltzer (Speech), Shaw (Music), Slifkin (Dance), Starosta (Speech)

*On leave of absence Spring, 1980.

**Deceased April, 1980.

(Italicics indicate graduate faculty.)

Department of Fine, Performing Arts and Communication Coursework

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

Secondary Teacher Certification

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

Requirements for the Degrees

Undergraduate Art

BA Degree with a Major Art

The major program in art prepares students for graduate study in studio art or art history, as well as for research and professional work in art.
Studio Art. In addition to general requirements for a Bachelor of Arts degree, students concentrating in studio art must complete a minimum of 42 hours in art.

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

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

Studio electives can be chosen as follows:

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

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

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

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

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

General Studio Emphasis
ART 201 or 202: Introductory Painting
ART 203 or 204: Intermediate Drawing
ART 215 or 216: Introductory Sculpture
ART 301 or 302: Intermediate Painting
ART 315 or 316: Intermediate Sculpture

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

Concentration in Art History
Introductory Drawing 6
Fundamentals of Design 6
Survey of Western Art 6
Nineteenth-Century Art 3
Twentieth-Century Art 3
Greek Art 3
Roman Art 3
Medieval Art 3
Early Renaissance Art 3
High Renaissance Art 3
Baroque Art 3
Senior Seminar in Art History 6

Art Courses
Descriptions of art courses offered by the Department of Fine, Performing Arts and Communication are listed in the Course Dictionary under ART.

Courses in Support of Graduate Programs
Course descriptions appear in the Course Dictionary of this catalog.

Undergraduate-Graduate Courses
The following undergraduate courses have been approved for graduate credit:
ART 491, 492: Advanced Studio Problems
ART 601, 602: Graduate Drawing/Painting
ART 605, 606: Graduate Printmaking
Music

Requirements for the Major in Music

The two music degree programs prepare students for graduate work in music and music literature, for research and professional work in musical activities, and for state certification to teach music on the elementary and secondary levels. Entrance to all music degree programs is by audition only. Arrangements must be made in advance for an audition by contacting the Department of Fine, Performing Arts and Communication before the scheduled audition date. Auditions are held in November, January, March, April, May, June, July, and August (normally on the first Friday of each month except for January and August when dates are scheduled during the University registration period). Competency placement tests are also required of all transfer students who desire to present transfer credit in any of the following areas: Written Harmony, Keyboard Harmony, Sight Singing, Ear Training, and Class Piano (for dates, see the Academic Calendar in the front of this catalog).

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

Bachelor of Arts with a Major in Music

In addition to general degree requirements for a Bachelor of Arts degree, music majors must complete a minimum of 42 hours in music. A total of 120 semester hours is required for the Bachelor of Arts degree in music.

Required courses in music are as follows:

- 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

Bachelor of Music

A total of 130 semester hours is required for the Bachelor of Music degree. The requirements by area are as follows:

General Education1 .................................................. 32

- ENGL 101 or 102 ..................................................... 6
- Literature ................................................................. 6

   This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures or from among the following specified 200-level courses in foreign literatures: CLAS 250, FREN 255, GERM 254, RUSS 254, SPAN 256, 257, or 258.

- Natural Sciences/Mathematics/Computer Science ......... 6
- Social Sciences ......................................................... 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
- Survey of World Music ............................................. 4
- Historical, Theoretical, and Analytical Study of Music ....... 12
- Class Composition and Arranging I ............................ 3
- General Conducting .................................................. 2
- Class Piano I, II ...................................................... 2
- Major Instrument or Voice (Private Music Instruction) ....... 12
- Ensemble .................................................................. 8

Music Electives2 ...................................................... 18

Free Electives ............................................................. 22

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

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

2Courses from the College of Arts and Sciences only.

3Students may choose electives from any or all of the following areas: Music History, Ethnomusicology, Theory, Composition, Performance, Music Education.

Bachelor of Music with Virginia Certification to Teach Music

A total of 140 semester hours is required for the Bachelor of Music with Virginia Certification to teach music.1 The requirements by area are:

General Education1 .................................................. 32

- ENGL 101 and 102 ..................................................... 6
- Literature ................................................................. 6

   This requirement is met by taking two courses in literature at the 200 level or above in English or at the 300 level or above in foreign languages and literatures or from among the following specified 200-level courses in foreign literatures: CLAS 250, FREN 255, GERM 254, RUSS 254, SPAN 256, 257, or 258.

- HIST 121 or 122 ....................................................... 3
- Social and/or behavioral science .................................. 9
- Laboratory science .................................................... 8
### Basic Musicianship

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Harmony I, II, III, IV</td>
<td>11</td>
</tr>
<tr>
<td>Keyboard</td>
<td>1</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I, II</td>
<td>4</td>
</tr>
<tr>
<td>Survey of World Music</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I, II, III, IV</td>
<td>12</td>
</tr>
<tr>
<td>Class Composition and Arranging I</td>
<td>3</td>
</tr>
<tr>
<td>General Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano I, II</td>
<td>2</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>12</td>
</tr>
<tr>
<td>Ensemble</td>
<td>7</td>
</tr>
<tr>
<td>Laboratory Ensemble</td>
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### Music Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Laboratory Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Class Instruments/Voice²</td>
<td>8</td>
</tr>
<tr>
<td>Advanced Conducting</td>
<td>2</td>
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<tr>
<td>Improvisation</td>
<td>3</td>
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<tr>
<td>Music Methods²</td>
<td>6</td>
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### Free Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics¹</td>
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<tr>
<td>Mathematics or science¹</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>
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<tr>
<td>Modern Dance²</td>
<td>1</td>
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<tr>
<td>Free elective</td>
<td>3</td>
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### Additional Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student teaching*</td>
<td>9</td>
</tr>
<tr>
<td>Physical education*</td>
<td>1</td>
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### Total

<table>
<thead>
<tr>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>140</td>
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</tbody>
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¹The music education degree program is certified by the Virginia State Department of Education and the National Council for the Accreditation of Teacher Education. General education courses and free electives are derived from state certification and NCATE requirements as outlined under the Department of Education.

²Courses from the College of Arts and Sciences only. The National Teachers Examination and the related music examination must be taken before state certification can be granted.

### Instrumental Emphasis—The following courses are required: Class Voice I and II and six of the following instrument classes (Class Guitar; Class Strings: Violin and Viola; Class Strings: Cello and String Bass; Class Woodwinds: Flute and Clarinet; Class Woodwinds: Oboe and Bassoon; Class Brass; Class Percussion). Five of the seven required ensemble credits must be earned in Symphonic Winds and/or Chamber Orchestra. Students whose major performance medium is something other than a band or orchestra instrument must earn a minimum of six additional credits of Private Music Instruction (or the equivalent) on such an instrument, the actual number to be determined by an audition committee.

### Vocal Emphasis—The following courses are required: Class Voice I and II, Class Guitar, two credits of Private Music Instruction (piano), and three of the following instrument classes (Class Strings: Violin and Viola; Class Strings: Cello and String Bass; Class Woodwinds: Flute and Clarinet; Class Woodwinds: Oboe and Bassoon; Class Brass; Class Percussion). Five of the seven required ensemble credits must be earned in University Chorus and/or College Music. Students whose major performance medium is not voice must earn a minimum of six additional credits of Private Music Instruction in voice (or the equivalent), the actual number to be determined by an audition committee.

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

### Sample Schedule for BA with Major in Music

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
</tr>
<tr>
<td>FRLN 151</td>
<td>4</td>
</tr>
<tr>
<td>Harmony I</td>
<td>3</td>
</tr>
<tr>
<td>Sight Singing and Ear Training I</td>
<td>2</td>
</tr>
<tr>
<td>Class Piano I</td>
<td>1</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>15</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 102</td>
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<tr>
<td>FRLN 152</td>
<td>4</td>
</tr>
<tr>
<td>Harmony II</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>
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<tr>
<td>Ensemble</td>
<td>15</td>
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**Third Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature (English or foreign languages and literatures)</td>
<td>3</td>
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<tr>
<td>FRLN 265</td>
<td>4</td>
</tr>
<tr>
<td>Natural science</td>
<td>4</td>
</tr>
<tr>
<td>Harmony III</td>
<td>3</td>
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<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
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<tr>
<td>Ensemble</td>
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</table>

**Fourth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Literature (English or foreign languages and literatures)</td>
<td>3</td>
</tr>
<tr>
<td>Survey of World Music</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>Major Instrument or Voice (Private Music Instruction)</td>
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<tr>
<td>Ensemble</td>
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**Fifth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics or logic</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>3</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I</td>
<td>3</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
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<td>Ensemble</td>
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**Sixth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Social science</td>
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<tr>
<td>Fine arts elective</td>
<td>3</td>
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<tr>
<td>Historical, Theoretical, and Analytical Study of Music II</td>
<td>3</td>
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<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
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<td>Ensemble</td>
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**Seventh Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Social science</td>
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<tr>
<td>Historical, Theoretical, and Analytical Study of Music III</td>
<td>3</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>1</td>
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<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Oral communication</td>
<td>3</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
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<td></td>
<td>17</td>
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**Eighth Semester**

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music IV</td>
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<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
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</tr>
<tr>
<td>Electives</td>
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Sample Schedule for Bachelor of Music

**First Semester**

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<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
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</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
</tr>
<tr>
<td>Harmony</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>
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<tr>
<td>Ensemble</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 102</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
</tr>
<tr>
<td>Harmony</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>
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<tr>
<td>Ensemble</td>
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**Third Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Literature (English or foreign languages and literatures)</td>
<td>3</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>
<tr>
<td>Natural sciences/mathematics/computer science</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Fourth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</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>
<td>1</td>
</tr>
<tr>
<td>Natural sciences/mathematics/computer science</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fifth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music I</td>
<td>3</td>
</tr>
<tr>
<td>Class Composition and Arranging I</td>
<td>3</td>
</tr>
<tr>
<td>General Conducting</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>
<tr>
<td>Music elective</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

**Sixth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music II</td>
<td>3</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music electives</td>
<td>6</td>
</tr>
<tr>
<td>Social science</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Seventh Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music III</td>
<td>3</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music elective</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Eighth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music IV</td>
<td>3</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>1</td>
</tr>
<tr>
<td>Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Music electives</td>
<td>6</td>
</tr>
<tr>
<td>Free electives</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>
Music Courses

Descriptions of music courses offered by the Department of Fine, Performing Arts and Communication are listed in the Course Dictionary under MUSI.

Courses in Support of Graduate Programs

Course descriptions appear in the Course Dictionary of this catalog.

Undergraduate-Graduate Courses

The following undergraduate courses have been approved for graduate credit:

MUSI 445: Bibliography and Research Techniques
MUSI 496: Seminar in Ethnomusicalogical Area Studies

Graduate Courses

MUSI 561: Advanced Topics in Music Education

Speech

BA Degree with a Major in Speech

The speech program prepares the major for graduate study and/or a career in three areas of communication:

1. Public Communication
2. Interpersonal Communication
3. Mass Communication

In addition to the general requirements for a Bachelor of Arts degree, speech majors must complete a minimum of 39 semester hours in communication. Required courses in communication are as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 300: Public Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301: Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 302: Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>Communication Electives</td>
<td>21</td>
</tr>
<tr>
<td>(12 hours must be at the 300 or 400 level)</td>
<td></td>
</tr>
<tr>
<td>Cognate Courses</td>
<td>9</td>
</tr>
<tr>
<td>(see the list below)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>

The following courses are recognized as cognate courses in the speech major program:

AMST 201, 202, and 401
ENGL 301, 309, 310, 331, 391, 397, 398, 467, 469, 503 (403), and 581 (482)
GOVT 310
PSYC 220, 230, 231, 309, 326, 533 (432), and 581 (482)
PUAD 241
SOCI 203, 204, 206, 307, and 332
THR 160, 220, 350, and 401

COMM 100 may not be counted toward the minimum 31 semester hours for the major; however, it may count toward BA communication requirements or as an elective.

Communication Courses

Descriptions of communication courses offered by the Department of Fine, Performing Arts and Communication are listed in the Course Dictionary under COMM.

Theatre

BA Degree with a Major in Theatre

The theatre program prepares the major for graduate study in acting and directing, technical theatre, history and literature, and dance, as well as for professional activities and research.

In addition to general requirements for the Bachelor of Arts degree, theatre majors must complete a minimum of 42 hours in the major: 23 hours 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 and...
3. History and Literature

<table>
<thead>
<tr>
<th>Area of Concentration</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre or East Asia</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Theatre of East Asia</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Black Theatre</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Theories of Theatre</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Practicum**</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

Potential electives include:
- Foreign language
- Social science
- American culture
- Music
- Philosophy
- Foreign language
- Social science
- American culture
- Music
- Philosophy
- American culture
- Music
- Philosophy

**Theatre of East Asia**

<table>
<thead>
<tr>
<th>Area of Concentration</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre of East Asia</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Black Theatre</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Theories of Theatre</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Practicum**</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

Potential electives include:
- Foreign language
- Social science
- American culture
- Music
- Philosophy
- Foreign language
- Social science
- American culture
- Music
- Philosophy
- American culture
- Music
- Philosophy

**Foreign Language**

- Social science
- American culture
- Music
- Philosophy

**American Culture**

- Music
- Philosophy

**Music**

- Philosophy

**Philosophy**

- Music
Foreign Languages and Literatures

Faculty

Professors: Aguera (Spanish), Eistun (German), Font (Spanish), Willis (French)

Associate Professors: Hecht (Russian) (Chairman), Chu (Asian Languages), Cordero (French), Goldin (Spanish), Hazera (Spanish), Hobson (German), Meyer (French), Tedder (French), Villavicencio (Spanish)

Assistant Professors: Brooks* (Spanish), Bufill (Spanish), Evans (French), LePage (French), Wekerle (German)

Lecturers: Barilla (Spanish), Berls (Russian), Bledsoe (Spanish), Fagg (German), Gordon (Classics), Harmon (French), Layman (Classics), Rivera-La Scala (Spanish), Seidman (German), Smith (French), Yager (French)


(italics indicate graduate faculty.)

Department of Foreign Languages and Literatures Coursework

This department offers all coursework designated CLAS, FREN, FRLN, GERM, GREE, JAPA, KORE, LATN, PORT, RUSS, SPAN, and VIET in the Course Dictionary of this catalog.

General Aims and Guidelines

Courses in the Department of Foreign Languages and Literatures are designed to meet the needs of several categories of students. A major is provided in French, German, and Spanish for those who wish to build a liberal education around the intensive study of a foreign language, literature, and culture; for those who plan to undertake graduate study in these fields; and for those who intend to become foreign language teachers, professional translators, interpreters, and foreign correspondents.

Elective courses are provided on several levels for those who wish to acquaint themselves with the language, culture, literature, and worlds of thought outside their own environment; for those majoring in disciplines that require the knowledge of one or more foreign languages; and for those who recognize that the knowledge of a foreign language or literature combined with other professional interests in business and industry will enhance employment opportunities and advancement. These elective courses are CLAS 250 and 300; FREN 252, 254, 325, and 329; GERM 252 through 255; RUSS 252, 254, 311, 353, and 354; and SPAN 325, 353, and 359.

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

- CLAS 250: Classical Myths and Legends (3)
- CLAS 300: Homer and Greek Tragedy (3)
- FREN 325: Major French Writers (3)
- FREN 329: Problems of Western Civilization in French Literature (3)
- FRLN 431: Medieval Intellectual Topics (3)
- FRLN 450: Methodology of Foreign Language Teaching (3)
- GERM 301: German Culture and Civilization (3)
- GERM 302: Germany Today (3)
- GERM 305: Field Study in German Culture (1)
- GERM 325: Major German Writers (3)*
- JAPA 301, 302: Japanese Culture and Civilization (3, 3)
- KORE 450, 451: Korean Culture and Civilization (3, 3)
- RUSS 300: Field Study in Russian Culture (1, 2, or 3)
- RUSS 353: Russian Civilization (3)
- RUSS 354: Contemporary Soviet Life (3)
- SPAN 325: Major Hispanic Writers (3)*
- EUST 300: Foundations of European Civilization (3)
- EUST 350: Classicism and Romanticism (3)
- EUST 400: The Arts in Modern European Culture (3)
- EUST 450: The Twentieth Century in Europe
- VIET 301, 302: Vietnamese Culture and Civilization (3, 3)

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

Theatre Courses

Descriptions of theatre courses offered by the Department of Fine, Performing Arts and Communication are listed under THR in the Course Dictionary.
Elementary and intermediate courses are offered in French, German, Latin, Portuguese, Russian, and Spanish, which may be used to fulfill the college’s foreign language area requirement for the BA degree. These courses are also designed to broaden the student’s general educational background and strengthen an awareness of the intrinsic value of language and linguistic heritage. The language laboratory complements the oral and written work of the classroom with tapes, drills, exercises, and cultural materials. Language instruction is also offered in Japanese, Korean, and Vietnamese.

Courses Which Fulfill General Requirements

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 301, 302.

Secondary Teacher Certification

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

Requirements for the Degrees

Undergraduate

French

BA Degree with a Major in French

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

1. one advanced language course (FREN 351, 353, 355, 356, or 461);

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

3. one survey course in French literature (FREN 377 or 378);

4. four courses at the 400 level.

No more than six hours in French literature in translation may be applied to the major.

Students majoring in French are encouraged to take courses in other languages and literatures, and in related disciplines such as music, art, history, and philosophy. Those wishing to complete a double major in French and another subject are urged to work in consultation with advisers in both disciplines.

Sample Schedule for French Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 151</td>
<td>FREN 152</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Natural science</td>
<td>Social science</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Natural science</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

Courses in Support of Graduate Programs

Course descriptions appear in the Course Dictionary of this catalog.

Undergraduate-Graduate Courses

The following undergraduate courses have been approved for graduate credit:

- FREN 405: French Literature of the Renaissance
- FREN 413: French Literature of the Seventeenth Century: Classical Drama
- FREN 414: French Literature of the Seventeenth Century: Prose and Poetry
- FREN 421: French Literature of the Eighteenth Century: Montesquieu and Voltaire
- FREN 422: French Literature of the Eighteenth Century: Diderot and Rousseau
- FREN 461: Linguistic Structure of Modern French

Graduate Courses

- FREN 525: Studies in Modern French Literature
- FREN 550, 551: Special Topics

French Courses

Descriptions of French courses offered by the Department of Foreign Languages and Literatures are listed alphabetically in the Course Dictionary under FREN.

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 Sciences, students must complete 27 hours of work in German courses at the 300 and 400 levels for the German major. Students are expected to complete a balanced program that includes courses in (1) language, (2) culture and civilization, and (3) literature. The literature component must include GERM 340. Students are urged to include PHIL 231, 232, and ENGL 391 among their electives.

Students who plan to double major in German and another subject will prepare a program of study in consultation with advisers from both disciplines.
Courses in Support of Graduate Programs
Course descriptions appear in the Course Dictionary of this catalog.

Undergraduate-Graduate Courses
The following undergraduate courses have been approved for graduate credit:
GERM 360: Literature of German Romanticism
GERM 370: German Literature: 1830-1880
GERM 420: Linguistics of Modern German
GERM 440: German Drama in the Age of Classicism
GERM 441: Goethe
GERM 450: Modern German Literature: 1880-1925
GERM 451: Modern German Literature: 1925 to the Present

German Courses
Descriptions of German courses offered by the Department of Foreign Languages and Literatures are listed in the Course Dictionary under GERM.

Spanish
BA Degree with a Major in Spanish
The degree program in Spanish prepares the major to qualify for positions in government and industry, to undertake graduate study in Spanish, or to teach on the secondary level.

In addition to meeting the general degree requirements for the Bachelor of Arts degree as established by the College of Arts and Sciences, students must complete 27 hours of work in Spanish courses at the 300 level for the Spanish major. SPAN 303, 304, 317, and 318 are required. Six hours may be taken in Spanish courses in translation. Students who major in Spanish will also find it useful to complete some or all of these related courses: ENGL 313: Critical Approaches to Literature; ENGL 391: General Linguistics; HIST 271, 272: Latin American History; and HIST 443: History of Spain and Portugal.

Graduate
Master of Arts in Spanish
This program offers courses in the Spanish language; literary theory and criticism; and Spanish and Spanish-American literature, culture, and civilization. An emphasis on Bilingual Studies is available.

The degree may be terminal for those planning to teach at the secondary and community college levels, or it can provide sound preparation for students who plan to continue toward the PhD.

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, applicants are expected to have a BA degree with a major in Spanish, although students with majors in related fields who know the language are encouraged to apply. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

In addition, two letters of recommendation are required from professors of Spanish with whom the applicant has studied or from others directly familiar with his/her professional competence.

Departmental Degree Requirements
In addition to fulfilling the degree requirements of the Graduate School, the candidate must meet the following departmental requirements:
1. Completion of 30 hours of coursework, including SPAN 500 and SPAN 515. Six of the 30 hours may be earned in a related field (e.g., Latin American History) approved in advance by the student's faculty adviser. A list of related fields and courses is available on request. At the student's option, six hours may also be earned in SPAN 599 (Thesis). If a student elects not to write a thesis, his/her program must include at least two seminars (SPAN 520 and above) in which substantial research papers are required.
2. Satisfactory performance on a written comprehensive examination.
3. Reading proficiency in one other foreign language, as demonstrated in a departmentally administered examination; the Graduate School Foreign Language Test, taken under the auspices of the Educational Testing Service; or a graduate reading examination administered and endorsed by the language department of another accredited school.
Undergraduate-Graduate Courses

The following undergraduate courses have been approved for graduate credit. Course descriptions appear in the Course Dictionary of this catalog.

SPAN 412: Special Studies in Literature
SPAN 422: Hispanic Sociolinguistics

Spanish Courses

Descriptions of Spanish courses offered by the Department of Foreign Languages and Literatures are listed alphabetically in the Course Dictionary under SPAN.

History

Faculty

Professors: Boothe*, Cassara, Spence
Associate Professors: Harsh (Chairman), Gleissner, Jensen, Lytton, Pacheco, Pugh, Saeed, Soder, Spindler
Assistant Professors: Censer, Cohen, DeMarce, Deshmukh, Hawkes, Henriques, Siu, Walker
Acting Assistant Professor: Longwell (Regional Cultures)
Lecturers: Angel, Cohn, Jessup, Lykes

*Fall, 1979, only.
(italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate

Bachelor of Arts with a Major in History

Candidates for a Bachelor of Arts degree in history must present 36 semester hours of history, with at least 21 hours of the total presented for the degree in the 300 and 400 series. Requirements for a degree in history include:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. United States history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>2. European history at the 100, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>3. Latin American, African, Asian or Middle Eastern history at the 200, 300, and/or 400 levels</td>
<td>6</td>
</tr>
<tr>
<td>4. HIST 300</td>
<td>3</td>
</tr>
<tr>
<td>5. HIST 499</td>
<td>3</td>
</tr>
<tr>
<td>6. Electives in history at the 300 and/or 400 levels</td>
<td>12</td>
</tr>
<tr>
<td>Total</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.

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>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>HIST 102</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>English composition</td>
<td>English composition</td>
</tr>
<tr>
<td>Social science (Group A or B)</td>
<td>Social science (Group A or B)</td>
</tr>
<tr>
<td>Fine arts</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

Department of History Coursework

This department offers all coursework designated HIST and LAC in the Course Dictionary of this catalog.

Graduate

Master of Arts in History

This program is designed to help students achieve a greater understanding of the discipline of history and to master the methodology of the historian. Since this is a research-oriented program, it can be useful to students who plan to become candidates for the PhD.

Students may concentrate on the history of the United States, Modern Europe, or Latin America.

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants for the Master of Arts in history should have majored in history at the undergraduate level. Students with undergraduate majors in fields other than history may be admitted, if their records demonstrate strong background in history and studies closely related to it. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

Other Requirements

1. Satisfactory scores in the Graduate Record Examination, including the area examination in history.
2. Two letters of recommendation from professors of history with whom the applicant has studied or from others directly familiar with the applicant’s professional competence.
3. Language proficiency, where appropriate to the student’s field of concentration, may be required as a prerequisite for admission to the program. (See general language requirements under Departmental Degree Requirements below.)

Departmental Degree Requirements

Candidates for the Master of Arts degree in history must successfully meet the following requirements to be awarded the degree:

1. With thesis, 30 semester hours of approved graduate work with a grade point average of not less than 3.00; or, alternatively, 33 semester hours of approved graduate work with a grade point average of not less than 3.00.
2. Three semester hours in HIST 500 (to be taken within the first nine hours of coursework).
3. 12 semester hours in a major field of concentration, including one research seminar; such major fields
presently offered are United States, Latin American, and Modern European history.
4. Nine semester hours in a second field of history; minor fields presently offered are United States, Latin American, and Modern European history.
5. A student's program may include up to six semester hours in approved undergraduate courses.
6. Candidates must meet the foreign language requirement in one of the following ways:
   a. have successfully completed (before completing 15 hours of graduate work) college courses through the intermediate level in a modern foreign language appropriate to the field of concentration.
   b. pass a proficiency examination administered by the foreign languages and literatures department.
7. Pass an oral comprehensive examination administered by the history faculty covering the area of concentration and one other field of history. The candidate must petition the chairperson to schedule this examination no earlier than the end of the last semester of coursework, nor later than the beginning of the next regular semester. Oral comprehensive examinations are not scheduled during the summer session.
8. One of the following alternatives:
   a. Six semester hours in HIST 599 (Thesis);
   b. Nine semester hours, including one additional research seminar in either major or minor field and two elective graduate history courses, which need not be in the candidate's fields of concentration.

Sample Program for the MA in History with Thesis Courses

<table>
<thead>
<tr>
<th>Thesis Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 500</td>
<td>3</td>
</tr>
<tr>
<td>Field of major concentration</td>
<td>12</td>
</tr>
<tr>
<td>United States, Latin American, or</td>
<td>(including one</td>
</tr>
<tr>
<td>Modern European history</td>
<td>research seminar)</td>
</tr>
<tr>
<td>Field of minor concentration</td>
<td>9</td>
</tr>
<tr>
<td>same fields as above</td>
<td></td>
</tr>
<tr>
<td>HIST 599 (Thesis)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Sample Program for the MA in History without Thesis

<table>
<thead>
<tr>
<th>Thesis Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 500</td>
<td>3</td>
</tr>
<tr>
<td>Field of major concentration</td>
<td>12</td>
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<tr>
<td>United States, Latin American, or</td>
<td>(including one</td>
</tr>
<tr>
<td>Modern European history</td>
<td>research seminar)</td>
</tr>
<tr>
<td>Field of minor concentration</td>
<td>9</td>
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<tr>
<td>same fields as above</td>
<td></td>
</tr>
<tr>
<td>Additional coursework</td>
<td></td>
</tr>
<tr>
<td>Research seminar</td>
<td>3</td>
</tr>
<tr>
<td>(in major or minor field)</td>
<td></td>
</tr>
<tr>
<td>Two elective history graduate courses</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

Master of Arts in Teaching (History)
The program leading to the degree of Master of Arts in Teaching is designed to help teachers extend their knowledge of bibliography and current trends in historical thinking and to improve their effectiveness in presenting history in the 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 for the degree of Master of Arts in Teaching should have majored in history. Applicants with undergraduate majors in fields other than history may be admitted if their records demonstrate strong background in history and studies closely related to it. The department may require that undergraduate deficiencies be made up in courses without graduate credit.

Other Requirements
1. Satisfactory scores in the Graduate Record Examination, including the area examination in history.
2. Two letters of recommendation from professors of history with whom the applicant has studied or from others directly familiar with his/her professional competence.

Departmental Degree Requirements
Candidates for the Master of Arts in Teaching must successfully complete the following:
1. 24 credits in history, including the three credits in HIST 500 (to be taken within the first nine hours of coursework).
2. 12 credits in education, including EDUC 567 and 583.
3. A comprehensive examination administered by the faculty.
Candidates intending to teach at the secondary level must also qualify for the Virginia Collegiate Professional Certificate (or its equivalent) in history.

The Master of Arts in Teaching Degree requires a minimum of 36 hours of graduate credit.

Undergraduate-Graduate Courses
A student's program may include up to six semester hours in approved Undergraduate Courses. The following courses, descriptions of which appear in the Course Dictionary of this catalog, have been approved for graduate credit:
HIST 401: Colonial America
HIST 403: Early National Period in American History
HIST 404: Jacksonian Democracy, 1820-1848
HIST 406: Civil War and Reconstruction
HIST 409: Between the Wars: The United States, 1919-1941
HIST 410: The United States Since World War II: Nation and Empire
HIST 411: Cultural and Intellectual History of the United States: 1600-1865
HIST 412: Cultural and Intellectual History of the United States since 1865
HIST 435: Social Transformation and Culture in Seventeenth- and Eighteenth-Century Europe
HIST 436: European Society and Culture: Nineteenth and Twentieth Century
HIST 441: France Since the Revolution
HIST 443: History of Spain and Portugal
HIST 463: Ancient India and Pakistan
HIST 464: Modern India and Pakistan
HIST 470: Diplomacy and War in Latin America
HIST 475: History of Mexico
HIST 478: Spanish Borderlands

Department of History Coursework
This department offers all coursework designated HIST and LAC in the Course Dictionary of this catalog.
Mathematical Sciences

Faculty

Professors: Oppelt (Chairman), Papp, Smith (Mathematics Education)

Associate Professors: R. Bolstein, Cabell, Draper, K. Fischer, Kiley, Rice, Superster, Seidman, Sennott*

Assistant Professors: Becker, Carrig, Damiano, Gabel, Gantz, Greenland, Grotzinger*, Levy, Lim, Liu**, Manare, Miller, Paik

Lecturers: Adolfson, Andersen, Arrillaga, H. Bolstein, Cragg, Driver, Dykes, E. Fischer, Frazier, Friend, Goldschen, Kafatou, Kerrigan, Lanier, Marin, Monk, Morse, Mouchahoir, Oliver, Ong, Perunko, Roberts, Senus, C. Swain, T. Swain

**Fall, 1979, only. (Italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Mathematics

In addition to general degree requirements for a Bachelor of Arts degree, the following courses are required: MATH 115, 116, 215, 306, plus 18 additional hours of which at least 12 must be numbered above 310 for a total of 46 semester hours in mathematics. Three semester hours in computer science are recommended.

Those students pursuing certification for secondary school teaching are recommended.

In addition to general degree requirements for a Bachelor of Arts degree, the following courses are required: MATH 115, 116, 215, 306, 315, 316, 321, 322, plus 18 additional hours of which at least 12 must be numbered above 310 for a total of 46 semester hours in mathematics. CS 263 and CS 264 are also required.

The science requirements may be fulfilled by one of the following four options: PHYS 250, 350, 351, 352, 353; four semesters of chemistry excluding CHEM 103, 104, 106, four semesters of biology excluding BIOL 103, 104, 124, 125, 185, 211, 225; CHEM 211-212 and BIOL 113, 114.

The department strongly recommends that a two-year proficiency in either French, German, or Russian be demonstrated by each student pursuing a Bachelor of Science degree.

MATH 113, 114, 213, 304 are not recommended for mathematics majors. MATH 103, 104, 106, 108, 109, 252, 254, 255, 256, 371, 372 and 373 do not count toward satisfying the requirements for a major in mathematics. Students may not duplicate equivalent courses in the 113 and 115 sequence.

For Non-Majors

Designed for the students in the social and behavioral sciences are MATH 103, 104, 108, and 109, and CS 261 and 262. Liberal arts majors are advised to take either MATH 106 or the sequence 103, 104, and possibly CS 261. Students in the natural sciences who plan to do graduate work are advised to add to their basic calculus sequence from CS 263, CS 264, MATH 313, 314, 351, 352, 382, 443, 444, 446, 447. Students pursuing certification for elementary school teaching are advised to take MATH 103, 104, 106, 113, 114, 200; CS 261, 262, 263, 264. Students who have taken MATH 113 may not receive credit for MATH 108. Also, credit for MATH 252 and MATH 109 may not be duplicated.

Department of Mathematical Sciences Coursework

This department offers all coursework designated CS and MATH in the Course Dictionary of this catalog.

BS Degree with a Major in Computer Science

In addition to the general degree requirements for a Bachelor of Science degree, the following courses are required: Computer Science: CS 263, 264, 364, 365, 465, plus 15 additional hours of courses numbered above 300 for a total of 46 hours in computer science. Mathematics: MATH 113, 114, 213, 304, 315, 451, 452, 446, for a total of 26 hours in mathematics. Engineering: ENGR 441.

Students are also required to complete 15 hours of computer science-related courses in other disciplines. These courses may be chosen from the following: INF 311 (formerly DESC 311 or BUAD 312), 312 (formerly DESC 312 or

Sample Schedule for BA Mathematics Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>First Semester</td>
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<td>CS 161</td>
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<td>MATH 215</td>
<td>MATH 306</td>
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<tr>
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<td>Philosophy or religion 3</td>
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<td>MATH 321</td>
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<td>MATH 315</td>
<td>MATH 316</td>
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<tr>
<td>Soci., psych., or anth. 3</td>
<td>Soci., psych., or anth. 3</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>Electives 6</td>
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<td>MATH 311-400 level 3</td>
<td>MATH 311-400 level 3</td>
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<td>MATH 400 level 3</td>
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Sample Schedule for BS Mathematics Majors

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<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>CS 161</td>
<td>CS 161</td>
</tr>
<tr>
<td>Natural science 4</td>
<td>Natural science 4</td>
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<tr>
<td>MATH 115</td>
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<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>Natural science 4</td>
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<tr>
<td>MATH 215</td>
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<td>FRLN 251</td>
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<td>MATH 315</td>
<td>ENGR 441</td>
</tr>
<tr>
<td>MATH 321</td>
<td>MATH 322</td>
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<td>Elective (nonscience) 3</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
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<tbody>
<tr>
<td>MATH 351</td>
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<td>MATH 400 level 3</td>
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<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Elective (nonscience) 3</td>
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<tr>
<td>15</td>
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</table>

http://catalog.gmu.edu
BUAD 316, 411 (formerly DESC 411 or BUAD 415); MATH 352, 443, 444, 447; ENGR 285, 301, 442.

Students are strongly urged to complete PHYS 250, 350, 351, 352, 353.

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

<table>
<thead>
<tr>
<th>Sample Schedule for BS Computer Science Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
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<tr>
<td>CS 161</td>
</tr>
<tr>
<td>ENGL 101</td>
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<tr>
<td>MATH 113</td>
</tr>
<tr>
<td>Elective (nonscience)</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
</tr>
<tr>
<td>CS 264</td>
</tr>
<tr>
<td>MATH 213</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>PHYS 350</td>
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<td>MATH 351</td>
</tr>
<tr>
<td>Elective (nonscience)</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
</tr>
<tr>
<td>MATH 322</td>
</tr>
<tr>
<td>CS 365</td>
</tr>
<tr>
<td>ENGR 441</td>
</tr>
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<td>Elective (CS-related)</td>
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<tr>
<td>Seventh Semester</td>
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<tr>
<td>MATH 351</td>
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<tr>
<td>MATH 466</td>
</tr>
<tr>
<td>CS Elective</td>
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</tbody>
</table>

Departmental Degree Requirements

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

1. Complete no less than 30 semester hours of graduate work approved by the department. Up to six hours toward the master's degree in mathematics may be chosen from certain mathematically related courses in other departments, provided prior approval has been obtained from the department.
2. Complete MATH 515 and 516 by the end of the second full year in the degree program.
3. Complete a research component of the degree (Thesis 599/Seminar 591, 592). This component must be at least three hours and may not exceed nine hours. No more than six hours of either thesis or seminar can be applied toward the 30 hour minimum requirement for the degree.
4. Pass a comprehensive examination.

Undergraduate-Graduate Courses

The following undergraduate courses have been approved for graduate credit. Course descriptions appear in the Course Dictionary of this catalog.

MATH 443, 444: Deterministic Models in Operations Research

Department of Mathematical Sciences Coursework

This department offers all coursework designated CS and MATH in the Course Dictionary of this catalog.

**Philosophy and Religion**

Faculty

*Professors: McFarlane (Philosophy) (Chairman, Fall, 1979), Kreilkamp* (Philosophy)

*Associate Professors: Fletcher (Philosophy) (Acting Chairman, Spring, 1980), Bergoffen (Philosophy), Holman (Philosophy), Houlgate* (Philosophy), McDermott (Philosophy), Yance (Religion)

*Assistant Professors: Halbrook (Philosophy), Pielke (Religion), Rothbart (Philosophy), Srinivasan (Indian Studies)

*Lecturers: Golash (Philosophy), Jackson (Religion), Roberts (Religion), Ross (Philosophy)*

*On leave of absence Spring, 1980.

*On leave of absence academic year, 1979-80.

(italics indicate graduate faculty.)

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. Students who plan to major in philosophy for any of these reasons should read carefully the following paragraph and, with the assistance of their advisers, plan a course of study that is most appropriate to their interests.

In addition to general requirements for a Bachelor of Arts degree, philosophy majors must complete at least 33 semester hours in philosophy, including: History of Western Philosophy (both semesters) and either Logic or Symbolic Logic. At least 18 semester hours, which are credited toward the major, must be courses at the 300 level or above, including
six hours at the 400 level. For those students who plan to pursue graduate studies in philosophy, the following courses are recommended: Ethics or Social and Political Philosophy; Metaphysics; Philosophy of Mind or Theory of Knowledge; Twentieth-Century Analytic Philosophy; Contemporary Continental Thought (Existentialism and Phenomenology.)

Courses in Support of Graduate Programs

Course descriptions appear in the Course Dictionary of this catalog.

Graduate
PHIL 531: Freud and Philosophy

Department of Philosophy and Religion Coursework

This department offers all coursework designated PHIL and RELI in the Course Dictionary of this catalog.

Physics

Faculty

Professors: Ehrlich (Chairman), Johnston, Lankford, Mielczarek
Associate Professors: Black (Coordinator, Engineering), Evans (Astronomy), Kafatos (Astronomy), Lieb
Assistant Professors: Ceperley (Engineering), Flinn, Keramidas* (Engineering), Pedroni
Visiting Assistant Professor: Baguio (Engineering)
Lecturer: Nainan

*On leave of absence, 1979-80. (Italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate

Requirements for the Major

Entering freshmen who do not have a math SAT score of 600 should take a proficiency examination in elementary algebra and trigonometry. The test is given before the beginning of the summer, fall, and spring semesters. The exact dates may be found in the Academic Calendar. Students who fail the examination are urged to take MATH 101 or retake and pass the examination. Ideally, MATH 101 should be taken during the summer prior to MATH 113, or alternatively along with MATH 113 in the student's first semester.

BS Degree with a Major in Physics

In addition to general degree requirements, a Bachelor of Science in physics requires the completion of 44 semester hours in the major and 23 semester hours in mathematics. The following physics courses are required for the BS degree: PHYS 111, 250, 350, 351, 352, 353 (2 cr), 303, 305, 306, 402, 403, 405, 407, 416. The remaining eight credits are to be elected from PHYS 406, 410, 414, 301, 302, 307, 412, ASTR 328, and ASTR 428 with at least five semester hours from the first three courses. Included in the 23 semester hours of mathematics, the following courses are required: the two-year calculus sequence (MATH 113-114 and 213-214); PHYS 311 or MATH 313; PHYS 312 or MATH 314; plus one course in mathematics at the 300 or 400 level.

The course labeled “Problems in Physics” is intended for the outstanding student who can proceed beyond the standard requirements of other courses in the physics program.

Students electing the Bachelor of Science program in physics are required to demonstrate a proficiency in computer programming. Proficiency in computer programming is required for senior level physics courses. One way to demonstrate such proficiency is to complete a computer programming course.

BA Degree with a Major in Physics

In addition to general degree requirements, a Bachelor of Arts in physics requires the completion of 31 semester hours in the major and 17 semester hours of mathematics. The following physics courses are required: PHYS 111, 250, 350, 351, 352, 353 (2 cr), 303, 305, 306, 402, and either 407 or 302.

Voluntary Comprehensive Examination

The physics faculty offers a comprehensive examination each spring, which is optional for senior physics majors. An outstanding performance on this examination entitles the
student to the following statement on his/her transcript: "Voluntary Comprehensive Examination in Physics Passed with Distinction, (date)."

**Secondary Teacher Certification**

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

**Department of Physics Coursework**

PHYS 341-342 are recommended for biology and premedical students and for mathematics and chemistry majors who seek a Bachelor of Arts degree. PHYS 103, 104, 106, 151, 201, and 315 are intended for nonscience majors. PHYS 250, 350, 351, 352, and 353 consist of a calculus-based sequence in general physics to be taken by physics and engineering majors and those chemistry and mathematics students who pursue a Bachelor of Science degree. Students may receive credit for only one of the following sequences: 341-342; or 103, 104; or 250, 350, 351, 352, 353.

This department offers all coursework designated ASTR, ENGR, and PHYS in the Course Dictionary of this catalog.

<table>
<thead>
<tr>
<th>Sample Schedule for Physics Majors</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>PHYS 111</td>
</tr>
<tr>
<td>MATH 113</td>
</tr>
<tr>
<td>CHEM 111 or BIOL 113</td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>Elective</td>
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<td>15</td>
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</tbody>
</table>

| **Third Semester** | **Fourth Semester** |
| PHYS 350 | PHYS 352 |
| PHYS 351 | MATH 214 |
| Literature | Literature |
| Elective | Computer science |
| 16 | 14 |

| **Fifth Semester** | **Sixth Semester** |
| PHYS 303 | PHYS 308 |
| PHYS 305 | PHYS 302 |
| PHYS 311 | PHYS 312 |
| Mathematics elective | PHYS 402 |
| Elective | Elective |
| 15 | 16 |

| **Seventh Semester** | **Eighth Semester** |
| PHYS 403 | PHYS 410 |
| PHYS 405 | PHYS 414 |
| PHYS 407 | PHYS 408 |
| Mathematics elective | PHYS 412 |
| Elective | Elective |
| 15 | 16 |

| **Courses in Support of Graduate Programs** |
| Course descriptions appear in the Course Dictionary of this catalog. |

**Undergraduate-Graduate Courses**

The following undergraduate courses have been approved for graduate credit:

PHYS 403: Introduction to Quantum Mechanics and Atomic Physics
PHYS 405: Statistical Mechanics and Thermodynamics
PHYS 410: Solid State Physics
PHYS 412: Computational Physics
PHYS 414: Introductory Nuclear Physics

**Graduate Courses**

ASTR 505: Fundamentals of Astronomy
PHYS 500: Physics for High School Teachers
PHYS 501: Physics Laboratory Techniques for High School Teachers

PHYS 520: The Physics of Energy and Environmental Technology
PHYS 590: Selected Topics in Physics

**Engineering (two years only)**

George Mason University offers a two-year engineering course of study designed to meet most of the basic requirements of the first two years of the standard engineering curriculum. Students completing this course of study may expect to complete a Bachelor of Science degree in any of the specialized areas offered at schools of engineering. 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.

The 300- and 400-level engineering courses listed in the Course Dictionary of this catalog have been developed in support of a proposed four-year electrical engineering program. An engineering advisory board consisting of practicing engineers is assisting the University in the development of this degree program.

Entering freshmen who do not have a math SAT score of 600 should take a proficiency examination in elementary algebra and trigonometry. The test is given before the beginning of the summer, fall, and spring semesters. The exact dates may be found in the Academic Calendar. Students who fail the examination are urged to take MATH 101 or retake and pass the examination. Ideally MATH 101 should be taken during the summer semester prior to MATH 113, or alternatively along with MATH 113 in the student's first semester.

Inquiries concerning the engineering course of study at George Mason should be directed to Dr. W. M. Black, Department of Physics, George Mason University, Fairfax, VA 22030.

**Sample Schedule for the Engineering Course of Study**

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<td>PHYS 250</td>
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<tr>
<td>MATH 113</td>
<td>MATH 114</td>
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<td>CHEM 111</td>
<td>CHEM 112</td>
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<td>ENGL 101</td>
<td>ENGL 102</td>
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<td>ENGR 100 (or ENGR 181)</td>
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<th>Third Semester</th>
<th>Fourth Semester (for EE/NE)</th>
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<tbody>
<tr>
<td>PHYS 350</td>
<td>PHYS 352</td>
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<td>PHYS 351</td>
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<td>ENGR 285</td>
<td>ENGR 302</td>
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<td>ENGR 205</td>
<td>ENGR 206</td>
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<th>Fourth Semester (for non-EE/NE)</th>
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<td>PHYS 352</td>
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</table>

**Engineering Courses**

Descriptions of engineering courses offered by the Department of Physics are listed in the Course Dictionary under ENGR.
Psychology

Faculty

Professors: Jordan, Mandes, Pasnak
Visiting Professor: Kurke

Associate Professors: Mellinger (Chairman), Altman, Blaha, Buffardi, Cooper*, Gessner, Gross*, Moretz, Rugel, Sanford, Savage, Tyler

Assistant Professors: Allen, Batlis, Erdwins, Flinn, Hollenbeck, Holt, Lehman, Small, R. Smith, Wahl, Walters, Williams

Lecturers: Auerbach, Conway, Daen, Eddy, Fields, Fischer, Friedman, Furlong, Gade, Herrell, Jamieson, Kaplan, Martens, Meade, Peterson, Robins, Scarpetti, Shostak, Stusnick, Szalay, Tiscione, Weisman, Werber, West

(italics indicate graduate faculty.)

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Psychology

In addition to general requirements for a Bachelor of Arts degree, students majoring in psychology must complete 36 semester hours of coursework in psychology. These hours must include PSYC 100, 200, either 360 or 365, and one of the following: PSYC 304, 305, 309, 311, or 316. Hours earned in psychology may be applied to both the general degree requirement and the psychology major.

BS Degree with a Major in Psychology

Students who wish to graduate with the Bachelor of Science degree with a major in psychology must complete the following requirements:

Psychology: 38 semester hours including PSYC 100, 200, either 360 or 365, and two of the following: 304, 305, 309, 311, 316, and 323.

Cognate courses: 24 semester hours

BIOL 113, 114


CS 161 and 262 (recommended); or 261

Nine hours of ANTH 114, 332, BIOL 225, or any sociology courses

English Composition: six semester hours

Literature: six semester hours

Electives: 19-21 semester hours

Students are also required to plan with their advisers a program of courses in psychology and in a cognate area; the five cognate areas are social, developmental, experimental, physiological, and industrial. This program is then submitted for approval to a BS Degree Review Committee appointed by the psychology department. 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 semester hours, which are credited toward the major, must be completed at the 300 level or above. Students intending to major in psychology should note that PSYC 200 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.

Areas in psychology are identified by the last two digits of each course number (experimental 00, developmental 10, clinical 20, industrial-social 30, and general 60). It is recommended that students with a serious interest in psychology take courses for which credit may be earned in psychology.

Students interested in developing technical skills in the application of psychology at the paraprofessional level may wish to earn a psychology technician certificate. The purpose of this program is to provide students with technical expertise for use in human service employment settings at the paraprofessional level. The psychology technician certificate requirements are shown under Certificate Programs in this catalog. No more than six semester hours of PSYC 326, 421, and 422 may be used to satisfy either the 35-hour psychology requirement for the BA degree, the 38-hour psychology requirement for the BS degree, or the 24-hour requirement in psychology at the 300-level or above.

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Sample Schedule for BA Psychology Majors

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101</td>
<td>English 102</td>
</tr>
<tr>
<td>Oral communication</td>
<td>Natural science</td>
</tr>
<tr>
<td>Natural science</td>
<td>Psychology (any 200-level courses)</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>PSYC 360 or 365</td>
</tr>
<tr>
<td>Mathematics or logic</td>
<td>Social science (Non-Western)</td>
</tr>
<tr>
<td>Social science (Non-Western)</td>
<td>PSYC 200</td>
</tr>
<tr>
<td>Psychology (any 200-level course)</td>
<td>Electives</td>
</tr>
<tr>
<td>Fine arts</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>Psychology (any 300-level courses for which student has prerequisites)</td>
</tr>
<tr>
<td>Philosophy or religion</td>
<td>Foreign language**</td>
</tr>
<tr>
<td>PSYC 304, 305, 309, 311, 316</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>9</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology (any 300- or 400-level course)</td>
<td>Foreign language**</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td></td>
<td>13-14</td>
</tr>
</tbody>
</table>

*MATH 103 is recommended.
**Foreign language courses should be taken earlier, if necessary, to avoid disruptions in language training.
Department of Psychology Coursework

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

Secondary Teacher Certification

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

Graduate

Master of Arts in Psychology

The graduate program in psychology is designed to be sufficiently flexible to provide professional or research training to students with diverse interests as outlined below:

1. Persons who wish to become candidates for the doctorate in psychology.
2. Those intending to pursue a career in research in experimental psychology upon completion of the master's degree.
3. Those intending to pursue a career in industrial/organizational psychology upon the completion of the master's degree.
4. Persons who wish to receive professional training in child or adult clinical psychology, in counseling, or in school psychology.

Departmental Entrance Requirements

In addition to fulfilling the entrance requirements of the Graduate School, applicants to the program are normally expected to have at least 15 semester hours of undergraduate psychology, including statistics and a laboratory course in experimental psychology. Applicants to the clinical and counseling specializations are also required to have an undergraduate course in psychological measurement. Applicants to the school psychology specialization should have courses in the following areas of psychology: introductory, statistics, developmental, personality, and either learning or experimental psychology. Those with undergraduate majors in fields other than psychology are encouraged to apply. Applicants are required to make up deficiencies by taking appropriate undergraduate courses without graduate credit.

Three letters of reference from persons familiar with the applicant's academic work and/or potential for professional work, as well as GRE aptitude scores, are required of all applicants for admission to the psychology program. A Miller Analogies Test score may be submitted if the applicant wishes to give further evidence of ability.

Applicants who wish to specialize in the clinical, counseling, and school areas are evaluated on potential clinical ability as well as academic performance since sound interpersonal skills are an important aspect of clinical effectiveness. Applicants are asked to submit a biographical statement, outlining their background and experience and describing their future goals in psychology. A personal interview is required of school psychology applicants. Applicants to these specializations should generally have an overall grade point average of 3.00 for the last 60 undergraduate hours and a minimum of 3.250 in undergraduate psychology courses.

Because space is limited, fulfillment of the minimum requirements stated above does not guarantee admission to the graduate program in psychology. Selection is made of the best qualified from among all applicants. Work experience, publications, or special recommendations may compensate for deficiencies in other qualifications.

Special Departmental Regulations

Provisional students should take 12 semester hours of graduate work in psychology from the courses listed below before applying for degree status. Provisional students are expected to obtain a minimum 3.250 grade point average in these courses. Their grade point average is a major (but not the sole) factor in determining acceptance to the degree program. The courses needed before the student requests a change to degree status are:

1. PSYC 641 (501).
2. PSYC 651 (551), or 652 (552), or 653 (503). Students in the experimental specialization should take 651 (551) or 652 (552).
3. Two courses in the area of specialization. Students should consult the department to determine the exact courses required.

Non-degree Status

Applicants who qualify for degree status, but who are not applicants for a degree at George Mason University, may be admitted to non-degree status. Non-degree graduate status is not intended to be used as a qualifying program for degree status. While consideration may be given at a later date to the application of credits earned toward a degree program while in non-degree status, there is no assurance that such requests will be granted. If granted, however, no more than 12 semester hours of credit earned in non-degree status may be applied to a degree program.

Departmental Degree Requirements

In addition to fulfilling the degree requirements of the Graduate School, candidates must fulfill the following departmental requirements:

1. Candidates in the experimental and industrial/organizational specializations must complete 30 hours of graduate credit. Candidates in the clinical and counseling specializations must complete 41 hours of graduate credit. Candidates in the school specialization must complete 50 hours of graduate credit; in addition, a one-year supervised internship is required for certification.
2. All candidates must complete six credit hours of general psychology (PSYC 641 (501) and 642 (502)).
3. All candidates must take work in methodology in psychology. Clinical, counseling, and industrial/or-
Experimental Specialization
Students specializing in experimental psychology must complete a total of 30 hours of graduate credit including (a) core courses that cover research in the major areas of psychology: PSYC 641 (501), 642 (502); (b) six credit hours of research methodology: PSYC 651 (551), 652 (552); (c) a six-credit-hour research component, including the completion of a thesis: PSYC 799 (599); (d) three additional courses in various areas of experimental psychology; and (e) a three-hour elective.

Industrial/Organizational Specialization
Students in the industrial/organizational specialization also complete 30 hours of graduate credit including (a) core courses that cover research in the major areas of psychology: PSYC 641 (501), 642 (502); (b) three courses in the industrial/organizational area; (c) one three-hour course in research methodology; (d) a six-credit-hour research component, including the completion of a thesis: PSYC 799 (599), or a six-credit-hour practicum: PSYC 750 (550); and (e) six hours of electives.

School Psychology Specialization
The basic goal of the school psychology training program at George Mason University is to produce high quality psychologists who can apply the knowledge of psychology to the problems of education. Since school psychology students develop knowledge, skills, and competencies in both education and psychology, the program is coordinated jointly by the Department of Psychology and the Department of Education. The program is approved by the Virginia Department of Education and prepares the student for endorsement as a fully certified school psychologist in Virginia. The program is also designed to meet the standards of the National Association of School Psychologists and the Division of School Psychology of the American Psychological Association. Thus it prepares the student for certification as a school psychologist in the majority of states.

Two years are needed to complete the 50 semester hours of coursework in the program. Written comprehensive examinations are administered after a minimum of 30 semester hours of coursework. The comprehensive must be passed prior to the internship and the awarding of the master's degree.

Coursework is integrated with practical experience gained in two practica during the second year of training. The first practicum involves in-depth case studies, which students conduct on children at the Psychological Clinic of George Mason University. Students are placed in a school system for their second practicum.

At the conclusion of their coursework, students may choose to complete a thesis or to conduct a practical research project concurrent with the internship. A full-year internship, completed after the Master of Arts degree, is required for certification of a school psychologist in Virginia and other states. The school system usually pays a stipend to the student for services provided during the third year when the internship is completed. The student receives six semester hours credit for the internship experience. Thus a minimum of 60 semester hours is needed to satisfy all requirements necessary for certification.

Students in the school psychology program are evaluated each semester by the School Psychology Committee on the basis of their clinical and interpersonal skills as well as their academic performance. Since a school psychologist needs to be effective in all three areas, some students may be asked to discontinue their school psychology specialty if they are not able to remediate problem areas.

Programs of Study

<table>
<thead>
<tr>
<th>Clinical and Counseling Psychology</th>
<th>Required hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Basic core courses:</td>
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</tr>
<tr>
<td>General psychology core:</td>
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</tr>
<tr>
<td>PSYC 641 (501)</td>
<td>12</td>
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<tr>
<td>PSYC 642 (502)</td>
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<tr>
<td>PSYC 653 (503)</td>
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<tr>
<td>PSYC 728 (528)</td>
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</tr>
<tr>
<td>PSYC 750 (550)</td>
<td>3</td>
</tr>
<tr>
<td>II. Research component:</td>
<td></td>
</tr>
<tr>
<td>PSYC 799 (599)</td>
<td>6</td>
</tr>
<tr>
<td>I. Practicum:</td>
<td></td>
</tr>
<tr>
<td>PSYC 750 (550)</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
</tbody>
</table>
II. Select from courses listed below:

Clinical:
- Psychological assessment: PSYC 711 (511), 715 (515), 712 (512), or 722 (522) 11 hours
- Psychotherapy: PSYC 616 (516) or 617 (517) 3 hours
- Biological foundations: PSYC 644 (504) 3 hours
- Psychotherapy and counseling:
  - PSYC 729 (529), 784 (584), or 785 (585) 3 hours
  - Elective 3 hours
  - Total 23 hours

Counseling:
- Psychological assessment: PSYC 711 (511), 715 (515), 786 (586), or 687 (587) 8 hours
- Psychotherapy and counseling:
  - PSYC 729 (529), 784 (584), 785 (585) 6 hours
  - Special concentration:
    - PSYC 514 (415), 524 (424), 631 (531), or 682 (582) 3 hours
  - Ego psychology or psychopathology:
    - PSYC 616 (516) or 680 (580) 3 hours
    - Elective 3 hours
  - Total 9 hours

Experimental Psychology
- General experimental: PSYC 641 (501) (may be waived on an individual basis), 642 (502) 6 hours
- Methodology: PSYC 651 (551), 652 (552) 6 hours
- Research: PSYC 799 (599) 6 hours
- At least three courses from the experimental methodology area: PSYC 560, 563, 564, 565, 654 (554), 661 (561), 662 (562), 666 (566), 669 (569), 772 (572) 9 hours
- Elective 3 hours
  - Total 30 hours

Industrial/Organizational Psychology
- General experimental: PSYC 641 (501), 642 (502) 6 hours
- Research or practicum: PSYC 760 (550) or 799 (599) 6 hours
- Three courses from the Industrial/Organizational area: PSYC 530 (430), 533 (432), 631 (531), 632 (532), 634 (534), 635 (535), 682 (582) 9 hours
- One course from the area of Methodology:
  - PSYC 633 (433), 651 (551), 652 (552), 653 (503), 654 (554), 756 (556) 3 hours
  - Electives 6 hours
  - Total 30 hours

School Psychology
- Coursework
  - Child study: PSYC 711 (511), 715 (515), 722 (522), 750 (550), EDSE 641 (EDUC 652) 17 hours
  - Personality and developmental:
    - PSYC 508, 617 (517), 642 (502) 9 hours
  - Learning and remediation: PSYC 641 (501)
    - EDRD 611 (EDUC 601) and EDCE 650, 651, or 652 (EDUC 550, 549, or 551) 9 hours
  - School organizations: EDAS 621 (EDUC 555), EDUC 571 and 579 or PSYC 671 (571) 9 hours
  - Methodology: PSYC 653 (503), EDUC 531 6 hours
  - Total 50 hours

Thesis Option
- Thesis: PSYC 799 (599) 6 hours
- Internship: PSYC 765 (665) and/or EDUC 665 6 hours
- Total 12 hours

Non-Thesis Option:
- Practical Project: PSYC 798 (610) or EDUC 610 4 hours
- Internship: PSYC 765 (665) and/or EDUC 665 6 hours
- Total 10 hours

Department of Psychology Graduate Coursework
To assist students in program planning, the semester in which courses are normally offered is indicated by the following abbreviations:
- F—Fall Semester
- Sp—Spring Semester
- Su—Summer Session

Typical schedules for each specialization are available in the department office.
With the approval of the department chairperson, a maximum of six credit hours in disciplines related to psychology may be accepted in fulfillment of the requirements for the MA in psychology degree.
Students who have the background equivalent to the prerequisites listed for any graduate psychology course may apply to the instructor for permission to enter the course.
A minimum of 15 undergraduate hours in psychology is a prerequisite for all psychology graduate courses. Students who have fewer hours in psychology but who have had similar courses in other disciplines should consult the department for permission to take graduate psychology courses.
This department offers all coursework designated PSYC in the Course Dictionary of this catalog.

Public Affairs

Faculty
Professors: Clark (Government and Politics) (Chairman), Early (Government and Politics) (Director, Law Enforcement and Fire Administration Programs)
Visiting Professor: Cole (Government and Politics)
Associate Professors: Andrews (Geography), Brown (Government and Politics), Fonseca (Geography) (Director, Geography Programs), Gartner (Government and Politics) (Director, Public Administration Programs), Khoury (Government), Knight (Government and Politics), Nicholson (Government and Politics), Thomas (Geography)
Assistant Professors: Abrams (Government and Politics), Cox (Geography), Hung (Government and Politics), Plant (Government and Politics), Stopp (Geography), Truong (Government and Politics), White (Government and Politics)
Instructor: Thompson (Government and Politics)
Lecturers: Castillo (Government and Politics), Dim (Geography), Gasch (Government and Politics), Goldberg (Government and Politics), Janes (Government and Politics), Jentsch (Government and Politics), Lynch (Government and Politics), Marcus (Fire Administration), Neal (Government and Politics), O'Kelley (Government and Politics), Persil (Government and Politics), Reiber (Government and Politics), Saenz (Government and Politics), Semone (Government and Politics), Shaw (Government and Politics), Simmons (Government), Taylor (Geography), Thillmann (Public Affairs)
(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 102, 103, 310, 415 and three of the following: GEOG 301, 304, 305, and 306. MATH 252-256 (Statistics) is also required but may not be counted toward the 36 hours in geography. In addition, a student may offer a maximum of three of the following regional courses toward the degree: GEOG 201, 215, 220, 225, 230, 280. The
following geology courses may be counted toward the 36-hour requirement: GEOL 204, 205, 301, 302.

**Secondary Teacher Certification**

Students pursuing certification for secondary school teaching are advised to take GEOG 101, 102, 103, 215, and 520; must present a minimum of 131 hours for graduation in order to include nine hours of credit for practice teaching; and should consult with the secondary education adviser in their department. The professional preparation component of the state-approved teacher education programs for secondary school teachers is offered in the Department of Education. Please refer to the catalog section under the Department of Education, Secondary School Education.

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**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>ENGL 102</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>Laboratory science</td>
</tr>
<tr>
<td>Geography</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Econ., govt., or hist.</td>
</tr>
<tr>
<td>GEOG 103</td>
<td>Elective</td>
</tr>
<tr>
<td>Art or music</td>
<td>GEOG 304</td>
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<tr>
<td>Oral communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>GEOG 230*</td>
</tr>
<tr>
<td>GEOG 305</td>
<td>GEOG 310</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>GEOG 306</td>
</tr>
<tr>
<td>Econ., govt., or hist.</td>
<td>MATH 252, 256</td>
</tr>
<tr>
<td>Elective</td>
<td>Anth., psyc., or sci.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>GEOG 415</td>
<td>Mathematics or logic</td>
</tr>
<tr>
<td>Geography</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Geography</td>
</tr>
<tr>
<td>Anth., psyc., or soci.</td>
<td></td>
</tr>
</tbody>
</table>

* satisfies part of non-Western requirement.

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**Geography Courses**

Descriptions of geography courses offered by the Department of Public Affairs are listed alphabetically in the Course Dictionary under GEOG.

**BA Degree with a Major in Government and Politics**

To be eligible to graduate with a BA in government and politics, a student must complete at least 120 semester hours of coursework and satisfy all requirements for the Bachelor of Arts degree prescribed by the University.

In addition to the General Requirements for the Bachelor of Arts degree, the student must complete 39 hours of coursework in government and politics. Twelve of these hours must be completed in the four introductory courses in the curriculum: GOVT 103: Introduction to Democratic Government; GOVT 132: Introduction to International Relations; GOVT 241: Introduction to Public Administration; and GOVT 250: Introduction to Political Analysis. Twenty-four hours must be drawn from courses in the six fields in the curriculum: Field A, American Government Institutions and Processes (GOVT 301-309; 401-409); Field B, Political Behavior (GOVT 310-319, 410-419); Field C, Political Theory (GOVT 320-329, 420-429); Field D, Comparative and Regional Politics (GOVT 330-339, 430-439); Field E, International Relations (GOVT 340-349, 440-449); or Field F, Public Administration and Policy Analysis (GOVT 350-359, 450-459). With the approval of the department, a student may substitute three hours of Internship (GOVT 480) or Seminar (GOVT 490) for an equivalent amount of credit in the field requirement of 24 hours. No more than six hours from any single field may be taken for completion of major requirements.

Three hours must be completed in courses involving politically relevant skills or techniques. Courses from the 360-369 and 460-469 series in the government and politics curriculum will satisfy this requirement. The requirement may also be met by the following courses, or combinations of courses: MATH 252 and 255; SOCI 221; DESC 202; CS 261; or INFS 201 (formerly DESC 201 or BUAD 212).

Majors in government and politics who have completed at least one five-credit seminar under the requirements of an earlier catalog will probably find it in their interests to seek to graduate under the terms of that catalog, rather than the 1979-1980 or later catalogs. Since there are no longer any five-credit seminars offered in the government and politics curriculum, these students may fulfill their degree requirements by completing enough three-credit upper level (300 and 400) government courses to reach a minimum of 34 semester hours. Students seeking to graduate under a 1978-1979 or earlier catalog are responsible for consulting their faculty advisers about the appropriate ways to fulfill their degree requirements in the new curriculum.

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**Sample Schedule for Government and Politics Majors**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 103</td>
<td>GOVT 132</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>Laboratory science</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>Math or logic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>GOVT 241</td>
<td>GOVT 250</td>
</tr>
<tr>
<td>Foreign language</td>
<td>Oral communication</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Econ., govt., or hist.</td>
<td>Econ., govt., or hist.</td>
</tr>
<tr>
<td>Art of music</td>
<td>Philos. or rel.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>Government field courses</td>
<td>Government field courses</td>
</tr>
<tr>
<td>Electives</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>Government field courses</td>
<td>Government field courses</td>
</tr>
<tr>
<td>Non-Western culture</td>
<td>Gov't. skills/techniques</td>
</tr>
<tr>
<td>Electives</td>
<td>Non-Western culture</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
</tr>
<tr>
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</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**

A student who desires to earn a BA with a major in International Studies must complete 120 semester hours of coursework and satisfy all requirements for the Bachelor of Arts degree prescribed by the College.

Each candidate for the degree must complete the following:

1. A required core of courses amounting to 62 hours distributed as follows:
   - Communication: (21 hours)
     - Composition (ENGL 101, 102)
     - Oral (COMM 100, 110, 120, 130)
   - Foreign language (12 hours)
   - Analytical reasoning (3 hours)
   - Humanities (12 hours)
   - Social sciences (18 hours)
     - ECON 103, 104; GOVT 132; HIST 122 (12 hours)
     - ANTH 114, 332 (6 hours)*
     - Laboratory science (8 hours)

---

http://catalog.gmu.edu
2. One concentration to be selected according to the student’s individual interests from those designated (39-42 hours)
   - International Politics Concentration 39
   - International Economics Concentration 39
   - Comparative and Regional Concentration** 42
3. Free Electives 19-16

Lists of courses approved for inclusion in the concentrations and the regional groupings are available in the Department of Public Affairs.

*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>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>HIST 122</td>
<td>GOVT 132</td>
</tr>
<tr>
<td>ECON 103</td>
<td>ECON 104</td>
</tr>
<tr>
<td>ANTH 114</td>
<td>ANTH 332</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>Laboratory science</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVT 320</td>
<td>ART 320</td>
</tr>
<tr>
<td>RELI 211</td>
<td>GOVT 336</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature</td>
</tr>
<tr>
<td>Oral communication</td>
<td>GEOG 301</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language</td>
<td>Foreign language</td>
</tr>
<tr>
<td>GOVT 340</td>
<td>GOVT 342</td>
</tr>
<tr>
<td>HIST 410</td>
<td>GOVT 444</td>
</tr>
<tr>
<td>ECON 306</td>
<td>ECON 380</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language</td>
<td>HIST 344</td>
</tr>
<tr>
<td>GOVT 446</td>
<td>GOVT 447</td>
</tr>
<tr>
<td>HIST 420</td>
<td>ECON 390</td>
</tr>
<tr>
<td>Elective</td>
<td>Mathematics or logic</td>
</tr>
</tbody>
</table>

BS Degree with a Major in Law Enforcement

This interinstitutional and interdisciplinary program culminates in the conferral of the Bachelor of Science with a major in law enforcement and requires a minimum of 128 semester hours of coursework. Participants should familiarize themselves fully with the requirements for this degree and with the academic regulations of George Mason University. The program is designed principally for students who have completed their professional courses and who desire to earn a baccalaureate degree. Such work must be taken in an accredited program at another institution and transferred to the University. Credits earned in law enforcement courses may not be transferred to other majors. Generally, not more than one-half of the 128 semester hours required by this program may be transferred to the University from one or more junior or community colleges.

The quantitative and distributional requirements which must be fulfilled by candidates for a Bachelor of Science degree with a major in law enforcement are summarized below. English composition or an equivalent course must be completed prior to entry into the program at George Mason University. Except for the specified professional courses and English Composition, all requirements may be completed at this University.

Inquiries concerning this program should be directed to Dr. Stephen T. Early, Jr., Department of Public Affairs, George Mason University, Fairfax, Virginia 22030.

Requirements for the BS in Law Enforcement

Minimum Quantitative and Distributional Requirements by Subject

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English composition</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>Art, religion, music and/or philosophy</td>
</tr>
<tr>
<td></td>
<td>American History or Principles of Economics</td>
</tr>
<tr>
<td></td>
<td>A two-semester sequence in one recognized science with a laboratory</td>
</tr>
</tbody>
</table>

Major requirements

<table>
<thead>
<tr>
<th>1. Law enforcement</th>
<th>28</th>
</tr>
</thead>
<tbody>
<tr>
<td>These courses or acceptable substitutes are required professional preparation for this degree program.</td>
<td></td>
</tr>
<tr>
<td>Introduction to Law Enforcement</td>
<td></td>
</tr>
<tr>
<td>Patrol Administration or Traffic Administration and Control</td>
<td></td>
</tr>
<tr>
<td>Police Organization and Administration I, II, III</td>
<td></td>
</tr>
<tr>
<td>Criminology or Prevention and Control of Juvenile Delinquency</td>
<td></td>
</tr>
<tr>
<td>Criminal Law, Evidence, and Procedure I, II, III</td>
<td></td>
</tr>
<tr>
<td>Criminal Investigation Techniques I, II or Principles of Criminal Investigation and Advanced Criminal Investigation</td>
<td></td>
</tr>
<tr>
<td>Special Investigative Techniques or Administration of Justice</td>
<td></td>
</tr>
</tbody>
</table>

Law enforcement and the Community

At GMU, GOVT 371 and 372

<table>
<thead>
<tr>
<th>2. Directly related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government—to consist of:</td>
</tr>
<tr>
<td>At GMU, GOVT 103 or at NVCC, Govt 281 and 282 or 187 and</td>
</tr>
<tr>
<td>At GMU, GOVT 204 or at NVCC, Govt 188 and</td>
</tr>
<tr>
<td>At GMU, two courses from among GOVT 301, 309, and 320 or 420</td>
</tr>
<tr>
<td>Psychology—to consist of:</td>
</tr>
<tr>
<td>At GMU, PSYC 100 or at NVCC, Psyc 201 and 202 or 203</td>
</tr>
<tr>
<td>At GMU, PSYC 215, 231, and 325</td>
</tr>
<tr>
<td>Sociology—to consist of:</td>
</tr>
<tr>
<td>At GMU, SOCI 101 or at NVCC, Soci 101 and 102 and</td>
</tr>
<tr>
<td>At GMU, SOCI 152 or at NVCC, Soci 184 and 185 and</td>
</tr>
<tr>
<td>At GMU, SOCI 471 and three courses from among</td>
</tr>
<tr>
<td>205, 301, 302, 307, 308, 332, and 402</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted</td>
</tr>
<tr>
<td>Two of the following options must be included among elective courses:</td>
</tr>
<tr>
<td>At GMU, MATH 252 and 255 or at NVCC, BuAd 251 and 252</td>
</tr>
<tr>
<td>At GMU, ACCT 201 or at NVCC, Acc1 111 and 112 or 211 and 212</td>
</tr>
<tr>
<td>At GMU, INFS 201 (formerly DESC 201 or BUAD 212) or at NVCC, Dapr 106 and 120</td>
</tr>
<tr>
<td>At GMU, GOVT 241</td>
</tr>
<tr>
<td>Free</td>
</tr>
<tr>
<td>Sufficient credit hours earned in courses of the student’s choice as may be necessary to bring the total presented for graduation to 128 semester hours.</td>
</tr>
</tbody>
</table>

BS Degree with a Major in Public Administration

The program of study leading to the Bachelor of Science degree with a major in public administration comprises a core of work in government and politics and quantitative and distributional requirements for appropriate courses in other subjects of the curriculum. To complete this course of study, a student must earn 125 semester hours of credit and meet general degree requirements set for the BS degree by work falling within the following pattern:
Virginia Community College courses in fire science may not be transferred to other majors within the University. Generally, 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 21 semester hours of upper division courses is required.

Fire Administration and Technology Program Requirements

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>59-69</th>
</tr>
</thead>
<tbody>
<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 of the Northern Virginia Community College or their acceptable substitutes, but excluding FIRE 290 and 298, are required for completion of this program. However, not more than 30 semester hours of credit earned in fire science may be applied to completion of the BS degree in fire administration and technology.</td>
<td></td>
</tr>
<tr>
<td>Fire science—at GMU</td>
<td>12</td>
</tr>
<tr>
<td>Professional required</td>
<td></td>
</tr>
<tr>
<td>GOVT 241: Introduction to Public Administration</td>
<td></td>
</tr>
<tr>
<td>GOVT 376: Collective Bargaining in the Public Sector</td>
<td></td>
</tr>
<tr>
<td>GOVT 377: Public Safety Officers and the Law</td>
<td></td>
</tr>
<tr>
<td>GOVT 378: Risk and Insurance</td>
<td></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>
<tr>
<td>Accounting: ACCT 201 and 202</td>
<td></td>
</tr>
<tr>
<td>Statistics: MATH 252 and 255</td>
<td></td>
</tr>
<tr>
<td>Computers: CS 161, 263 or 450; DESC 201 or 212</td>
<td></td>
</tr>
<tr>
<td>3. Concentration</td>
<td>16</td>
</tr>
<tr>
<td>To consist of 18 hours of coursework additional to that offered to meet requirements designated above and taught by either the School of Business Administration, the Department of Public Affairs, or by the Departments of Psychology and Sociology, in combination. At least nine hours of credit must be earned by completing courses numbered at the 300 and 400 levels. Acceptable courses by academic unit are:</td>
<td></td>
</tr>
<tr>
<td>School of Business Administration</td>
<td></td>
</tr>
<tr>
<td>ACCT 201, 202, 311 and 471</td>
<td></td>
</tr>
<tr>
<td>DESC 211, 311, and 312</td>
<td></td>
</tr>
<tr>
<td>INFS 201 (formerly DESC 201 or 212)</td>
<td></td>
</tr>
<tr>
<td>MGMT 311, 312, and 411</td>
<td></td>
</tr>
<tr>
<td>Departments of Psychology and Sociology</td>
<td></td>
</tr>
<tr>
<td>PSYC 220, 430, 332, 340, 373, 392, 401, and 411</td>
<td></td>
</tr>
<tr>
<td>Department of Public Affairs</td>
<td></td>
</tr>
<tr>
<td>GOVT 309, 355, 356, 358, 401, 402, 451, and 452</td>
<td></td>
</tr>
<tr>
<td>Open electives</td>
<td>6-16</td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>128</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. Generally, 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 21 semester hours of upper division courses is required.

Students who attend George Mason University to complete the program leading to the BS with a major in fire administration and technology usually bring with them approximately 60
semester hours of work applicable to this program. While the additional courses required depend on which subjects are included in these transfer credits, a schedule similar to the following five-semester sample schedule may be typical. In this sample, the first three semesters of work are assumed to be met through transfer credit.

### Sample Schedule in Fire Administration and Technology

<table>
<thead>
<tr>
<th>Fourth Semester</th>
<th>Fifth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 301</td>
<td>GOVT 204</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Literature</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Concentration</td>
</tr>
<tr>
<td>GOVT 103</td>
<td>GOVT 241</td>
</tr>
<tr>
<td></td>
<td>Open elective</td>
</tr>
<tr>
<td>Humility elective</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sixth Semester</td>
<td>Seventh Semester</td>
</tr>
<tr>
<td>DESC 202</td>
<td>ACCT 201</td>
</tr>
<tr>
<td>Literature</td>
<td>Open elective</td>
</tr>
<tr>
<td>GOVT 376</td>
<td>GOVT 377</td>
</tr>
<tr>
<td>Concentration</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Semester</td>
<td></td>
</tr>
<tr>
<td>ACCT 202</td>
<td></td>
</tr>
<tr>
<td>GOVT 378</td>
<td></td>
</tr>
<tr>
<td>Concentration</td>
<td>9</td>
</tr>
</tbody>
</table>

### Graduate

#### Master of Science in Geographic and Cartographic Sciences

The objective of this program is to serve the needs of persons in three categories: those currently employed in research, technical, or teaching fields related to geography or cartography and who wish to improve their occupational skills; those with baccalaureate degrees in geography or cartography who desire to improve their skills before entering a career; and those who wish to earn a master's degree as a prerequisite to additional graduate work in geography or cartography.

#### Program Entrance Requirements

In addition to meeting all general requirements for admission to the Graduate School, students admitted to the program must have a BA or BS in geography or cartography, or the equivalent. They must have earned a grade point average of 3.00 (on a 4.00 scale) during their last two years of undergraduate work. Three letters of recommendation and transcripts of all college coursework must be submitted in support of the application. In addition to these general program requirements, applicants for the cartography track of the program must have completed courses in FORTRAN, Elementary Cartography, Photo Interpretation, Elementary Photogrammetry, and courses in two of the following: statistics, calculus, or matrix algebra. Applicants who do not meet all of these requirements may be offered provisional or non-degree status in accordance with the general regulations of the Graduate School.

#### Degree Requirements

The following is a statement of the complete set of degree requirements as they are planned by the geography faculty of the Department of Public Affairs. Since the program is in its early years of operation, some of the specific courses listed below may not yet be approved for inclusion in the course listing. Prospective students should consult the Course Dictionary of this catalog for descriptions of approved graduate courses in geography and cartography.

In addition to fulfilling the degree requirements of the Graduate School, the candidates for the MS in geographic and cartographic sciences must complete several requirements specific to the program:

1. The student must complete all required core courses in either the geography or the cartography track. The MS degree in geographic and cartographic sciences is organized around two tracks, each of which offers two specializations. Core courses in the geography track are the following: GEOG 580: Seminar in Geographic Thought and Methodology; GEOG 585: Geographic Fieldwork and Quantitative Methods; GEOG 595: Seminar in Regional Analysis; and GEOG 599: Thesis. Core courses in the cartography track are as follows: CART 550: Mapping Foundations; CART 551: Thematic Cartography; CART 552: Computer Applications in Cartography; CART 579: Remote Sensing; and CART 599: Thesis.

2. In addition to the core courses in either track, the student must complete enough additional courses to constitute a total of 33 hours of earned credit. (A maximum of two approved undergraduate courses taken for graduate credit may be included in this total.) The 33 hours of credit includes all courses taken in the core of either track.

In the geography track, there are two specializations available. The human geography specialization includes the following: GEOG 581: World Food and Population in Geographical Perspective; GEOG 583: Spatial Dynamics of Political Systems; GEOG 584: Applied Economic Geography; GEOG 521: Human Ecology and the City; GEOG 587: International Geopolitical Systems; GEOG 520: Seminar for Teachers of Geography; and GEOG 590: Selected Topics in Modern Geography. The physical geography specialization includes the following: GEOG 570: Applied Climatology; GEOG 571: Applied Geomorphology; GEOG 572: Biogeography; and GEOG 574: Environmental Impact Analysis and Statement Preparation.

In the cartography track, there are also two specializations available. The topographic specialization includes the following cartography courses: CART 556: Advanced Photogrammetry; CART 562: Digital Processing of Remotely Sensed Data; CART 563: Advanced Computer Cartography; CART 564: Map Projections and Transformations. The thematic specialization includes the following cartography courses: CART 565: Map Design; CART 566: Geographic Information Systems; CART 567: Map Reproduction; CART 568: Statistical Mapping; CART 569: Advanced Cartographic Techniques.

Courses from the two specialty areas may be mixed in consultation with the student's adviser. CART 597: Internship; GEOG 597: Internship; and GEOG 598: Directed Readings and Research may be applicable to either track. CART 551: Thematic Cartography; and CART 579: Remote Sensing are strongly recommended for students in the geography track.

3. The student must pass a comprehensive written exam to qualify for admission to degree candidacy. This exam must be taken at the end of the semester in which the student completes 18 credit hours of graduate work in geography or cartography (excluding internship credit). Depending on the grade achieved, and after consultation with advisers, the student may also be required to take a comprehensive oral examination. Successful completion of the written/oral examination, and remediation of deficiencies determined by advisers, will allow the student to be admitted to degree candidacy. Except for remedial coursework, admission to candidacy is a prerequisite for enrollment in geography or cartography courses after the semester in which 18 credit hours have been earned.

4. The student must complete a master's thesis. The content and nature of the thesis may vary in accordance with
with the particular track chosen as the field of study. An
oral defense of the thesis may be required. Not more
than six credit hours of thesis research (GEOG/CART
599) may be offered toward fulfillment of the 33 hours of
required credit. Students should refer to the Graduate
Policies and Procedures section of this catalog for
regulations concerning the thesis committee, style, and
fees.

Undergraduate-Graduate Courses

The following undergraduate geography courses have been
approved for graduate credit. No more than two of these may
be offered to fulfill requirements for the MS degree. Course
descriptions appear in the Course Dictionary of this catalog.
GEOG 403: Problems approved for graduate credit. No more than two of these descriptions appear in the Course Dictionary of this
Undergraduate-Graduate Courses

GEOG 405: Transportation Geography (3)

Geography and Cartography Courses

Descriptions of geography and cartography courses
offered by the Department of Public Affairs are listed 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 manage-
ment and policy analysis and the role and practices of public
administration and the public policy system. As the standard
professional credential in the public service, the MPA is
designed to serve the career needs of most public adminis-
trators. MPA graduates are expected to assume responsible
managerial and staff positions in the public service, in a wide
variety of organizational settings. While the program is
designed for mid-career public employees who hold baccalaureate degrees in various disciplines, it also will help
preprofessional students who expect to enter public employ-
ment and who aspire to reach middle and upper-level posi-
tions to develop their managerial and analytic skills.

MPA Admissions Criteria and Procedure

Applicants for the MPA program must meet all of the ad-
mission requirements of the Graduate School. In addition, for
admission to degree student status, applicants must have
achieved a 3.000 grade point average (on a 4.000 scale) in
1) overall undergraduate work, 2) the last 60 hours of under-
graduate work, or 3) the major field of study. Applications are
accepted from the full range of baccalaureate degrees.

Provisional admission may be effected. Provisional
students, as defined by the admission regulations of the
Graduate School, will be admitted to degree status if within
two years after their initial admission they have removed any
deficiencies in the designated administrative tools and com-
pleted six to twelve hours of graduate coursework with at
least a B average. Those who cannot or who fail to do so will
be automatically dropped from the MPA program.

Applicants must furnish the materials required by the
Graduate School. In addition they must furnish:
1. Three letters of recommendation. (At least one letter
should be from an individual who is familiar with the ap-
licant'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 appli-
cant's academic and career potentials.)
A resume detailing work and civic activities ex-
perience if the applicant is employed.
2. Training certificates or other work-related or post-
baccalaureate training information. (No credit will be
given for this experience but the information will be
used in helping to plan the student's education pro-
gram.)
3. Notification as to whether the applicant is applying
for Management or Policy Analysis track within the MPA
program.
4. GRE Aptitude Test scores.

All applications are reviewed by an admissions committee
composed of faculty teaching in the MPA program. Individuals
who are denied admission or students who are admitted
to the MPA program and drop out for reasons other than
academic inadequacy may reapply for admission. Persons
making reapplication must meet the full University and
departmental requirements. Applications for readmission are
considered only prior to the fall semester of each year, except
that readmissions after suspension for academic inadequacy
are considered only after the lapse of two years.

Departmental Degree Requirements

The MPA program has two tracks within it, each leading to
conferral of the MPA degree. The management track is the ap-
propriate degree program for those students who desire to
enhance their managerial abilities. For those students who
wish to develop their skills and knowledge in the area of
public policy and analysis the appropriate track is policy
analysis. (The Department of Sociology offers a social policy
analysis track within the MPA degree program. For full
details, consult the Department of Sociology.) Listed below
are the degree requirements for the two tracks. These are re-
quirements in addition to those established by the Graduate
School.

1. Analytic and Managerial Tools—Students in the MPA pro-
gram must demonstrate proficiency in the use of the following
analytic and managerial tools.
a. Written Communication. Students must show the ability
to write cogent, concise, precise, and lucid English. Profi-
ciency in this area is proven through the preparation of
course-related written work.
b. Statistics

c. Either

or

Computer Science

Accounting (This applies only to students in the manage-
ment 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 satis-
fying the MPA faculty that work experience clearly demon-
strates proficiency of the appropriate tool.

2. Requirements in the Management Track

a. Core courses (27 hours). Required of all students in the
management track.

*PUAD 502: Theory and Practice of Public Administration
(3)
*PUAD 503: The Political Environment of Public Adminis-
tration (3)
**PUAD 611 (511): Methods of Analysis for Public Man-
agers I (3)
PUAD 612 (512): Methods of Analysis for Public Man-
agers II (3)
PUAD 615 (505): Administrative Law (3)
PUAD 620 (531): Organization Theory and Management
Behavior (3)
PUAD 650 (550): Intergovernmental Relations in the U.S.
(3)
PUAD 660 (565): Public Financial Management (3)
PUAD 700 (599): Ethical Dimensions of Public Adminis-
tration (3) (This course is to be taken during the final
semester of a student's MPA program.)
b. Concentrations (9 hours). One concentration area re-
quired of all students.
—Public Financial Management
PUAD 661 (561): Public Budgeting Systems (3)
PUAD 662 (562): State and Local Financial Management
(3)
PUAD 769 (563): Issues in Public Financial Management
(3)
—Public Management
PUAD 621 (521): Principles and Practices in Govern-
ment Organization and Management (3)
3. Requirements in the Policy Analysis Track

a. Core courses (15 hours). Required of all students in the policy analysis track.
   - PUAD 503: The Political Environment of Public Management (3)
   - PUAD 611 (511): Methods of Analysis for Public Managers (3)
   - PUAD 620 (531): Organization Theory and Management Behavior (3)
   - PUAD 622 (523): Program Planning and Implementation (3)
   - PUAD 700 (599): Ethical Dimensions of Public Administration (3) (This course is to be taken during the final semester of a student’s MPA coursework.)

b. Analytic methods (9 hours). Three graduate courses—one in each of the following fields:
   - Statistics
   - Computer Science
   - Economic Analysis

   Appropriate courses are designated by the Department of Public Affairs; courses are drawn from available offerings throughout the University. These courses must be taken only with the written approval of the student’s adviser.

c. Policy concentration (12 hours)
   - PUAD 641 (520): Program and Policy Analysis (3)
   - PUAD 642 (543): Program Evaluation (3)

   Two additional graduate policy-related courses. Courses may be chosen from throughout the University. Courses from other universities may be taken if appropriate approvals are gained. (See section of MPA program description entitled “Limitation on Transfer and Equivalency Credits.”) At least one of these courses should deal with substantive policy. These courses must be approved in writing by the student’s adviser.

d. 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 and must be approved in writing by the adviser.

   *Must be taken as the first courses in the program.

   **Prerequisites: Computer science and statistics tools proficiency must be fulfilled.

Graduate Student Advising

Each student admitted to the MPA program is assigned to a member of the public administration faculty in the Department of Public Affairs for graduate academic counseling and advice. Working together, the student and the faculty member design a course of study to meet the practical career needs of the individual student, with particular attention given to the concentration and elective courses. No student is permitted to enroll in other than MPA core courses without the written approval of the faculty adviser.

Transfer and Equivalency Credit

Transfer Credits. Subject to overall University requirements, a student with prior approval of the graduate faculty adviser may transfer a maximum of six semester hours of graduate work completed at another fully accredited institution of higher learning. As appropriate, and with the prior approval of the graduate faculty adviser, these six hours may be used to fulfill any of the MPA degree requirements. Such transfer credit hours must have been completed prior to admission as a degree student to the MPA program at George Mason University. In addition to all other requirements, the credits must have been earned within ten years of admission as a degree candidate to the MPA program; the credits must not have been previously used to satisfy any requirement for any other University degree; and the credits must relate closely to the field of public administration, covering, for example, such subjects as public administration, government, political science, management, policy analysis, behavioral science, or similar material. Approval of transfer credits in the MPA program must be obtained from the student’s graduate adviser and from the faculty of the Department of Public Affairs. Decisions on transfer credits by the faculty of the Department of Public Affairs are final, subject to overall approval of the dean of the Graduate School. After admission as a degree student, a student with the prior approval of the graduate faculty adviser and the graduate dean may, when need exists, earn up to nine hours of transfer credits for graduate courses taken at other institutions.

Equivalency Credit. Students who, prior to admission to the MPA program, have had extensive professional, managerial, administrative, or technical experience in the public service and who have successfully completed programs of instruction of graduate level caliber for which no graduate academic credit was awarded, may request the Department of Public Affairs to grant graduate credits therefor. The department may grant graduate credit for such work not to exceed nine graduate semester hours. Instructional experiences submitted for consideration as academic credit must have been completed in programs that operate at an instructional level comparable to that of a university graduate school; or have been conducted by recognized professional societies that present courses of comparable graduate level; or have been conducted by an accredited university. Credit, if granted, will be awarded at the rate of three semester hours for each 45 clock hours of instruction. In no case, however, may more
than three credit hours be awarded for a single instructional experience (e.g., completion of one full session at the Federal Executive Institute). The graduate faculty adviser in the Department of Public Affairs must find that equivalency credits proposed for acceptance into the MPA program fit the career needs and program requirements of the individual student.

Students who petition for such equivalency credit must submit to the Department of Public Affairs the following:  
1. Name, address, and affiliation of the organization that conducted the instruction.  
2. Name, description, contents, and requirements of the course.  
3. Name, profession, qualifications, and position of the instructor or instructors.  
4. Exact dates, duration of the course, and the total hours of contact with the instructor.  
5. Evaluation of the course by the student.  
6. Account of the instructional tools, physical environment, and materials used during the course of instruction.  
7. Authoritative evidence that the course was successfully completed. In all cases, the courses for which equivalency credit are claimed, if any, must have been completed prior to admission as a graduate student under the MPA program at George Mason University.

Limitation on Transfer and Equivalency Credits

1. A minimum of 30 graduate semester hours of credit must be earned at George Mason University toward the Master of Public Administration degree.
2. A maximum of 12 graduate semester hours of credit may be earned toward the Master of Public Administration degree by a combination of the following:
   a. Transfer of not more than six graduate semester hours of credit awarded according to the paragraph headed “Transfer Credit” of this section, and/or
   b. By award of not more than nine graduate semester hours of credit awarded according to the paragraph headed “Equivalency Credit” of this section; and/or
   c. After admission to degree status in the Master of Public Administration program by earning at one or more universities offering accredited graduate programs a maximum of nine transfer graduate semester hours of credit not available in the graduate curricula of George Mason University. These courses must receive the approval of the student’s graduate faculty adviser and the graduate dean prior to registration at another institution and must be relevant to the student’s professional development. Students should read the paragraph of the Graduate School academic regulations entitled “Permission to Take a Course Elsewhere.”
3. The graduate semester hours of credit resulting from options exercised under a, b, and c may not exceed nine in categories b and c or more than 12 from any combination of the above options.

Undergraduate-Graduate Courses

No undergraduate courses may be counted for graduate credit to satisfy any requirement of this program.

Public Administration Courses

Descriptions of public administration courses offered by the Department of Public Affairs are listed in the Course Dictionary of the Catalog 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 life’s work 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; an understanding of administrative institutions and behavior in a wide variety of social and cultural settings; an appreciation of the basic ethical and substantive questions faced by society; the discernment of future challenges to public administration knowledge and action; the enhancement of administrative and managerial competency; and the development of opportunities for ongoing personal and professional development.

Criteria for Admission

The number of applicants admitted to the DPA class each year is strictly limited. All applications are reviewed by the DPA admissions committee; those who pass the initial screening are interviewed by the graduate public administration faculty. The potential admits, approved by the graduate public administration faculty, are notified by mail in the first week of June and invited to the required introductory seminar which meets approximately two weeks prior to the beginning of the fall semester. Applicants accepted for the introductory seminar to the DPA may be required to take PUAD 502 prior to the introductory seminar. Upon satisfactory completion of the introductory seminar the applicants are certified as participants in the DPA class of that year.

The applicants for admission to the DPA program must meet the following general criteria. While the criteria are stated generally, applicants must be aware of the fact that the
class size each year is limited to no more than 20 participants; therefore, it is expected that only those individuals with outstanding records and potential will be chosen.
1. Applicants should demonstrate high intellectual capability through their previous academic record and be judged by the graduate public administration faculty to be capable of completing the doctoral degree.
2. The faculty must determine that the courses appropriate to the applicant's proposed doctoral plan can be adequately given and that the required research can be supported and directed.
3. Most participants in the program are expected to have had the equivalent of five years of substantial responsibility in governmental or public service organizations. The lack of such experience, however, does not automatically preclude the admission of those with exceptional potential and who meet the other admission criteria.
4. Applicants must have an MPA, MS, MA, or equivalent post-baccalaureate work at the time of entry into the DPA class (August 1 of the year for which application is made).*

George Mason University does not discriminate based on race, color, sex, or national origin. The Admissions Committee will act to assure a mixture of doctoral study participants with varied cultural, academic, professional, social, and geographical backgrounds.

**Procedures for Application**

Applications, including all supporting materials, must be received by the Graduate School Admissions Office no later than April 15 to be considered for the annual DPA class to be admitted approximately August 1. The following supporting materials are required in addition to the application documents required by the Graduate School Admissions Office:

1. Certification of completion of a master's degree, law degree, or equivalent post-baccalaureate study from an accredited institution or a recognized institution. *(Where regional accreditation associations do not exist, the graduate public administration faculty, with the advice of the appropriate GMU administrative officers, reserves the right to make the final judgement on the recognition of institutions.) A variety of academic backgrounds will be considered.
2. Letters of completion or certification from instructional institutions attended other than colleges and universities. No academic credit will be given for such courses; however, the information will be considered as part of the total individual profile for admission.
3. Three letters of reference. At least one letter should be from someone who is familiar with the applicant's prior academic career, and all letters should evaluate the applicant's academic and professional career potential.
4. A detailed resume, including information on all significant work, civic activities, and interests.
5. An essay of 1,500 to 2,000 words which spells out 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.

*DThose 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 con-

DPA Degree Requirements

The DPA program requires 90 semester hours of work beyond the baccalaureate degree. Participants must show proficiency in two analytic and/or managerial tools before being advanced to candidacy. Although all participants admitted to the DPA program must have the equivalent of a master's degree, they must take at least 36 hours of coursework (the core seminars, intensive seminars, and work spelled out in their individual education plan) and pass two comprehensive examinations before being advanced to candidacy. A dissertation is required, and it must be defended in an oral examination. These and other requirements for the DPA degree are described below.

**Residency.** All participants in the DPA program must establish academic residency at GMU before being advanced to candidacy. Residency is established by:

1. Participating in the introductory seminar, held prior to the fall semester;
2. Completion of the core curriculum, two six-hour seminars taken consecutively during the first two semesters of the DPA program;
3. Passing the core comprehensive examination, given after the completion of the core curriculum; and
4. Successful completion of at least six hours of intensive seminars (including the Introductory Doctoral Program Seminar) during the first two years of the DPA program.

**Analytic and/or Managerial Tools Proficiency.** Before being advanced to candidacy for the DPA degree, participants in the program must demonstrate proficiency in two analytic and/or managerial tools relevant to their program of study. Decisions on the relevance of specific tools to a participant's program must be reviewed and approved by the graduate public administration faculty. One of these tools must be statistics. The second tool may be one of the following:

- Systems Analysis
- Legal Research
- Computer Science
- Econometrics
- Government Accounting
- Foreign Language Test

Languages (if appropriate to the participant's specialized area of study—must score at least 500 on the Graduate School Foreign Language Test. The language cannot be one's native tongue nor English if a foreign student.)

Levels of proficiency are established by the graduate public administration faculty in consultation with the DPA participants and with experts in the particular field for which competency is being claimed.

**Curriculum Requirements.** Participants in the DPA program must complete the core seminars during the first full year of study and they must participate in six credits of intensive seminars (the pre-entry seminar plus seminars totaling five additional credits) during the first two years. After completing the core seminars, DPA participants may focus their studies in one of several broadly defined areas. This part of the doctoral program is spelled out in the education plan of each participant prepared during the required pre-entry seminar. The plan for the special area of study is periodically updated as the participant proceeds through the program. This plan must be worked out jointly by the participant and his or her adviser or, once established, advisory committee and is reviewable by
the graduate public administration faculty, which retains ultimate authority in such matters. Participants are expected to use the following matrix as a guide to establish the parameters of the education plans.

The following matrix is intended as a vehicle to provide structure to participants' education plans while also allowing maximum flexibility. The cells of the matrix are not considered to be mutually exclusive nor are the activities and perspectives exhaustive; instead, the intersections of activities and perspectives are intended to be used as foci around which participants construct their individual education plans. While a participant may take the majority of work in one part of the matrix and may spell out the issues, activities, and perspectives that are central to his or her goals for the DPA, each individual is responsible for the broader set of activities and perspectives represented by the other cells perpendicular and horizontal to the one chosen as the focus of attention. This five cell configuration forms the basis of the special area of study comprehensive examination. In order to successfully complete the special area of study comprehensive examination it is expected that students will take coursework in those cells that are perpendicular and horizontal to the main focus of attention. However, the amount and type of coursework required in the other cells is to be spelled out in each participant's educational plan.

The matrix serves not only as a guide to DPA participants and their advisory committees, but it is used as a framework for designing course content by the DPA faculty. Therefore, the seminars and tutorials of the DPA program focus on selected issues represented within the matrix even though the courses relating to each individual cell may deal with a variety of theoretical, procedural, and substantive materials. By establishing direction and parameters for both faculty and participants, the special area of study allows maximum flexibility and at the same time guarantees a commonality and consistency of intellectual experience.

### Model for Special Areas of Study Portion of DPA Program at George Mason University

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Activities</th>
<th>Analysis and Evaluation</th>
<th>Leadership</th>
<th>Change and Innovation</th>
</tr>
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<tbody>
<tr>
<td>Individual Perspective</td>
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<tr>
<td>Organizational and Inter-organizational Perspective</td>
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<tr>
<td>Societal and Environmental Perspective</td>
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The following additional guidelines are to be observed as special area study plans are designed. DPA participants:
1. must take at least one special area of study seminar;
2. may take no more than one MPA course as part of the special area of study program; (Core courses from the MPA may not be counted.)
3. may design the remainder of the coursework looking to the tutorials, the other resources of GMU, and to other universities in the area. Work at other universities must be approved by the director of the Public Administration Program, based on the recommendation of the participant's advisory committee. No more than six hours of work from other universities taken subsequent to the DPA core seminars can be counted toward the degree.

**Doctoral Examinations.** Participants in the DPA program must complete three (3) doctoral examinations.

1. **Core comprehensive examination.** Upon completion of the two core seminars participants must pass a written comprehensive examination covering the material included in the core of the program. This examination is prepared by the entire graduate public administration faculty.
2. **Special area of study comprehensive examination.** Upon completion of the special area of study a written examination must be completed by the participant as the final step in advancing to candidacy. This examination is prepared by the participant's advisory committee.
3. **Oral defense of dissertation prospectus.** The candidate must defend his or her research in a presentation to the graduate faculty. Oral defense of a dissertation prospectus is scheduled after the candidate has developed a research design for the dissertation that is acceptable to the dissertation review committee, and after the candidate has completed research, but before the final dissertation manuscript has been prepared.

**Advancement to Candidacy.** Upon establishing proficiency in two analytic and managerial tools, completing the required coursework as specified in the core and intensive seminars and in the plan for the special area of study, and passing the three examinations, participants are advanced to candidacy for the DPA.

**Dissertation.** Each candidate for the doctorate must present a dissertation on some subject connected with his or her special area of study. The dissertation must represent technical mastery of the subject, originality in research, independent thinking, and scholarly ability. Its conclusions must be logical, its literary form must be acceptable, and its contribution to knowledge must be recognizable to others in the field.

Candidates must register for at least 18 hours of dissertation credit. They may register for no more than 24 hours of such credit, the hours of credit depending on the number of courses required in the candidate's education program plan and based on a requirement of 90 hours for conferral of the DPA.

The dissertation, signed by the Dissertation Review Committee members, must be submitted to the dean of the Graduate School for approval not later than two weeks prior to graduation. Three official copies of the dissertation must be filed in the University Library for binding (the cost of binding to be paid by the candidate). Each copy must carry a certificate of approval signed by the Dissertation Review Committee and the dean of the Graduate School. An original abstract of the dissertation (not more than 600 words) must also be filed with the Library.

Before the degree is awarded, the candidate must file with the Graduate School a copy of the abstract of the dissertation. At the same time, the candidate must submit a receipt

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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).
showing that he or she has deposited with the treasurer of the University the amount required to cover the cost of binding and of microfilming the dissertation. If the candidate desires to have the dissertation copyrighted, an amount equal to the copyright fee must be paid to the University Library in the form of a certified check or money order payable to University Microfilms.

All requirements for the degree must be completed and reported to the Graduate School not later than one week (seven days) prior to graduation.

Satisfactory Progress Toward Degree

All requirements for the DPA, except the dissertation and oral defense, must be completed within a period of five years from the time of registration for the first of the core seminars. Those not advancing to candidacy within the five-year period must apply to the graduate public administration faculty for a continuance in participant status each additional year or else they are automatically dropped from the program and must apply for readmission.

A candidate for the DPA must complete the dissertation within four years after advancing to candidacy. If the dissertation is not completed within the four-year period, the candidate must take another defense of dissertation oral examination and be admitted to candidacy a second time by action of the graduate public administration faculty.

Any participant who does not enroll for coursework or take a comprehensive examination within a 12 month period must request a formal withdrawal from the program, stating the reasons for the delay in progress toward the degree. The graduate public administration faculty may grant or deny such a withdrawal. If the withdrawal is granted, the individual may re-enroll in the program within 24 months of last enrollment without penalty toward the time limitations stated above. If the request for withdrawal is not filed, or if it is denied, and the individual does not enroll in coursework or take a comprehensive examination over a 12 month period, that person must apply for readmission into the DPA program. Decisions on readmission are made by the graduate public administration faculty. These requirements do not apply for candidates for the DPA.

Participants in the DPA program must maintain at least a 3.000 (B) grade point average on all graduate courses taken while in the program. No grade below B will be counted toward the required hours for the degree.

Transfer of Credit

No more than 30 semester hours of post-baccalaureate academic work taken prior to admission can be transferred into the DPA program. Participants may take up to six hours of work at other universities, subsequent to completion of the DPA core seminars and with the approval of the participant's advisory committee, the director of the Public Administration Program, and the dean of the Graduate School.

DPA Committees

Participant Advisory Committee. DPA participants will be 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 a participant Advisory Committee consisting of a chairperson and two additional graduate faculty members. The chairperson and one other member of the committee must be members of the graduate public administration faculty.

The advisory committee, working with the participant, must review and approve the participant's DPA education program plan; arrange, as an expanded committee, the special concentration comprehensive and the oral examination; approve the dissertation subject; and advise the candidate on dissertation research and writing. All steps in this procedure must be approved by the director of the Public Administration Program.

Special Area of Study Comprehensive Committee. The Special Area of Study Comprehensive Committee is composed of the Participant Advisory Committee plus one additional faculty member appointed by the director of the Public Administration Program based on the recommendation of the graduate public administration faculty. At least two, but no more than three, members of the committee must be members of the graduate public administration faculty. This committee works with the DPA participant to define the area over which the participant will be examined. The committee is then responsible for preparing, administering, and grading the examination. Formal notification of the satisfactory (or unsatisfactory) completion of the Special Area of Study Comprehensive Examination is sent by the committee to the director of the Public Administration Program and to the participant.

Dissertation Review Committee. The Dissertation Review Committee is composed of the Participant Advisory Committee plus two additional members who are appointed by the director of the Public Administration Program, based on the recommendation of the graduate public administration faculty. (One member of the Dissertation Review Committee may be an individual who is not a GMU faculty member, but who is appointed by the dean of the Graduate School because of special academic and experiential credentials.) The chairperson of the Dissertation Review Committee cannot be the chairperson of the Participant Advisory Committee. It is the task of the Dissertation Review Committee to approve and advise the candidate on the dissertation research and writing, supervise 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 in the Course Dictionary under PUAD and PUAF.

Sociology

Faculty

Professors: Williams (Anthropology)
Associate Professors: Scimecca (Sociology) (Chairman), Borkman (Sociology), Hickey (Sociology), Hughes (Social Work), Krech (Anthropology), MacConkey (Sociology), Rader (Sociology), Raskin (Social Work), Tavani (Sociology)
Assistant Professors: Anderson-Sherman (Sociology), Black (Anthropology), DuMez (Social Work), Horton (Sociology), Kolker (Sociology), McAdam (Sociology), McGuire (Social Work), Polivka (Social Work), Rosenblum (Sociology)
Lecturers: Conway (Anthropology), Daddio (Sociology), Davidson (Anthropology), Doan (Sociology), Green (Sociology), Haines (Anthropology), Harris (Sociology), Hashmi (Sociology), Palkovich (Anthropology), Werwie (Sociology), Wyatt (Sociology)

(italics indicate graduate faculty.)

Department of Sociology Coursework

This department offers all coursework designated ANTH, SOCI, and SOCW in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate

BA Degree with a Major in Sociology

Students majoring in sociology must satisfy general requirements set for the Bachelor of Arts degree at George Mason University.
In addition to the general requirements for a BA degree, 36 semester hours of work in sociology are required. Students must include SOCI 101, 221, 303, 311, and 412, and 18 additional hours at the 300 and 400 level. ANTH 232 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.

<table>
<thead>
<tr>
<th>Sample Schedule for BS Degree Social Work Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td>SOCI 101</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>ENGL 101</td>
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<tr>
<td>3</td>
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<tr>
<td>Foreign language</td>
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<tr>
<td>4</td>
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<tr>
<td>Natural science</td>
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<td></td>
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<tr>
<td><strong>Third Semester</strong></td>
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<tr>
<td>Sociology (200 level)</td>
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<td>3</td>
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<tr>
<td>Oral communication</td>
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<tr>
<td>3</td>
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<tr>
<td>Foreign language</td>
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<tr>
<td>4</td>
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<td>Analytical reasoning</td>
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<tr>
<td>3</td>
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<tr>
<td>Literature</td>
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<tr>
<td>3</td>
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<tr>
<td><strong>Sixth Semester</strong></td>
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<tr>
<td>SOCW 301</td>
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<tr>
<td>3</td>
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<tr>
<td>SOCW 303</td>
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<td>4</td>
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<tr>
<td>Non-Western culture</td>
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<tr>
<td>3</td>
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<tr>
<td>Philosophy or religion</td>
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<tr>
<td>3</td>
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<tr>
<td><strong>Seventh Semester</strong></td>
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<tr>
<td>Advanced sociology courses</td>
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<tr>
<td>6</td>
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<tr>
<td>Econ., govt., geog., or hist.</td>
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<tr>
<td>3</td>
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<tr>
<td>Electives</td>
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</tbody>
</table>

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 the social work program, to include: SOCW 301, 351, 323, 324, 352, 357, 358, 453, 454 or 455, 471, and two 400-level social work electives;
2. SOCI 101 and 221, PSYC 100, and either SOCI 203 or PSYC 231;
3. Six semester hours in each of the following: English composition; English literature; philosophy/religion; and the social sciences (history/economics/government), to include GOVT 204;
4. BIOL 103, 104;
5. Three semester hours in mathematics;
6. 12 elective semester hours outside of the behavioral sciences (recommended in communication, Spanish, economics, public administration, government);
7. Additional semester hours to total 120 hours.

To be admitted to the Social Work Program, a student must:

1. Have completed at least 45 credits with an average of 2.000 quality grade points.
2. Have achieved at least a C in each of the following: SOCW 301, including a satisfactory evaluation of field experience, and SOCW 351.
3. Have submitted application for social work major to the director of Social Work Admissions. Sophomores should file this application by 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 its judgment 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.

Courses in Support of Graduate Programs

Course descriptions appear in the Course Dictionary of this catalog.

Graduate Courses

SOCI 502: Sociology of Formal Organizations
SOCI 504: Sociology of Occupations and Professions
SOCI 506: Socialization Processes
SOCI 520: Design of Social Research
SOCI 530: Analytic Techniques of Social Research
SOCI 565: Sociology of the Handicapped

Sociology Courses

Descriptions of sociology courses are listed in the Course Dictionary of this catalog under SOCI.

Graduate

Master of Public Administration (MPA) Social Policy Analysis Specialization

The sociology department in conjunction with the public administration faculty is offering an interdisciplinary graduate degree. Upon successful completion of the program of study, the student receives the degree of Master of Public Administration (MPA) with specialization in social policy analysis. This program specialization has as its major objective the acquisition and development of sociological training

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and applied research skills for persons who are interested in understanding and influencing social policy.

Non-degree Students
Students who do not wish to pursue a degree, or who have not supplied all required documents, may be admitted to non-degree status. Non-degree students may later apply for degree status. With approval, a maximum of 12 graduate credit hours earned in non-degree status may be applied to a master's degree.

The Graduate Record Examination, or similar scholastic aptitude testing, is not automatically required of all applicants. Where there is no clear evidence of potential for graduate study, the Department of Sociology may require such examinations.

Admission Requirements
Applicants for the MPA program must meet all of the admission requirements of the Graduate School. In addition, for admission to degree student status, applicants must have achieved a 3.00 grade-point average (on a 4.00 scale) in 1) overall undergraduate work, 2) the last 60 hours of undergraduate work, or 3) the major field of study. Applications are accepted from the full range of baccalaureate degrees.

Provisional admission may be effected. Provisional students, as defined by the admission regulations of the Graduate School, are admitted to degree status if within two years after their initial admission they have removed any deficiencies in the designated administrative tools and completed six to twelve hours of graduate coursework with at least a B average. Those who cannot or who fail to do so are automatically dropped from the MPA program.

Applicants must furnish the materials required by the Graduate School. In addition they must furnish:
1. three letters of recommendation. (At least one letter should be from an individual who is familiar with the applicant's undergraduate academic accomplishments; and, if the applicant is employed, one letter should be from an individual who is familiar with the applicant's employment record. All letters should assess the applicant's academic and career potentials.)
2. a resume detailing work and civic activities experience, if the applicant is employed.
3. GRE aptitude scores. (The test must have been taken within five years of the date of application.)

Degree Requirements
Degree students are required to complete 42 hours consisting of 18 hours of core requirements. Students may then concentrate in one of four areas with a minimum of nine hours required, and with the remaining hours selected from the electives or any of the other areas:

Suburban-Urban Studies. Designed for students who wish to develop a theoretical basis for understanding the social organization and structure of metropolitan areas, skills for assessing suburban-urban social policies and planning, and tools for conducting research concerned with suburban-urban problems.

Criminal Justice. Provides students with an understanding of theoretical models of deviance, the social context of the criminal justice system, and policies and planning in criminology.

Medical Sociology and Health Delivery Systems. Provides an understanding of medical sociology and the policy implications of health delivery.

Clinical Sociology. Presents techniques and skills which enable students to apply the sociological perspective for action and change.

Courses of Study
1. Core Requirements (18 hours)
   PUAD 502: Theory and Practice of Public Administration (3)

   PUAD 641 (520): Policy Analysis (3)
   PUAD 622 (523): Program Planning and Implementation (3)
   SOCI 520: Design of Social Research (3)
   SOCI 530: Analytical Techniques of Social Research (3)
   SOCI 540: Social Theory and Social Policy (3)

2. Specialization (9 hours)
3. Electives (9 hours), 5 of which may be from other departments
4. Individual Research Project (6 hours)

Either an internship or an independent study. If an internship, some research must be involved in the student's job. Guidelines for the project are developed jointly by the student and the student's faculty adviser and must be approved in writing by the adviser.

5. Transfer Credit
Subject to University requirements, a student may transfer with prior approval of his/her graduate faculty adviser up to six graduate credits taken at another university.

6. Comprehensive Examination
The student is expected to pass a comprehensive examination, written and administered by the sociology department, before the MPA is awarded. The student must have completed 36 hours or be in the final semester before being permitted to take the comprehensive examination.
College of Professional Studies

Mission

The College of Professional Studies is dedicated to preparing competent practitioners in the fields of human services. Students come to the College from increasingly diverse backgrounds and are encouraged to seek excellence in their chosen careers through programs of study which have become increasingly multidisciplinary in order to emphasize the richness and complexity of the human personality. In addition to preparing students and practitioners for increasing professional responsibilities, the mission of the College includes the development of each individual's intellectual, emotional, physical, and social capabilities. This requires cooperation and coordination with departments in the College of Arts and Sciences.

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. Because students must become competent in the application of professional knowledge, faculty members who prepare such graduates need to be skilled practitioners in the professions they represent in addition to being excellent teachers and scholars. They need not only to be active in the search for new knowledge but also to be adept at developing and using that knowledge in professional settings. Faculty members in the College of Professional Studies have the responsibility for continuously evaluating and revising programs to assure that graduates are fully prepared to offer their expertise effectively in the culturally pluralistic communities served by George Mason University.

The College of Professional Studies has a unique position within the university community. Its mission derives from the integration and application of knowledge from a variety of disciplines, including the practicing disciplines. The professional school develops in the student the potential for both the researcher and the practitioner. The students integrate this wide scope of learning and define their personal contribution within the real world in which they will function.

Programs

The College of Professional Studies enrolls students preparing for specific professions. The College is composed of three departments in which baccalaureate professional programs are offered as major fields of study:

Department of Education
- Early Childhood Education: BS Ed
- Elementary Education: BS Ed
- Industrial Education: BS Ed

Department of Health and Physical Education
- Health Education: BS Ed
- Physical Education: BS Ed

Department of Nursing: BSN

Administration

Larry S. Bowen, Dean

Teacher Certification

The College of Professional Studies is responsible for the professional courses, special standards, and certification recommendation for students desiring to complete the requirements for the Virginia Collegiate Professional Teaching Certification in all state-approved and NCATE-accredited programs preparing teachers and administrative, supervisory, and related instructional personnel. Virginia requires persons seeking initial certification to submit the score(s) obtained on the National Teacher Examinations. Information on these tests can be obtained from the Teacher Certification Specialist in the education department.

Academic Policies and Degree Requirements

College of Professional Studies academic policies and degree requirements are described in detail under the following departmental sections: education, health and physical education, and nursing.

Sample Schedules

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

Education

Faculty

Professors: Spikey (Chairman), Azarowicz, Bindel, L. Bowen, Gilstrap, Martin, Montebello, Schindler.

Associate Professors: Carroll, Dobson, Duck, Dzama, Edgemon, Given, Gray, Jacobs, Levy*, Schuchman, Sellman, Smith.

Assistant Professors: Behrmann, Chernay, Doebler, Fauth, Isenberg, Masat, Sears.


*Fall, 1979, only.

Available Teacher Education Programs

The teacher education programs are designed to develop 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; and Physical Education, K-12)
5. Library Science—(Certification only)
6. Industrial 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. Prerequisites for admission are the following:
1. Formal application on file with the Teacher Education Screening Committee by November 1, March 15, or July 15 of the semester preceding that in which the student intends to enroll in 400-level education courses. Students must have completed a minimum of 60 hours (72 hours for students in the Department of Health and Physical Education), six of which must have been taken at George Mason before applying. The application can be submitted, however, while taking the six hours. Only students in good academic standing will be admitted to the program and allowed to register for student teaching.

2. For elementary education majors, completion of EDUC 200, 300, and 313. For those in secondary certification programs, completion of EDUC 301 and 313. For majors in music education, health education, and physical education, EDUC 200, 301, and 313. For industrial education majors (industrial arts), completion of EDUC 308, 313, 362, 364, 365, 366, and 367 and an AAS degree from Northern Virginia Community College or its equivalent. For industrial education majors (trade and industrial education), completion of EDUC 309, 313, 320, 325, 361, 363, 368, and 369 and an AAS degree from Northern Virginia Community College or its equivalent.

3. A grade point average of 2.500 (or above) in all courses attempted at any institution of higher education or 2.800 (or above) for the most recently completed 30 hours. The same minimum grade point average options (2.500 or 2.800) must be maintained for admission to student teaching.

4. A grade point average of 2.500 (or above) in all professional courses with a minimal grade of C in each professional course. (Deficiencies may be corrected by repeating the courses in accordance with University regulations.)

5. Three endorsements submitted by the applicant from faculty members evaluating the student's suitability for teaching. One of these endorsements must be from a member of the George Mason Department of Education. An additional endorsement, if a student is not majoring in education, must be from a faculty member in the department to which the student is assigned major. Appropriate forms are available from the coordinator of Field Experiences.

6. Demonstrated proficiency in written and oral communication in English (and, in the case of early childhood/elementary majors, competency in quantitative skills).

7. Completion of those courses required by departments before the departments will recommend a student for the teacher education program. Students majoring in music, health, and/or physical education should check with the departments for information concerning courses required.

8. Suitability for teaching as stipulated in part by Virginia Certification Regulations for Teachers:
   a. Applicant must be a citizen of the United States, must 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 industrial education majors must complete all required education and support courses prior to student teaching. The support courses are ART 373; HEAL 305; MATH 371, 372, 373; MUSI 251; PHED 301; and THR 354 or an approved oral communication course. Prior to student teaching, secondary students must have completed all prerequisite education courses, be within three semester hours of completing the University's state-approved program in the discipline, and have completed 12 hours at the 300 or higher level in the teaching discipline.

Application for student teaching must be filed by April 1 for the Fall semester and September 15 for the Spring semester. During student teaching, coursework is limited to the 15 semester hours worked in education plus any hours enrolled for Directed Field Experiences credit (EDUC 444-447). A minimal grade of C in Student Teaching is required to secure the recommendation of the University for certification. Because student teaching requires a full-time commitment and preparation work during evening hours, experience has shown that students with part-time employment or coursework overload usually experience difficulty.

**Post Baccalaureate Students**

Students with bachelor's degrees in biology, chemistry, economics, English, French, German, geography, government, history, mathematics, physics, psychology, sociology, or Spanish may qualify for a Virginia certificate by completing all the requirements of the approved program. Students who have degrees in music should consult the Department of Fine, Performing Arts and Communication. Students who have degrees in subjects not designated above must go to other Virginia teacher education institutions to complete requirements for a Virginia certificate.

**Admission to Post Baccalaureate Status**

Students holding baccalaureate degrees who are working toward certification will be required to meet the general education and subject matter requirements prescribed for undergraduate students. All post baccalaureate students must apply as non-degree students through the Graduate School Admissions Office.

**Recency of Study**

Due to constant changes in the field of education, a student may benefit from repeating any course more than 10 years old. Therefore, education courses may be repeated for credit after a lapse of 10 years. Moreover, any education courses taken more than 10 years prior to admission to teacher education must be validated for credit by passing an examination constructed by education faculty who have taught the course that semester or during the previous two semesters, or by repeating the course. If the course is repeated, the new course credit will apply toward the degree requirement while the initial course will be applied as elective credit.

**Department of Education Coursework**

This department offers all coursework designated EDAS, EDCl, EDGC, EDRD, EDSE, and EDUC in the Course Dictionary of this catalog.


**Requirements for the Degrees**

**Undergraduate**

**Bachelor of Science in Education**

**Major in Early Childhood or Upper Elementary Education**

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Major</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Language Arts and Culture</td>
<td>32 or 34</td>
<td></td>
</tr>
<tr>
<td>A. English</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>B. Oral Communication (ENGL 101, 102)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C. Foreign Language</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>D. Regional Cultures</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>E. Literature</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>F. Humanities</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>II. Social Science</td>
<td>12 or 15</td>
<td></td>
</tr>
<tr>
<td>A. History</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>B. Other subjects</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>III. General and Health Sciences</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>A. Teaching Health in the Elementary School (HEAL 305)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>B. Teaching Physical Education in the Elementary School (PHED 301)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C. Physical Education Activities</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D. Mathematics (MATH 371, 372, 373)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>E. Laboratory Science (BIOL 151, CHEM 106, PHYS 151)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>IV. Professional (Major) Sequence</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Early Childhood Education: EDUC 200, 300, 313, 320, 325, 403, 407, 411, 412, 413, 431</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Upper Elementary Education: EDUC 200, 300, 313, 320, 325, 404, 408, 411, 412, 413, 432</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>V. Open Electives</td>
<td>130</td>
<td></td>
</tr>
</tbody>
</table>

*THR 354 preferred

Refer to section in catalog entitled “Foreign Language Placement.”

Only 12 required in social sciences for those taking the regional cultures sequence. Those who select the foreign language option must select one regional culture course to fulfill the 15 hour social science requirement.

All students must select either geography or History of Western Civilization.

Open Electives: Early childhood or upper elementary education majors should plan the utilization of the available electives in such a way that their competency will be strengthened. This can be done by planning a program in a subject area such as mathematics, foreign language, English, social sciences, music, art, science, library science, physical education, or by electing graduate courses open to qualified undergraduates.

**Early Childhood and Upper Elementary Education**

Programs in early childhood education (nursery school, kindergarten, grades 1-3) and in upper elementary education (grades 4-7) are offered. These programs require completion of 130 semester hours including one semester of student teaching during the senior year. The student must decide prior to enrollment in 400-level courses whether he/she desires to be certified at the early childhood level or at the upper elementary level.

All undergraduates seeking dual certification (NK-3 and 4-7) must fulfill the following requirements:

a. The completion of three hours in reading methods at the second level of study.

b. A 15 semester hour student teaching experience at the early childhood level.

c. A nine semester hour student teaching experience in the upper elementary grades.

None of the additional professional course hours for dual certification will count toward the 130 hours needed for graduation.

The program listed leads to the awarding of the Bachelor of Science degree with a major in early childhood education or in upper elementary education and the Virginia Collegiate Professional Certificate with endorsement at the nursery school-kindergarten-grade 3 level, or the grades 4-7 level.

**Sample Schedule for Early Childhood (NK-3) or Upper Elementary (4-7) Education Major**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory science</td>
<td>Laboratory science</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>Regional culture or foreign language</td>
<td>EDUC 200</td>
</tr>
<tr>
<td>3-4</td>
<td>3</td>
</tr>
<tr>
<td>16-17</td>
<td>16-17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory science</td>
<td>Laboratory science</td>
</tr>
<tr>
<td>MUSI 251</td>
<td>ART 373</td>
</tr>
<tr>
<td>EDUC 300</td>
<td>EDUC 313</td>
</tr>
<tr>
<td>ENGL 205</td>
<td>ENGL 206</td>
</tr>
<tr>
<td>Approved electives, or</td>
<td>Physical education activity</td>
</tr>
<tr>
<td>Regional culture course for those taking foreign language option</td>
<td>ECON 103 or 104</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 371</td>
<td>MATH 372</td>
</tr>
<tr>
<td>EDUC 305</td>
<td>EDUC 403 or 404</td>
</tr>
<tr>
<td>THR 354</td>
<td>EDUC 411</td>
</tr>
<tr>
<td>EDUC 326</td>
<td>EDUC 413</td>
</tr>
<tr>
<td>EDUC 320</td>
<td>EDUC 445*</td>
</tr>
<tr>
<td>EDUC 444*</td>
<td>Approved electives 1 or 3</td>
</tr>
<tr>
<td>Physical education activity</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>14-16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 373</td>
<td>EDUC 431 or 432</td>
</tr>
<tr>
<td>PHED 301</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 407 or 408</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 413</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 44*</td>
<td>Approved electives</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

*Elective Credit

**Bachelor of Science in Education**

**Major in Industrial Education**

Students must have completed the AAS degree in industrial education at Northern Virginia Community College or its equivalent. Students who are not graduates of Northern Virginia Community College should contact the industrial education counselor at any of the five Northern Virginia Community College campuses, pay fee, and have transcripts and job experiences evaluated for equivalencies. Any deficiencies
must be completed before formal acceptance into the George Mason University program in industrial education.

Specializations in industrial arts (grades 7-12) and trade and industrial education (grades 7-12) are offered. These specializations require completion of 131 hours, including one semester of student teaching in the senior year. The specialization in trade and industrial education also requires a one-year (12-month, full-time) job experience in industry in the trade for which state teacher certification is sought.

The specializations listed lead to the awarding of the Bachelor of Science degree with a major in industrial education and the Virginia Collegiate Professional Certificate with endorsement at the grades 7-12 level.

Sample Schedule for Industrial Arts (7-12)

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>66 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman and sophomore years: Obtain AAS degree, or equivalent, from Northern Virginia Community College with a major in industrial education.</td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>World Literature or Speech</td>
<td>EDUC 313</td>
</tr>
<tr>
<td>EDUC 308</td>
<td>EDUC 355</td>
</tr>
<tr>
<td>EDUC 365</td>
<td>EDUC 366</td>
</tr>
<tr>
<td>Government, history, geography, or economics</td>
<td>Government, history, geography, or economics</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>EDUC 485</td>
<td>EDUC 461</td>
</tr>
<tr>
<td>EDUC 461</td>
<td>EDUC 460</td>
</tr>
<tr>
<td>English, math, or lab science</td>
<td>Regional cultures</td>
</tr>
<tr>
<td>Health 210</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td></td>
</tr>
<tr>
<td>English, math, lab science</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Included in the programs at NVCC and GMU are the General Education Requirements as mandated by the state of Virginia; see "Secondary School Education" below.

Sample Schedule for Trade and Industrial Education (7-12)

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>66 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman and sophomore years: Obtain AAS degree, or equivalent, from Northern Virginia Community College with a major in industrial education.</td>
<td></td>
</tr>
<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
</tr>
<tr>
<td>EDUC 365</td>
<td>EDUC 365</td>
</tr>
<tr>
<td>EDUC 309</td>
<td>EDUC 320</td>
</tr>
<tr>
<td>EDUC 361</td>
<td>EDUC 363</td>
</tr>
<tr>
<td>EDUC 335</td>
<td>Government, history, geography, or economics</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
</tr>
<tr>
<td>EDUC 466</td>
<td>EDUC 467</td>
</tr>
<tr>
<td>Government, history, geography, or economics</td>
<td>Regional cultures</td>
</tr>
<tr>
<td>Health 210</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>5th Year: Internship in industry in the trade for which state certification is sought (12 months, 8 hours per day, 5 days per week). Documentation is necessary.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Note: Included in the programs at NVCC and GMU are the General Education Requirements as mandated by the state of Virginia; see &quot;Secondary School Education&quot; below.</td>
<td></td>
</tr>
</tbody>
</table>

Secondary School Education

The Secondary School Teacher Education Program has three components:

1. Courses in the teaching discipline as developed by the College of Arts and Sciences. Majors are available in biology, chemistry, economics, English, French, German, geography, government, history, mathematics, physics, psychology, sociology, and Spanish. Added secondary endorsement certification is offered in pre-algebra, earth science, and general science. In addition, a specialization in multicultural/bilingual education is offered. Interested students should consult with an adviser in the Multicultural/Bilingual Education office. Students who major in music should consult the Department of Fine, Performing Arts and Communication. Students with majors in health education/physical education should consult the Department of Health and Physical Education. Students majoring in industrial education should consult the Department of Education.

2. General Education Requirements as mandated by the state of Virginia:

| Humanities | 12 |
| English, foreign language, oral communication, fine arts, music, or philosophy | 6 |
| Social Sciences | 12 |
| Anthropology, economics, geography, history, political science, psychology, or sociology | 9 |
| Laboratory Science and Mathematics | 12 |
| At least one course in each area | |
| Electives (from the above categories) | 8 |
| Health and Physical Education | 5 |
| Physical Education activities | 2 |

Electives (from the above categories): 8

Health and Physical Education: 5

Physical Education activities: 2

Recommended:

EDUC 200: Human Growth and Development: 3

EDUC 301: Foundations of Education: 3

EDUC 313: Education Psychology: 3

EDUC 320: Introduction to Tests & Measurements: 3

EDUC 325: Production & Utilization of Instruction: 3

Materials: 3

One methods course in the teaching discipline selected from:

EDUC 450: Teaching Foreign Language (Fall Only) or EDUC 455: Teaching Industrial Arts or EDUC 467: Methods of Teaching and Curriculum Construction for Trade and Industrial Education or EDUC 667 (EDUC 567): Teaching Social Studies in the Secondary School (Spring Only) or EDUC 669 (EDUC 569): Teaching English in the Secondary School (Spring Only) or EDUC 672 (EDUC 572): Teaching Mathematics in the Secondary School (Spring Only) or EDUC 673 (EDUC 573): Teaching Science in the Secondary School (Spring Only)

EDUC 435—12 hours. Student Teaching in Secondary Schools

Credits for these courses are available only in the Bachelor's Degree/Teacher Preparation Program.

Secondary School Education

The Secondary School Teacher Education Program has three components:

1. The Professional Courses offered by the Department of Education:

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>30 Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>12</td>
</tr>
<tr>
<td>English, foreign language, oral communication, fine arts, music, or philosophy</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>12</td>
</tr>
<tr>
<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>
</tr>
<tr>
<td>At least one course in each area</td>
<td></td>
</tr>
<tr>
<td>Electives (from the above categories)</td>
<td>8</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>5</td>
</tr>
<tr>
<td>Physical Education activities</td>
<td>2</td>
</tr>
</tbody>
</table>

Electives (from the above categories): 8

Health and Physical Education: 5

Physical Education activities: 2

Recommended:

EDUC 200: Human Growth and Development: 3

EDUC 301: Foundations of Education: 3

EDUC 313: Education Psychology: 3

EDUC 320: Introduction to Tests & Measurements: 3

EDUC 325: Production & Utilization of Instruction: 3

Materials: 3

One methods course in the teaching discipline selected from:

EDUC 450: Teaching Foreign Language (Fall Only) or EDUC 455: Teaching Industrial Arts or EDUC 467: Methods of Teaching and Curriculum Construction for Trade and Industrial Education or EDUC 667 (EDUC 567): Teaching Social Studies in the Secondary School (Spring Only) or EDUC 669 (EDUC 569): Teaching English in the Secondary School (Spring Only) or EDUC 672 (EDUC 572): Teaching Mathematics in the Secondary School (Spring Only) or EDUC 673 (EDUC 573): Teaching Science in the Secondary School (Spring Only)

EDUC 435—12 hours. Student Teaching in Secondary Schools

Credits for these courses are available only in the Bachelor's Degree/Teacher Preparation Program.

Undergraduate students will register in the department of the teaching discipline. Students must meet:

1. the degree requirements of the discipline;
2. the GMU-approved teacher certification requirements in the discipline;
3. the general education requirements;
4. the professional education requirements.

Students should consult with the secondary education adviser in each department as well as the appropriate discipline adviser in the Department of Education.

http://catalog.gmu.edu
Undergraduate students should plan to either (a) add a minimum of one semester or two summer terms of coursework to the requirements for the baccalaureate degree or (b) do student teaching at the post-baccalaureate level. Post baccalaureate students will register as non-degree graduate education students.

Multicultural/Bilingual Education
A specialization in multicultural/bilingual education is offered within the secondary school education program. Interested students should consult with an adviser in the Multicultural/Bilingual Education office.

Library Science
Courses in library science are offered to enable students to qualify as School Library Media Specialists in addition to achieving certification at the early childhood, upper elementary, or secondary school levels. The following are the courses required for certification as a School Library Media Specialist: LSCI 401, 402, 403, 404, and 405; EDUC 306 and 325.

The library science sequence is offered only one course each semester; therefore, students interested in entering this program should obtain advice from the Basic Teacher Education Coordinator and a library science brochure in the Department of Education office. BIS students may take a concentration in library science. LSCI 401: Adolescent and Adult Literature, and 402: Information Services, may be taken as electives by any student.

Graduate
Master of Education Programs
The Department of Education offers the Master of Education degree in the following fields: elementary education, guidance and counseling, reading, school administration and supervision, secondary education, and special education. Students holding the baccalaureate degree who wish to take courses toward teacher certification should apply for non-degree status in the Graduate School. For additional information contact the Department of Education.

Program Approval and Accreditation
All of the graduate programs listed above have been approved by the state Department of Education and are accredited by the Southern Association of Colleges and Schools and by the National Council for the Accreditation of Teacher Education (NCATE).

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School, the applicant must:
1. Possess a temperament appropriate for the teacher as required by Virginia Certification Regulations.
2. Meet specific requirements for the program desired.

The entrance requirements for each program are shown immediately preceding the program outline. Students admitted provisionally because of low grade point average 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.

Department Degree Requirements
In addition to fulfilling the degree requirements of the Graduate School the candidate must:
1. Complete at least one course in each of the two 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 school activities are based. In general, the following outline may serve as a guide to selection. (Please note that persons other than those preparing for positions in elementary and secondary schools may arrange with advisers for foundations courses not directly related to education.)

Area I, Historical, Philosophical, Sociological Foundations: EDUC 501, 502, 503, 504, or 505.

Area II, Psychological Foundations: EDUC 525, 526, 527, or 533 (Special Education students should refer to program descriptions for specific requirements in this area.)

Area III, Research: EDUC 590 or 591.
2. Complete the number of semester hours required for the graduate program in which enrolled.
3. Pass a comprehensive examination covering the graduate program in which enrolled. The comprehensive examination at the conclusion of each student’s program will be broadly conceived. Therefore, the student should support with independent reading those areas not chosen for coursework.

Students having an interest in research may elect a program requiring the preparation of a thesis. Students electing a thesis must include within the requirements for their program the following courses:
EDUC 590, 591 and 599.

Departmental Transfer of Credit Policy
No credit earned more than seven years prior to admission to a program will be transferred. Credits earned within the seven year period will be evaluated by the student’s adviser. The adviser’s recommendation for transfer of credit must be approved by the coordinator of the student’s program.

Program Requirements
It is each student’s responsibility to be aware of all requirements and to develop with the assigned adviser a program which will meet the requirements. The program should be developed as soon as possible after the student is admitted to degree status. The typical programs which appear for each degree are offered as examples. There is considerable flexibility as each student’s personal program is developed within the indicated guidelines.

The following programs require a practicum or internship: guidance and counseling, reading, school administration and supervision, and special education. Students should apply for practicum or internship one semester prior to enrollment and observe the following application deadlines:
April 1 for Fall semester
September 1 for Spring semester
February 1 for Summer session

Forms are available in the Office of Field Experiences, Room 3335 Robinson Hall.

Computer Names
New names have been provided for specialized courses in the six M Ed programs offered in the Department of Education. The names are as follows:
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) retain EDUC. Prerequisites: All graduate education courses, unless otherwise indicated, require the Collegiate Professional Certificate or equivalent, or permission of the department. Specific additional prerequisites pertaining to each course are listed 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 three years of acceptable teaching or administrative experience in a preschool or elementary school program. (This requirement is waived for students who can provide evidence of certification at the Collegiate Professional level in elementary education by the state of Virginia or another jurisdiction.)
3. Submit recommendations by three persons qualified to judge professional competence.

Students preparing for the elementary specialization must:
1. Provide evidence of certification at the Collegiate Professional level in elementary education by the state of Virginia or another acceptable jurisdiction.
2. Submit recommendations by three persons qualified to judge professional competence.

Degree Requirements
In addition to the departmental degree requirements, students must take six hours of basic concentration courses, nine hours in an area of specialization, and additional coursework to meet the degree total of 30 semester hours. Normally, students are required to take as the basic concentration EDCI 650 (EDUC 550) and 782 (EDUC 582), in that order. In addition, students normally take nine hours in one of the following specializations:
1. Pre-elementary Education (Infancy-Kindergarten): EDCI 511 (EDUC 511), 512 (EDUC 512), 513 (EDUC 513), 514 (EDUC 514), or EDSE 641 (EDUC 652) or other pre-elementary courses.
2. Elementary Education: EDCI 657 (EDUC 557), 658 (EDUC 558), 660 (EDUC 560), 661 (EDUC 561), 662 (EDUC 562), 663 (EDUC 563), 664 (EDUC 564), 666 (EDUC 566), EDGC 624 (EDUC 538), EDRD 559 (EDUC 559), EDSE 641 (EDUC 652), or EDUC 565.

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
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</tr>
<tr>
<td>Psychological Foundations</td>
<td>3</td>
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<tr>
<td>Research</td>
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<tr>
<td>Program Requirements</td>
<td>15</td>
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<tr>
<td>1. Basic Concentration (6)</td>
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<tr>
<td>2. Area of Specialization (9)</td>
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<td><strong>Total</strong></td>
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</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 at George Mason are biology, business, chemistry, economics, English, French, German, government, history, mathematics, psychology, physical education, physics, science, social studies, and Spanish.

Entrance Requirements
Applicants must:
1. Provide evidence of certification at the Collegiate Professional level in secondary education by the state of Virginia or another jurisdiction.
2. Submit recommendations by three persons qualified to judge professional competence.

Degree Requirements
In addition to the departmental degree requirements, students must complete at least nine hours of courses in the teaching field or in a related discipline; EDCI 652 (EDUC 551), 783 (EDUC 583), and one of the following as related to the teaching field: EDCI 667 (EDUC 567), 669 (EDUC 569), 672 (EDUC 572), 673 (EDUC 573), EDRD 614 (EDUC 604), 615 (EDUC 605), or EDUC 565. Approved electives bring the total to 30 semester hours.

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
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<tr>
<td>Psychological Foundations</td>
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<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Program Requirements</td>
<td>18</td>
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<tr>
<td>1. EDCI 652 and 783; EDCI 667, 669, 672, 673, EDRD 614, 615, or EDUC 565. (9)</td>
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</tr>
<tr>
<td>2. Courses in the teaching field or in a related discipline (9)</td>
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<tr>
<td>Electives</td>
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<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

Multicultural/Bilingual Education
Currently, students in either the elementary or secondary education programs may specialize in multicultural/bilingual education by taking EDCI 517 (EDUC 517), 518 (EDUC 518), 519 (EDUC 519), and EDRD 615 (EDUC 605) and a three semester hour course in linguistics (English, Spanish, or Korean). Secondary majors may add the specialization by taking EDCI 517 (EDUC 517), 518 (EDUC 518), 519 (EDUC 519), and EDRD 615 (EDUC 605). Please note that from time to time special sections of EDUC 527: Evaluation of Student Progress will emphasize multicultural/bilingual education.

Reading
The Master of Education program in reading is designed to permit qualified individuals to become reading specialists at the elementary or secondary level.

Entrance Requirements
Applicants must:
1. Provide evidence of certification at the Collegiate Professional level by the state of Virginia or another jurisdiction.
2. Have completed two years of successful teaching experience.
3. Be recommended by three professional educators in the position of principal, supervisor, or administrator, including at least one who has observed the applicant’s teaching.

Degree Requirements
In addition to the departmental degree requirements, students must complete another three semester hours in research and 21 semester hours in reading, to meet the degree total of 33 semester hours. Normally, students are required to take EDRD 559 (EDUC 559) and/or 612 (EDUC 602); 613 (EDUC 603), 615 (EDUC 605), 616 (EDUC 606), 617 (EDUC 607), 790 (EDUC 608) (3) and 794 (EDUC 609) (3).

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
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<tbody>
<tr>
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<td>Psychological Foundations</td>
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<td><strong>Total</strong></td>
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</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.

Entrance Requirements

Applicants must:

1. Provide evidence of certification at Collegiate Professional level by the state of Virginia or another jurisdiction.
2. Have completed two years of successful teaching experience, a portion of which must be at the level where qualification is desired.
3. Be recommended by three professional educators in the position of principal, supervisor, or administrator, including at least one who has observed the applicant's teaching.

Degree Requirements

In addition to the departmental degree requirements, students must take at least one course in each of the following:

1. Elementary, Middle School, or Secondary School Curriculum
2. School Administration
3. Supervision of Instruction
4. EDAS 789 (EDUC 585): Seminar in School Leadership
5. EDAS 790 (EDUC 580): 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.

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Psychological Foundations</td>
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<tr>
<td>Total</td>
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</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 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 and counseling 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.)

2. Students preparing for counseling and student personnel work in colleges and for counseling in agencies must:
   a. Possess a baccalaureate degree.
   b. Have successfully completed a minimum of 12 semester hours of undergraduate work in the behavioral sciences.
   c. Submit three letters of recommendation concerning promise as a professional counselor or as a student personnel professional.
   d. Submit a statement of interests and objectives.
   e. Be interviewed and recommended for acceptance.

Degree Requirements

In addition to the departmental degree requirements, students must complete 15 hours of core courses, from 12-15 hours in an area of specialization, and elective coursework to meet the degree total of 39 semester hours. Students will be required to take as the basic concentration EDGC 604 (EDUC 536), 606 (EDUC 538), 608 (EDUC 528), 610 (EDUC 637), and EDUC 531. In addition, students will take one of the following specializations:

Elementary School Guidance and Counseling Specialization: EDGC 624 (EDUC 538), 790A (EDUC 639), and a Special Education Course
Secondary School Guidance and Counseling Specialization: EDGC 634 (EDUC 539), 790B (EDUC 639), and a Special Education Course
Higher Education Guidance and Counseling Specialization: EDGC 644 (EDUC 544), 646 (EDUC 546), 648 (EDUC 548), and 790C (EDUC 639)
Community Agency Guidance and Counseling Specialization: EDGC 654 (EDUC 540), 656 (EDUC 541), and 790D (EDUC 639)

Sample Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Philosophical, or Sociological Foundations</td>
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<tr>
<td>Psychological Foundations</td>
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<td>Research</td>
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<td>Total</td>
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</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 two to eight years; or severely multihandicapped—SVMH)

Entrance Requirements

To be accepted as a degree student, each applicant must:

1. Submit recommendations by three persons qualified to judge professional competence.
2. Be interviewed and recommended for acceptance.
3. Submit a written autobiography (request details during interview).
4. a. For General Special Education applicants must:
i. have Virginia Collegiate Professional certification or the equivalent from another state.
ii. complete or have completed one course in each of the following:
   teaching of reading,
   teaching of mathematics,
   human growth and development, and
   tests and measurements.
b. For Education of the Severely Handicapped, applicants must:
i. provide evidence of successful completion of a baccalaureate degree in a human services area,
such as education, psychology, sociology, or allied health services, and
ii. provide evidence of work-related experience with severely handicapped individuals
iii. and, if preparing for endorsement in early childhood handicapped, have Virginia Collegiate Professional certification or the equivalent from another state and two years of teaching experience under that endorsement.

Degree Requirements
The student must complete a minimum of 27 hours in an area of special education emphasis: General Special Education (ED, LD), or Severely Handicapped (ECH, SVMH). The 27 hours must be planned by the student’s special education adviser and approved by the Special Education Committee. Note that the psychological foundations course required in General Special Education is EDUC 526; in Education of the Severely Handicapped, EDUC 525 is required. The student must also complete the departmental degree requirements which are standard within the department.

School Psychology
Certification in school psychology can be obtained by completing the MA in psychology. This program, jointly administered by the departments of education and psychology, is open to students with either an education or a psychology background. The degree is offered by the Department of Psychology, while the Department of Education assumes responsibility for certification. Further information concerning this program can be found under the psychology department in this catalog.

Department of Education Coursework
This department offers all coursework designated EDAS, EDCI, EDGC, EDRD, EDSE, and EDUC.

Doctor of Arts in Education
The Doctor of Arts in Education (DA Ed) is a new degree program designed for practitioners from traditional and non-traditional educational settings.

Admission to this program is highly selective and is limited to 15 persons each academic year. Each participant must enter the program through an assessment seminar, offered only during the Summer Session.

Eligibility for Admission
In addition to completing all George Mason University Graduate School admission requirements, each applicant to the DA Ed Program must fulfill the following program admission requirements:
1. A minimum of five years of successful experience as a practitioner in an educational setting.
2. A baccalaureate and/or master’s degree.
3. Demonstration of high intellectual capability through previous academic records and other evidence of an ability to complete the doctoral program.
4. Graduate Record Examination.

5. For applicants from elementary and secondary education, evidence of certification at the Virginia Collegiate Professional level (or its equivalent from another jurisdiction).
6. Minimum requirements established by the various disciplines.

Program of Study
Each curriculum must include study in general culture, in a basic discipline, and in education.

Structure of Program
Enrollees in the program must participate in a common core of required courses and seminars. Each person also has a highly individualized program of study.

General Objectives of the Program
Each individual must demonstrate scholarly use of oral and written English, quantitative literacy (including use of computer technology), and the ability to apply general and specific knowledge and skills to problems in real situations.

Residency
The basic purposes of residency are achieved in the DA Ed through a combination of various seminars and continuous enrollment. Full-time study (for example, 9-12 hours per semester) is not a requirement of the degree.

Internship
As a culminating experience, candidates have one or more internships which broaden their professional awareness. These internships may occur in a variety of settings, drawing on the rich resources of the Northern Virginia/metropolitan D.C. area. In all cases, the student works with a University and an on-site supervisor.

Major Department
DA Ed students are admitted to study in the Department of Education. However, each individual in the program must also be admitted to a department offering study in the basic discipline applicable to the student’s program.

Semester Hours Required for the DA Ed
90 semester hours beyond the baccalaureate degree
60 semester hours beyond the master’s degree
These are minimum formal requirements. An individual’s program may require more as a result of admissions assessment and program development.

For further information about admission and program requirements, contact the Department of Education, Robinson Hall (323-2421).
Health and Physical Education

Faculty
Professor: Cooper (Health Education) (Chairman)
Associate Professors: Kilby (Physical Education), Metcalf (Physical Education), Richardson (Physical Education)
Assistant Professors: Bever (Health Education), Linn (Physical Education), Prager-Decker (Health Education), Schack (Physical Education)
Instructors: Masterson (Physical Education), Walters (Physical Education)
Lecturers: Bhanos (Physical Education), Butterfield (Physical Education), Decker (Health Education), Gordon (Physical Education), Magruder (Physical Education), Rodney (Physical Education), Young (Health Education).
(italics indicate graduate faculty.)

Department of Health and Physical Education Coursework
The department offers all coursework designated HEAL and PHED in the Course Dictionary of this catalog.

Requirements for the Degrees

Undergraduate
BS in Education Degree
The Department of Health and Physical Education offers two major programs leading to the Bachelor of Science in Education (BS Ed) degree.
1. 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 Examinations of the National Teacher Examinations prior to being recommended for state certification.
2. The physical education major includes basic coursework in biological and social sciences with special preparation in theory and methodology of physical education and education which meets 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 programs in teacher education are accredited and approved by the National Council for Accreditation of Teacher Education and the Virginia State Department of Education. Admission is granted by the Teacher Education Screening Committee. Students should apply for admission to the teacher education program during the spring semester of the junior year. To be considered for admission to the teacher education program in physical education or health education, students must meet the following requirements:
1. Have completed or be in the process of completing 72 semester hours, six of which must have been taken at George Mason University before applying.
2. Have completed EDUC 200, 301, 313.
3. Have a grade point average of 2.500 in all courses attempted at any institution of higher education or 2.800 (or above) for the most recently completed 30 hours. The same minimum grade point average options (2.500 or 2.800) must be maintained for admission to student teaching.
4. Have a grade point average of 2.500 (or above) in the following courses with a minimum grade of C in each:
   - EDUC 200, 301, 313; for physical education majors, PHED 206, 371, 403, 472; and for health education majors, HEAL 420, 440. Deficiencies may be corrected by repeating the courses in accordance with University regulations.
   a. Physical education majors must have completed successfully or be currently enrolled in the following courses: BIOL 124-125; HEAL 110, 205; PHED 106, 201, 206, 213, 214, 215 or 216, 300, 304, 306, 365.
   b. Health education majors must have completed or be currently enrolled in the following courses: BIOL 124-125; BIOL 186; CHEM 106; HEAL 110, 120, 205, 220, 310, 315, and 330.
5. Have requested and received recommendation from the health and physical education department.
6. Have submitted three endorsements from faculty members evaluating the student's suitability for teaching. One of these endorsements must be from a member of the Department of Education and one from a faculty member in the Department of Health and Physical Education. Appropriate forms are available from the coordinator of Field Experiences.
7. Have demonstrated proficiency in written and oral communication in English.
8. Students are directed to review "Admission to Student Teaching" in the Department of Education section of the catalog. Students are required to have a grade point average of 2.500 in the major for admission to student teaching.

Requirements for the Major in Physical Education
Undergraduate and post-baccalaureate students must be admitted to the Teacher Education Program prior to enrollment in PHED 403 and 460.
The physical education major student will be required to meet minimum standards in the areas of cardiovascular fitness, strength, and flexibility in the semester preceding student teaching.

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http://catalog.gmu.edu
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 a swimming course taken as an elective.

During the second semester of the senior year the student will complete a professional semester which will include PHED 472 and EDUC 436.

Specific requirements for the degree of Bachelor of Science in Education with a major in physical education are as follows:

**Program in Physical Education**

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<th>Semester</th>
<th>Hours</th>
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<tr>
<td>English</td>
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<tr>
<td>English Composition (ENGL 101, 102)</td>
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<tr>
<td>Oral Communication/Select One</td>
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<td>Introduction to Communication (COMM 100)</td>
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<td>Introduction to Public Speaking (COMM 120)</td>
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<td>Regional Cultures (6)</td>
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<td>Latin America (LAC 151)</td>
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<td>Asia and Western Pacific (LAC 153)</td>
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<td>North Africa and the Middle East (LAC 154)</td>
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<td>Humanities/Select One</td>
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</tbody>
</table>

*May substitute equivalent number of hours in foreign language.

**Physical Education Courses**

Descriptions of physical education courses offered by the Department of Health and Physical Education are listed in the Course Dictionary under PHED.

**Requirements for the Major in Health Education**

Undergraduates and students holding baccalaureate degrees must be admitted to the Teacher Education Program prior to enrollment in 400-level courses.

Specific requirements for the Bachelor of Science in education with a major in health education are as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts and Culture</td>
<td>15</td>
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<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>English Composition (101-102)</td>
<td></td>
</tr>
<tr>
<td>Oral Communication/Select One</td>
<td>3</td>
</tr>
<tr>
<td>COMM 100 or 120</td>
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</tr>
<tr>
<td>Literature/Select One</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 203, 204, 205, or 206</td>
<td></td>
</tr>
<tr>
<td>Humanities/Select One</td>
<td>3</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>Psychology (PSYC 100, 215)</td>
<td>6</td>
</tr>
<tr>
<td>Sociology</td>
<td>6</td>
</tr>
<tr>
<td>History</td>
<td>3</td>
</tr>
<tr>
<td>American History (HIST 121 or 122)</td>
<td></td>
</tr>
<tr>
<td>Anthropology or Regional Cultures</td>
<td>6</td>
</tr>
<tr>
<td>(or Foreign Language)</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Natural Science</td>
<td>27</td>
</tr>
<tr>
<td>CHEM 106: Chemistry in Changing World</td>
<td>4</td>
</tr>
<tr>
<td>Biology</td>
<td></td>
</tr>
<tr>
<td>Man and His Environment (BIOL 103-104)</td>
<td>8</td>
</tr>
<tr>
<td>Anatomy and Physiology (BIOL 124-125)</td>
<td>8</td>
</tr>
<tr>
<td>Introductory Microbiology (BIOL 165)</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Statistics (MATH 252-254)</td>
<td></td>
</tr>
<tr>
<td>Health Sciences</td>
<td>7</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td>4</td>
</tr>
<tr>
<td>Personal Health (HEAL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Professional Sequence</td>
<td>24</td>
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<tr>
<td>EDUC 200, 301, 313, 436</td>
<td></td>
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<tr>
<td>HEAL 420, 440</td>
<td></td>
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<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>Electives*</td>
<td>9</td>
</tr>
<tr>
<td>Total Hours</td>
<td>131</td>
</tr>
</tbody>
</table>

*May include elective credit for Directed Field Experience EDUC 444-447
Aim of the Undergraduate Program

The Bachelor of Science degree with a major in nursing is designed to meet the challenge of changing and increasingly demanding health care delivery service. Graduates are prepared to function as professional nurses in hospitals, nursing homes, community health agencies, other health-related agencies, and in the home.

Emphasis is placed on early detection of potential health problems, care of individuals, families and population groups, health maintenance in ambulatory services, and enlarged responsibilities for nurses.

Requirements for the Degrees

Undergraduate

Bachelor of Science with a Major in Nursing

Candidates for the degree must present at least 122 semester hours of work. Specific requirements for the degree of Bachelor of Science with a major in nursing are as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>15</td>
</tr>
<tr>
<td>Second</td>
<td>15</td>
</tr>
<tr>
<td>Third</td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td></td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
</tr>
<tr>
<td>Sixth</td>
<td></td>
</tr>
<tr>
<td>Seventh</td>
<td></td>
</tr>
<tr>
<td>Eighth</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Composition and Introduction to Literature (ENGL 101, 102)</td>
<td>6</td>
</tr>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Communication (COMM 100)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Small Group Discussion (COMM 130)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Art (appreciation, history, criticism, or theory)</td>
<td>2</td>
</tr>
<tr>
<td>Music (appreciation, history, criticism, or theory)</td>
<td>2</td>
</tr>
<tr>
<td>Literature (in addition to six hours of ENGL 101, 102)</td>
<td>2</td>
</tr>
<tr>
<td>Philosophy, Language, Religion, or Humanities</td>
<td>2</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
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<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>21-23</td>
</tr>
<tr>
<td>CHEM 103-104</td>
<td>8</td>
</tr>
<tr>
<td>Biology</td>
<td>8</td>
</tr>
<tr>
<td>Anatomy and Physiology (BIOL 124-125)</td>
<td>8</td>
</tr>
<tr>
<td>or Human Structure and Function (BIOL 274)</td>
<td>6</td>
</tr>
<tr>
<td>Introductory Microbiology (BIOL 185)</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Statistics (MATH 252-254)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activities (PHED 100-level) Recommended</td>
<td>2</td>
</tr>
<tr>
<td>Major</td>
<td>58</td>
</tr>
<tr>
<td>NURS 211 or 300, 250, 260 or 306, 262, 301, 302, 311, 312, 321, 322, 411, 426, 431, 450, 470, 476</td>
<td>58</td>
</tr>
<tr>
<td>Electives*</td>
<td>15-17</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
</tr>
</tbody>
</table>

*No more than three hours of nursing department electives may be used to satisfy this requirement.

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.

Health Education Courses

Descriptions of health education courses offered by the Department of Health and Physical Education are listed in the Course dictionary under HEAL.

Master of Education Degree in Secondary Education

A student earning a Master of Education degree in secondary education may select physical education as a field of study. Certification at the collegiate professional level in secondary physical education is required. The applicant must possess a baccalaureate degree in physical education. For information, see the Master of Education in Secondary Education section of the Department of Education in this catalog.

Nursing

Faculty

Professors: Cohelan (Chairman), D. Walker

Associate Professors: Allinger, Baldwin, Carty, Liu, Silva, Smith

Assistant Professors: Bednash, Bennett, Boland, Boyd, Connely, DiLoreto, Hall, Harris, Hayes, Jenkins, Joseph, Kopac, Koranek*, Lee*, Michael, Millonig**, Mullin, Nowotny, Piemme, Pitts, Redmond, Schmadi, Sewall, Shire, Stefanov, Vaughan, L. Walker, Weed, Zink

Instructors: Facteau, Neill, White

Lecturers: Albert, Barrett, Boren, Cianci, Feeg, Grosso, Hindle, Hoeffler, Ledbetter, Matthews, Ortiz, O'Reilly, Reafs, Roberts, Ryan, Smoczymski, Sobota, Swenson, Williams, Yoselle

*On leave of absence Spring, 1980.
**On leave of absence, 1979-80.

Italicics indicate graduate faculty.

The nursing program is accredited by the Virginia State Board of Nursing and by the National League for Nursing.
Completion of the program may require attendance in one or more summer sessions because of limited laboratory facilities.

Special Quality Standards in the Major Field
Because knowledge, skills, and behavior patterns in the major field of this program are so vital to the health and perhaps even the survival of individuals or groups of human beings served, failure or borderline achievement cannot be tolerated. Therefore, the faculty of the department has established, with approval of the University faculty and administration, the following special major field quality standards which go beyond the general University quality standards printed elsewhere in this catalog:

1. Acceptance into Junior Standing in Nursing
   Acceptance into Junior Standing in Nursing is competitive. The number of applicants accepted is determined by the availability of resources such as faculty, classrooms, and clinical agencies in the community.

   Permission to register for NURS 301, 302, 311, 312, 321, 322 requires prior acceptance into Junior Standing in Nursing. Application must be made during the semester in which the student will be completing the prerequisites for the Junior-level courses. If completion of prerequisite courses is planned for a summer session, application must be made in the preceding spring semester.

   Application for acceptance into Junior Standing in Nursing for the Fall semester must be made prior to March 15; for the Spring semester, prior to November 15.

   Students applying for credit by examination for Junior-level courses are to submit applications no later than the last Thursday of the month. Applications are not to be submitted until prerequisites for Junior courses have been satisfied.

   A committee of nursing faculty will recommend to the department chairperson applicants judged on the basis of (1) cumulative grade point average in all courses (wherever taken) which are prerequisites for NURS 301, 302; and (2) performance in NURS 262, the first University clinical course. The student has the right to appeal.

Additional Academic Grade Standards
A final nursing course grade of less than C prohibits further 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 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 two grades of less than C were earned in the same semester) which resulted in the suspension.

No more than two nursing courses may be repeated. Failure to produce a satisfactory grade of C or better in the trial course(s) or subsequently in any nursing course results in exclusion from George Mason University’s nursing program.

**Department of Nursing Coursework**
This department offers all coursework designated NURS in the Course Dictionary of this catalog.

**Graduate**

Master of Science in Nursing
The graduate program in nursing is designed to prepare nurses for a variety of leadership roles in the health care delivery system. The nursing major in administration prepares nurses to function in mid-level management positions in hospitals, nursing homes, and community health agencies. The nursing major in long-term care prepares nurses to give and manage long-term care of individuals, families, and groups, including the elderly, chronically ill, and others with self-care limitations. A variety of health care settings is utilized.

Departmental Entrance Requirements
In addition to fulfilling the entrance requirements of the Graduate School for degree status, the applicant is normally expected to (1) be a graduate of a baccalaureate program accredited by the National League for Nursing; (2) have obtained a cumulative grade point average of 3.000 (on a 4.000 scale) in the last two years of undergraduate work or last 60 credits of undergraduate work; (3) have completed satisfactorily a course in research or its equivalent; (4) have completed satisfactorily a course in statistics or its equivalent; (5) hold an active Registered Nurse License; (6) submit Graduate Records Examination (GRE) aptitude scores; and (7) submit three letters of recommendation, one from an academic source, one from last immediate administrative superior or equivalent, and one from applicant’s choice.

An applicant may be admitted to provisional status if (1) a graduate of a baccalaureate nursing program located outside the United States; (2) a graduate of a baccalaureate nursing program not accredited by the National League for Nursing; (3) a registered nurse graduate of a non-nursing baccalaureate program who fulfills the undergraduate nursing major equivalent to the George Mason University nursing program; (4) a graduate with an undergraduate grade point average of 2.700 to 2.999 on a 4.000 scale in the last two years of undergraduate work or last 60 credits of undergraduate work. Before being admitted to degree status, a student with provi-
sional status must complete nine credits in graduate nursing courses with a grade point average of 3.000 on a 4.000 scale.

Applicants who qualify for degree status, but who are not applicants for a graduate degree at George Mason University, may be admitted in a non-degree status. Non-degree status is not intended to be used in a qualifying program for graduate degree status. Should resources (faculty, clinical, facilities) be limited, preference will be given respectively to students with degree status, students with provisional status, and then to students with non-degree status. Provided that adequate Department of Nursing resources are available, students with non-degree status are eligible for enrollment only in NURS 755, NURS 759, and nursing electives. In addition, non-degree students must meet any course prerequisites and must have permission of the instructor to take courses.

Departmental Degree Requirements
Students must meet all the degree requirements of the Graduate School. In addition, the master's program in nursing requires 36 semester hours of graduate credit.

Core Courses—9 credits
Nursing Major Areas:
1. Nursing Administration at the Middle Management Level
2. Long-Term Care and Gerontological Nursing
   Thesis or Non-thesis Option:
   1. Research Project (non-thesis)—3 credits
   OR
   2. Thesis—3-6 credits
Nursing Electives—6 credits
Related Discipline Electives—6 credits

Departmental Course Prerequisites
NURS 755 and 759 are co- or prerequisites to NURS 790, any course in the nursing major areas (Long-term Care and/or Nursing Administration), and to the thesis or non-thesis option. First-level courses in the nursing major areas are prerequisites to second-level courses in the nursing major areas.

Departmental Scheduling of Nursing Majors
1. NURS 763, 765, 766, 768 and NURS 773, 775, 776, 778 will be offered Fall Semester 1980.
2. NURS 766, 768 and NURS 776, 778 will be offered Spring Semester 1981.
3. NURS 763, 765 and NURS 773, 775 will be offered Fall Semester 1981.
4. NURS 766, 768 and NURS 776, 778 will be offered Spring Semester 1982.
5. Thereafter, first semester didactic and practicum courses in each major will be offered only fall semester and second semester didactic and practicum courses in each major will be offered only spring semester.

Placement in practicum experiences will depend upon availability of appropriate clinical resources and preceptors.

Department of Nursing Coursework
This department offers all coursework designated NURS in the Course Dictionary of this catalog.

Continuing Nursing Education
Continuing education is an important commitment of the nursing department at George Mason University and activities are planned so that individuals can grow personally and professionally.

The Department of Nursing, in cooperation with the George Mason University Division of Continuing Education, offers opportunities for credit and noncredit courses representing a variety of subjects focusing on the concerns of nurses and health care consumers.

When planning and presenting continuing education program activities, the Department of Nursing utilizes the wealth of available resources in the Northern Virginia area. Comments and suggestions for programming from the health care community are welcomed and encouraged. One may be placed on the mailing list to receive notice of specific activities scheduled throughout the academic year by contacting either the nursing department or the Division of Continuing Education.

Sample Schedule for Full-time Nursing Students

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 755</td>
<td>NURS 763 or 773</td>
</tr>
<tr>
<td>NURS 759</td>
<td>NURS 759</td>
</tr>
<tr>
<td>Elective</td>
<td>NURS 790</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
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<td></td>
<td>12</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
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<tr>
<td>NURS 768 or 776</td>
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<tr>
<td>NURS 797, 798 or 799</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
School of Business Administration

Aims
The basic philosophy of the School of Business Administration is reflected in these goals:
1. To present degree and non-degree programs that serve the needs of the citizens of Northern Virginia.
2. To attract, maintain, and support a multidisciplinary business administration faculty that meets the various career, intellectual, and developmental needs of its students.
3. To encourage a balanced faculty orientation toward teaching, research, scholarship, and community service that recognizes individual strengths and preferences while advancing the academic excellence of the University as a whole.
4. To structure graduate and undergraduate programs with a focus on preparing students for professional careers which are responsive to community needs based on continuous assessments, interdisciplinary resources, and coordination with other institutions.
5. To foster an atmosphere of open communication among students, faculty, and community which contributes significantly to the professional development of students and faculty.

Administration
The administrative office for the School of Business Administration is located in Room 4611, Robinson Hall:
Lloyd M. DeBoer, Dean
Edward M. Pierce, Assistant Dean for Graduate Program
Ben F. Sands, Jr., Assistant Dean for Undergraduate Program

School of Business Administration Undergraduate Coursework
In the 1979-80 academic year the School of Business Administration adopted a new numbering system for undergraduate courses. This system is designed to accurately identify major subject areas within the fields of business administration. All undergraduate courses are now positioned under one of these headings: Accounting (ACCT); Business Administration (BUAD); Business Legal Studies (BULE); Decision Sciences (DESC); Finance (FNAN); Information Systems (INFS); Management (MGMT); Marketing (MKTG); and Real Estate and Urban Development (REUD). The old BUADXXX course number is shown in parentheses. Such a course, or an undergraduate course shown as “formerly BUADXXX,” is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student’s degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course, given in the undergraduate section of the catalog headed “Academic Policies and Procedures,” applies.

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

Requirements for the Degree
Undergraduate
Bachelor of Science Degree
The programs in business administration offered by the University culminate in a Bachelor of Science (BS) degree with majors in accounting, business administration, decision sciences, finance, management, or marketing. A minimum of 122 hours of coursework is required.
The areas of concentration in the majors are designed to meet the needs of students with highly diverse interests and career goals: careers in business or government, graduate work, or studies which will support their current occupation or profession. Each of the faculties (Accounting/Business Law, Decision Sciences, Finance/Real Estate and Urban Development, Management, Marketing) has developed groups of required and optional courses pertaining to these specific areas of concentration.
Students previously enrolled in a degree program in business administration at another institution must be enrolled in this degree program at George Mason University for at least 15 semester hours of upper-level (numbered 300 or 400) business credits of which six semester hours must be in courses not designated as “Business Core Courses.” These six semester hours must be applied toward the 18 semester hours required for the major as part of a student’s degree program.

Degree Requirements
The following requirements must be met by all degree applicants.

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Core Courses</td>
</tr>
<tr>
<td>Accounting (ACCT 201, 202)</td>
</tr>
<tr>
<td>Applied Statistical Analysis (DESC 202)</td>
</tr>
<tr>
<td>Computer Information Systems (INFS 201)</td>
</tr>
<tr>
<td>Business Decision Models (DESC 301)</td>
</tr>
<tr>
<td>Business Law (BULE 301, 302)</td>
</tr>
<tr>
<td>Finance (FNAN 301)</td>
</tr>
<tr>
<td>Management (MGMT 301)</td>
</tr>
<tr>
<td>Marketing (MKTG 301)</td>
</tr>
<tr>
<td>Business Strategy and Policy (BUAD 498)</td>
</tr>
<tr>
<td>Major*</td>
</tr>
<tr>
<td>Language Arts and Culture</td>
</tr>
<tr>
<td>English Composition</td>
</tr>
<tr>
<td>Oral Communication (COMM 100 or 130 recommended)</td>
</tr>
<tr>
<td>Literature</td>
</tr>
<tr>
<td>Humanities (ART 101, 111, 113, 115, 221, 222, 223, 225, 320, 321, 322, 325, 326, 327, 328, 330, 331, 332; or DANC 101; or THR 160, 251, 252, 253; or MUSI 101, 103, 104, 105, 106, 107; or Philosophy; or Religion)</td>
</tr>
<tr>
<td>Social Sciences</td>
</tr>
<tr>
<td>Principles of Economics</td>
</tr>
<tr>
<td>Economics (Upper level, including ECON 306 or 310)</td>
</tr>
<tr>
<td>History or government</td>
</tr>
<tr>
<td>Psychology and/or sociology</td>
</tr>
<tr>
<td>General and Health Sciences</td>
</tr>
<tr>
<td>Mathematics (MATH 108, 109)</td>
</tr>
<tr>
<td>Laboratory Sciences (astronomy, biology, chemistry, geology, physics)</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td>Total*</td>
</tr>
</tbody>
</table>

*Must be taken at George Mason University.
*Approved areas of concentration within a major are shown in each program.
*May include no more than four semester hours of physical education courses.
*May include a maximum of 61 semester hours of credit from accredited two-year colleges.

Acceptance to Junior Standing in Business Administration
Effective with the 1980 Fall semester, a predetermined number of students will be accepted for Junior standing in
the School of Business Administration on a competitive basis. This number is determined based on the resources available and the appropriate share of University enrollment for the School of Business Administration.

To make application for acceptance to Junior standing in the School of Business Administration, students must meet these eligibility requirements:

1. Completion of 60 or more hours (no more than 90 hours) at George Mason University, or by acceptable transfer credit.

2. Completion of these courses 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.

Selection of students for acceptance to Junior standing in the School of Business Administration is determined on a competitive basis as to the quality of academic work and the courses presented on an application for acceptance to Junior standing in the School of Business Administration. Special consideration is given to grades earned in the courses specified in eligibility requirement #2 and any other courses offered by the School of Business Administration that students may have completed prior to acceptance.

Students are expected to file an application for acceptance to Junior standing in the School of Business Administration by the deadline established for the semester at the end of which they will have met the eligibility requirements. The deadline for this application in a given semester is on or before the last day for dropping a course without incurring a grade of F. Applications received after this date are held until the next deadline.

Students planning to seek acceptance to Junior standing in the School of Business Administration are identified as pre-business by an appropriate code by the Registrar’s Office. An office in the School of Business Administration counsels pre-business students and administers acceptance to Junior standing.

For the 1980-81 academic year, the following policies apply:

1. Students admitted to the University effective with the 1980 Fall Semester are expected to follow the process established above for pre-business and for acceptance to Junior standing in the School of Business Administration.

2. Students admitted to the University prior to the 1980 Fall Semester who are majoring in business administration (as well as those seeking readmission) and who have earned 36 or more hours toward the degree program at the end of the 1980 Spring Semester are automatically accepted to Junior standing in the School of Business Administration when they complete 54 or more hours toward the degree program.

3. Students admitted to the University prior to the 1980 Fall Semester who are majoring in business administration (as well as those seeking readmission) and who have earned 35 or fewer hours toward the degree program at the end of the 1980 Spring Semester are considered pre-business and are expected to make application for acceptance to Junior standing in the School of Business Administration according to the eligibility requirements and selection criteria.

Students have the right to appeal.

Until the requirements for acceptance to Junior standing are met, students are considered pre-business and their programs are administered by the assistant dean for Undergraduate Program. Upon acceptance to Junior standing, students must complete the remaining 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 of the School of Business Administration and the assistant dean for Undergraduate Program. All other programs are administered by the faculty of the discipline concerned.

### Sample Schedule for First Four Semesters in Pre-Business

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 103</td>
<td>ECON 104</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>ENGL 102</td>
</tr>
<tr>
<td>MATH 108</td>
<td>MATH 109</td>
</tr>
<tr>
<td>Laboratory science*</td>
<td>Laboratory science*</td>
</tr>
<tr>
<td>Humanities** and/or psychology or sociology</td>
<td>Humanities** and/or psychology or sociology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>ACCT 202</td>
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<tr>
<td>INFS 201</td>
<td>Elective</td>
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<td>DESC 202</td>
<td>Literature</td>
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<tr>
<td>Literature</td>
<td>Oral communication</td>
</tr>
<tr>
<td>Humanities and/or psychology or sociology</td>
<td>Humanities and/or psychology or sociology</td>
</tr>
</tbody>
</table>

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### Change in Mathematics-Statistics Sequence

A change in the mathematics-statistics sequence for the School of Business Administration becomes effective with the 1980 Fall Semester. The sequence of MATH 107, MATH 108, DESC 205, DESC 206 is replaced by the sequence of MATH 108, MATH 109, DESC 202, DESC 301. Students who have completed the old sequence by September, 1980, are not required to complete the new sequence. Students who have only completed one to three courses of the old sequence should consult the table below for the courses they must complete in order to finish the mathematics-statistics sequence.

<table>
<thead>
<tr>
<th>Have Completed</th>
<th>Must Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 107</td>
<td>MATH 108, 109, DESC 202</td>
</tr>
<tr>
<td>MATH 107, 108</td>
<td>MATH 109, DESC 202</td>
</tr>
<tr>
<td>MATH 108</td>
<td>MATH 109, DESC 202, 301</td>
</tr>
<tr>
<td>MATH 107, 108, DESC 205</td>
<td>DESC 202</td>
</tr>
</tbody>
</table>

### Accounting/Business Legal Studies

#### Faculty

**Associate Professor:** Floyd (Accounting/Business Legal Studies)

**Assistant Professors:** Millspaugh (Faculty Chairman) (Business Legal Studies), Bressier (Accounting), Cao (Accounting), Capps (Accounting), Coffinberger (Business Legal Studies), McIlvaine (Accounting), L. Samuels* (Accounting/Business Legal Studies)

**Acting Assistant Professor:** Smallwood (Business Legal Studies)

**Instructors:** D. Gray (Accounting), Ingram (Accounting), Reisig (Accounting), Ingram (Accounting), Swanson (Accounting)

**Lecturers:** Bryant (Accounting), Carlson (Accounting), J. Davis (Business Legal Studies), Dawson (Business Legal Studies), Denton (Accounting), Doebring (Accounting), Duncan (Business Legal Studies), Fox (Business Legal Studies), Gibbons (Accounting), J. Gray (Accounting), Hicks (Business Legal Studies), Hogue (Business Legal Studies),
J. Jones (Business Legal Studies), Le Rosen (Accounting), E. Miller (Accounting), J. Miller (Accounting), Mourtou (Accounting), Patterson (Accounting), Peckron (Accounting), Pierson (Business Legal Studies), Pope (Business Legal Studies), Quinn (Business Legal Studies), Ricketts (Accounting), Rosenberg (Accounting), J. Samuels (Business Legal Studies), Schoen (Accounting), Shapiro (Accounting), Slavitt (Business Legal Studies), Williams (Business Legal Studies), Woehrle (Business Legal Studies)

*On leave of absence Fall, 1979. (Italics indicate graduate faculty.)

The accounting faculty offers a major in accounting with four areas of concentration designed to prepare students for careers in accounting and related fields. In addition to the general degree requirements for the BS degree, students desiring to major in accounting must complete 18 hours in upper-level courses. (Undergraduate courses in Business Administration [BUADXXX] have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BUADXXX," is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student's degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.) Within the major, students must choose an area of concentration as shown below:

### Concentration in General Accounting
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- ACCT 331 (369) Intermediate Accounting
- ACCT 332 (370) Intermediate Accounting II

**Elective Courses:**
- Three or more courses selected from:
  - DESC 352 (303) Methods and Models of Management Science
  - ACCT 312 (305) Accounting Systems
  - ACCT 351 (342) Federal Taxation
  - ACCT 352 (345) Advanced Federal Taxation
  - ACCT 333 (371) Advanced Accounting
  - ACCT 461 (401) Auditing
  - ACCT 411 (403) Advanced Managerial Accounting
  - ACCT 471 (405) Institutional and Governmental Accounting
  - ACCT 491 (409) Accounting Seminar.

### Concentration in Management Accounting
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- ACCT 312 (305) Accounting Systems
- ACCT 411 (403) Advanced Managerial Accounting

**Elective Courses:**
- Three or more courses selected from:
  - DESC 352 (303) Methods and Models of Management Science
  - ACCT 312 (305) Accounting Systems
  - ACCT 352 (345) Advanced Federal Taxation
  - ACCT 333 (371) Advanced Accounting
  - ACCT 411 (403) Advanced Managerial Accounting
  - ACCT 461 (401) Auditing
  - MGMT 311 (357) Organizational Behavior and Administration

### Concentration in Public Accounting
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- ACCT 312 (305) Accounting Systems
- ACCT 461 (401) Auditing

**Elective Courses:**
- Two or more courses selected from:
  - ACCT 351 (342) Federal Taxation
  - ACCT 333 (371) Advanced Accounting
  - ACCT 471 (405) Institutional and Governmental Accounting

### Concentration in Government Accounting
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- ACCT 312 (305) Accounting Systems
- ACCT 411 (403) Intermediate Accounting II

**Elective Courses:**
- Three or more courses selected from:
  - ACCT 352 (345) Advanced Federal Taxation
  - ACCT 333 (371) Advanced Accounting
  - ACCT 411 (403) Advanced Managerial Accounting

### Business Administration
The faculty of the School of Business Administration, with the assistant dean for Undergraduate Program, offers a major in business administration with four interdisciplinary areas of concentration. In addition to the general degree requirements for the BS degree, students desiring a major in business administration must complete 18 hours of upper-level courses.

Undergraduate courses in business administration (BUADXXX) have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BUADXXX," is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student's degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.

Within the major, students must choose an area of concentration as shown below:

#### Concentration in General Business Administration
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- DESC 352 (303) Methods and Models of Management Science
- MGMT 311 (357) Organizational Behavior and Administration
- MKTG 471 (412) Marketing Management
- FNAN 401 (433) Advanced Financial Management

**Elective Courses:**
- One or more upper-level, non-core courses selected from courses offered by the School of Business Administration.

#### Concentration in Operations Management
**Required Courses:**
- ACCT 311 (301) Cost Accounting
- DESC 352 (303) Methods and Models of Management Science
- MGMT 461 (430) Operations Management

**Elective Courses:**
- Three or more courses selected from either Group A or Group B.

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Concentration in Financial/Accounting Information Systems

Required Courses:

Elective Courses:
Two or more courses selected from: ACCT 311 (301) Cost Accounting, INFS 311 (312) Database Management, FNAN 321 (348) Financial Institutions, ACCT 471 (405) Institutional and Governmental Accounting.

Concentration in Accounting Information Systems

Required Courses:

Elective Courses:
Three or more courses selected from: ACCT 311 (301) Cost Accounting, INFS 312 (318) Computer Hardware and Operations, ACCT 333 (371) Advanced Accounting, ACCT 461 (401) Auditing, ACCT 411 (403) Advanced Managerial Accounting, FNAN 401 (433) Advanced Financial Management.

Note: Students may take additional courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Business Administration)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>DESC 301</td>
<td>ECON 306 or 310</td>
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<td>FNAN 301</td>
<td>Business administration</td>
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<tr>
<td>MGMT 301</td>
<td>area of concentration</td>
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<tr>
<td>MKTG 301</td>
<td>History or government</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Decision Sciences

Faculty

Associate Professors: Greenberg (Acting Faculty Chairman), Ruth, Siff* (Chairman, Fall, 1979)

Assistant Professors: Baum, Martin,* M. Oblik,* Parent

Instructors: Garland, Millar**, Quitmeyer, Schank

Lecturers: Beutel, Carlson, Carrow, Davis, Fishburn, Gardner, Gaudiosi, Harris, Heinrich, Holroyd, Korb, Langston, McLoughlin, McNaught, Noble, Pinto, Pugh, Rubino, Schnal, Slowinski, Travers, Tripiett, Walsh, Weed, Wenker, Womble

*On leave of absence Spring, 1980.

**Spring, 1980, only.

(Italicics indicate graduate faculty.)

The decision sciences faculty administers programs designed to equip students with the latest techniques in management science and information systems. The faculty is also responsible for core courses in data processing, statistics, and quantitative methods.

The faculty offers a major in decision sciences with concentrations in the areas of general decision sciences, management science, and information systems. In addition to the general degree requirements for the BS degree, students desiring to major in decision sciences must complete 18 hours in upper-level courses. (Undergraduate courses in business administration [BAUDXXX] have been renumbered. The old BAUDXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BAUDXXX," is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student's degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.) Within the major, students must choose an area of concentration as shown below.

Concentration in General Decision Sciences

Required Courses:

Elective Courses:

Concentration in Management Science

Required Courses:

Elective Courses:

Concentration in Information Systems

Required Courses:
- INFS 312 (316) Computer Hardware and Operation, INFS 313 (318) Computer Language and Data Structure, INF 411 (415) Management Information Systems, INF 211 (214) COBOL (strongly suggested).

Elective Courses:

* Only one of these three may be counted toward an elective in this program. If more than one is taken, the additional coursework must be applied to the "General Elective" requirement.

Note: 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.

Sample Schedule for Students Accepted to Junior Level Standing (Decision Sciences)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
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<tr>
<td>DESC 301</td>
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<td>History or government</td>
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<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision sciences area of concentration</td>
<td>BUAD 498</td>
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<tr>
<td>Electives</td>
<td>Decision sciences area of concentration</td>
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<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

122
Finance/Real Estate and Urban Development

Faculty

Assistant Professors: Johnston (Faculty Chairman) (Finance), Coffinberger (Real Estate and Urban Development), Hysom (Real Estate and Urban Development), D. Oblak (Finance), Pierce (Finance), L. Samuels* (Real Estate and Urban Development)

Instructors: D. Gray (Finance)

Lecturers: Batt (Finance), Friar (Finance), Kevorkian (Finance), LaRosa (Finance), C. Moore (Real Estate and Urban Development), Morrell (Finance), Nachman (Finance), Norcio (Finance), Pagett (Real Estate and Urban Development), Ronzetti (Finance), Shaikh (Finance), Wilkin (Real Estate and Urban Development)

*On leave of absence Fall, 1979.

The finance and real estate and urban development faculty offers a major in finance with five areas of concentration designed to prepare students for professional careers in finance as well as in real estate and urban development. In addition to the general degree requirements for the BS degree, students desiring to major in finance must complete 18 hours in upper-level courses. Undergraduate courses in business administration [BUADXXX] have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as “formerly BUADXXX,” is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student’s degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.

Within the major, students must choose an area of concentration as shown below.

Concentration in General Finance

Required Courses:

Elective Courses:

Concentration in Financial Management

Required Courses:

Elective Courses:

Concentration in Investments

Required Courses:

Elective Courses:

Concentration in Financial Institutions

Required Courses:

Elective Courses:

Concentration in Real Estate and Urban Development

Required Courses:
REUD 301 (344) Introduction to Real Estate and Urban Development, REUD 411 (447) Real Property Appraisal, REUD 412 (442) Real Estate Finance, REUD 421 (441) Real Estate Law.

Elective Courses:

Note: Students may take additional finance and real estate and urban development courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing

(Original course) Undergraduate courses in business administration [BUADXXX] have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BUADXXX," is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student's degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.

Management

Faculty

Associate Professors: English, Kovach, Marchione, Steinhauser

Assistant Professors: Duke (Faculty Chairman), Bhanos, Brooks, Ondock, Sands

Instructor: Turner

Lecturers: Bolce, H. Davis, Dempsey, Fare, Gaul, Hampton, Hughes, Hullander, Johnson, Larson, LeRosen, Mearas, Michaels, L. Miller, Murphy, Paris, Platt, Smart, Stimson, Tow, Zimmer.

(italics indicate graduate faculty.)

The management faculty administers a major designed to prepare students for managerial careers in the public and private sectors with concentrations in general management, personnel and industrial relations, and small business management.

The faculty offers a major in management with three areas of concentration.

In addition to the general degree requirements for the BS degree, students desiring to major in management must complete 18 hours in upper-level courses. Undergraduate courses in business administration [BUADXXX] have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BUADXXX," is
Marketing

Faculty

Professors: DeBoer (Dean), Tongren
Assistant Professors: Entrikin (Faculty Chairman), Bjorklund*, Horn
Instructors: Rishell
Lecturers: Dunn, Feik, Goresky, Hoelzel, B. Jones, McNallen, Rahn, Wittle

*On leave of absence Spring, 1980.

The marketing faculty offers a major in marketing with six areas of concentration designed to prepare students for careers in marketing and related fields. In addition to the general degree requirements for the BS degree, students desiring to major in marketing must complete 18 hours in upper-level courses. (Undergraduate courses in business administration (BUADXXX) have been renumbered. The old BUADXXX course number is shown in parentheses. Such a course, or a course shown as "formerly BUADXXX," is considered identical to the original course and may not be repeated as a course for credit to be applied toward a student's degree program. If a grade of D or F was achieved in the original course, the policy on repeating a course applies.) Within the major, students must choose an area of concentration as shown below.

Concentration in General Management

Required Courses:
MGMT 321 (332) Personnel Administration, MGMT 311 (357) Organizational Behavior and Administration, MGMT 461 (430) Operations Management.

Elective Courses:

Concentration in Personnell/Industrial Relations

Required Courses:

Elective Courses:

Concentration in Small Business

Required Courses:
MGMT 351 (337) Small Business Management, MGMT 311 (357) Organizational Behavior and Administration, MGMT 461 (430) Operations Management.

Elective Courses:

Note: Students may take additional management courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Management)

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>DESC 301</td>
<td>ECON 306 or 310</td>
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<td>FNAN 301</td>
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<td></td>
<td>15</td>
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<tr>
<td></td>
<td>8th Semester</td>
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<tr>
<td></td>
<td>BUAD 498</td>
</tr>
<tr>
<td>Management area of concentration 6</td>
<td>Management area of concentration 6</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<td></td>
<td>15</td>
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<td></td>
<td>15</td>
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</tbody>
</table>

Concentration in Marketing Research

Required Courses:

Elective Courses:
Four or more courses selected from: MKTG 312 (324) Consumer Behavior, MKTG 333 (327) Industrial/Government Marketing, MKTG 313 (328) Advertising Management, MKTG 491 (413) Marketing Seminar, MKTG 451 (410) Marketing Information Systems.

Concentration in Marketing Management

Required Courses:

Elective Courses:

Concentration in Retail Management

Required Courses:
MGKG 471 (412) Marketing Management, MKTG 332 (322) Retail Management, MKTG 312 (324) Consumer Behavior.

Elective Courses:
Three or more courses selected from: MKTG 351 (325) Marketing Research I, MKTG 331 (320) Distribution Systems, MKTG 313 (328) Advertising Management, MKTG 491 (413) Marketing Seminar, MGMT 351 (337) Small
Concentration in Industrial and Government Marketing

**Required Courses:**
- MKTG 333 (327) Industrial/Governmental Marketing, MKTG 311 (323) Sales Management.

**Elective Courses:**
- *Four or more courses selected from:* (Three must be in marketing area.) MKTG 351 (325) Marketing Research I, MKTG 331 (320) Distribution Systems, MKTG 313 (328) Advertising Management, MKTG 491 (413) Marketing Seminar, MGMT 371 (351) Government and Business, ACCT 471 (405) Industrial and Governmental Accounting, MKTG 451 (410) Marketing Information Systems.

Concentration in Sales Management

**Required Courses:**
- MKTG 311 (323) Sales Management, MKTG 471 (412) Marketing Management.

**Elective Courses:**

**Note:** Students may take additional marketing courses as well as other courses offered by the School of Business Administration to satisfy any or all of the 15 hours of "General Elective" requirements for graduation.

Sample Schedule for Students Accepted to Junior Level Standing (Marketing)

<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULE 301</td>
<td>BULE 302</td>
</tr>
<tr>
<td>DESC 301</td>
<td>ECON 306 or 310</td>
</tr>
<tr>
<td>FNAN 301</td>
<td>Marketing area of concentration</td>
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<td>MGMT 301</td>
<td>History or government</td>
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<td>MGMT 301</td>
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</table>

<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Marketing area of concentration</td>
<td>BUAD 498</td>
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<tr>
<td>6 concentration</td>
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<td>ECON upper level elective</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<td>6</td>
<td>6</td>
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<tr>
<td>15</td>
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</tbody>
</table>

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 their skills in business administration.
3. Persons employed in business and government who wish to continue their 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 an opportunity for in-depth specialization in one of several specializations. Nearly all courses are offered in the evening to facilitate part-time study. The MBA program involves between 36 and 60 semester hour courses of graduate coursework. The exact number of credit hours required is based on evaluation of the academic record at the time of application to the program. Generally, applicants are given credit for foundation courses if they have completed six hours of undergraduate work in a discipline (at least three hours must be upper-level undergraduate coursework in finance, marketing, management, law) or an equivalent graduate course. The minimum MBA program is 36 hours.

**MBA Entrance Requirements**

In addition to fulfilling the entrance requirements for the Graduate School, applicants for the MBA program should meet the following minimum entrance requirements:
1. A bachelor's degree from an accredited institution.
2. A grade point average 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 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).

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.

<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>
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<tr>
<td>Elective Courses</td>
<td>15 hours</td>
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<tr>
<td>Total</td>
<td>36-60 hours</td>
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</tbody>
</table>

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MBA Degree Requirements
A candidate must fulfill all of the degree requirements of the Graduate School and the following specific academic requirements of the MBA program:

1. **Foundation.** Each candidate must have completed the equivalent of the foundation courses or take them at George Mason University. These courses provide a common body of knowledge for students wishing to pursue graduate work at the MBA level. There are 24 hours of graduate foundation coursework. Some of these may be satisfied by academic coursework in the student’s background; this is decided upon admission to the MBA 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.

The foundation courses are:

- **ECON 502: Economic Analysis**
  (Offered by the economics department)  
- **BUAD 600 (500): Accounting and Reporting**  
- **BUAD 610 (510): Financial Management**  
- **BUAD 620 (520): Marketing Concepts and Processes**  
- **BUAD 630 (531): Computer Systems for Management**  
- **BUAD 640 (550): Statistical Foundation for Business Decision Making**  
- **BUAD 650 (530): Legal Concepts and Trends Affecting Business**  
- **BUAD 660 (540): Management Theory and Practice**  

Completion of all foundation coursework is prerequisite to courses at the next level, the MBA core.

2. **MBA Core.** Each candidate must complete the following MBA core courses unless, in the opinion of the School of Business Administration, the candidate has had equivalent work at the graduate level elsewhere:

- **BUAD 601 (501): Managerial Accounting**  
- **BUAD 611 (511): Cases in Financial Administration**  
- **BUAD 621 (521): Cases in Managerial Marketing**  
- **BUAD 641 (551): Quantitative Methods of Managerial Analysis**  
- **BUAD 661 (591): Cases in Organizational Behavior**  
- **BUAD 797 (595): Business Policy**  
- **BUAD 798 (598): Seminar in Business Research**  

(See note below on Thesis option.)

3. **Electives.** Electives provide the MBA student with the opportunity for limited specialization in one of several areas offered by the School of Business Administration. Each candidate must complete at least two graduate courses in one of the areas. Areas currently available are:

- Accounting
- Administrative Management
- Financial Management
- Information Systems
- International Business
- Management Science
- Managerial Economics
- Marketing Management and Research
- Real Estate and Urban Development

15 from above electives

4. **Thesis or 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 (598), Seminar in Business Research, and one elective course, by completing a thesis. Six credit hours may be earned by electing the thesis option.

Special School Regulations

1. Provisional students and non-degree students contemplating degree status must complete nine of their first 12 graduate hours from among MBA foundation courses if they have not had the foundation coursework, or from core courses if all foundation course requirements are satisfied.

2. No more than 12 semester hours of MBA foundation, core, or elective credits may have been earned through enrollment in non-degree status or through Extended Studies enrollment prior to acceptance in degree status.

3. A maximum of six semester hours of graduate credit in approved 500-level graduate courses may be authorized; however, these courses must be taken after entry into the program and normally are taken prior to the related MBA core courses.

4. A maximum of six hours of elective credit in another graduate program of this University may be allowed provided they are in a related field and have prior approval of the assistant dean, Graduate Programs, School of Business Administration.

5. Subject to general transfer policies of the Graduate School, up to six hours of graduate coursework may be transferred from other institutions. However, to be considered for transfer, such work must have been completed within five (5) years prior to the date of admission to the Graduate School of George Mason University.

6. In all cases, students must complete a minimum of 24 hours of graduate coursework at George Mason University while in degree status.

7. Required foundation courses must be completed prior to initiation of core courses, although there may be
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 2,000.

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) to participants in organized community service workshops, conferences, and institutes.

In response to the continuing education needs of health professionals, the Office of Extended Studies and the Department of Nursing began a cooperative Nursing Continuing Education Program in 1977.

In January, 1979, 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. This change recognized the maturing of George Mason University and the essential place in its offerings for adults who turn to their regional university for educational renewal. The step emphasized the University's determination to provide an extensive lifelong learning program to the community.

Programs and Services

The Division of Continuing Education provides the Northern Virginia community with a comprehensive program of learning opportunities: the nontraditional Bachelor of Individualized Study degree program; undergraduate evening programs; the nursing continuing education program; the Extended Studies Enrollment procedure; off-campus credit instruction; contract courses; undergraduate guest matriculant enrollment; senior citizen enrollment; community services; and noncredit courses. Academic programs offered through the Division of Continuing Education originate in the appropriate colleges and schools of the University and are subject to official University regulations and procedures. The dean of the Division of Continuing Education serves as the academic dean of all students enrolled in programs administered by the Division.

Administration

Robert T. Hawkes, Jr., Dean
Sally J. Reithlingshofer, Assistant Director

Extended Studies Enrollment Procedure

Although qualified students may seek formal admission to any undergraduate or graduate degree program on a full- or part-time basis, the Division of Continuing Education provides an alternative enrollment procedure that meets the specialized needs of continuing education students.

Students Served

The Extended Studies Enrollment procedure serves the academic counseling and career information needs of adult learners and provides an opportunity for qualified students to...
apply for enrollment in on-campus or off-campus courses without being formally admitted to the University. The program accommodates the diverse continuing education needs of students for achieving personal enrichment, upgrading skills, retraining for new jobs, increasing enjoyment of retirement or leisure time, entering or reentering the job market, exploring new areas of study or making up academic deficiencies or prerequisites in order to qualify for entry into a degree program. While achieving these needs, students earn credit that can be later applied to a degree program.

Enrollment Procedures
Prior to each semester, professional academic counselors assist over 3,000 students in selecting courses appropriate to career goals, advise students about requirements for courses and programs, approve course selections, inform students as to registration procedures, and acquaint students with the University services available to Extended Studies enrollees. All academic policies and procedures apply to Extended Studies enrollees. Completed courses, earned credits, and grades are recorded on regular University transcripts.

Enrollment Requirements
Prospective enrollees are required minimally to supply unofficial evidence of their academic background during their first visit to the Division of Continuing Education. High school transcripts and evidence of graduation are required of those who have no previous college coursework. Transcripts, grade reports, diplomas, or certification documents are required of those who have had previous academic work.

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 Admission 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 on a Student Request Form. If the student has transferable credit from another institution, the amount of applicable credit earned through Extended Studies Enrollment is reduced accordingly. Grades for the graduate courses taken through Extended Studies Enrollment, if approved toward a master's degree, are included in the student's grade point average. Prospective degree-seeking students are urged to apply for regular admission as soon as possible or as soon as they are eligible to do so. Candidates for degrees must fulfill the degree requirements outlined in the catalog that is in effect at the time they are admitted. All University tuition, fees, and regulations apply to Extended Studies enrollees.

Counseling and enrollment services are available to the public throughout the entire year in the Division of Continuing Education, East Building, Room 132, from 9 a.m. to 7 p.m. on Monday through Thursday and from 9 a.m. to 4 p.m. on Friday. No appointments are necessary. However, during pre-semester "rush periods" career and academic counseling services are limited to course approval only.

Undergraduate Evening Program
The Division of Continuing Education coordinates undergraduate courses and programs scheduled after 4:15 p.m. for the undergraduate colleges and schools. Undergraduate degree programs in business administration, economics, English, history, mathematics, philosophy, psychology, and sociology are completely available in the evening. All academic departments offer evening courses, and other undergraduate majors will be added as the evening session expands.

During its evening hours of operation, Monday through Thursday, the Division performs many of the daytime functions of the deans' offices, the Admissions office, the Registrar's office, the Cashier, and the departmental offices. The Deans of the Division administers many academic policies for undergraduate evening students. Evening class schedules are included in the University's Schedule of Classes.

Nursing Continuing Education Program
Continuing education is an important commitment of the nursing department at George Mason; program activities are planned so that individuals can grow personally and professionally.

The Department of Nursing, in cooperation with the Division, offers opportunities for credit and noncredit courses representing a variety of subjects focusing on the concerns of nurses and health care consumers.

Having completed the third operating year for continuing education, the Department of Nursing and Division of Continuing Education are pleased to utilize the wealth of available resources in the Northern Virginia area when planning and presenting continuing education activities. Comments and suggestions for programming from the health care community are welcomed and encouraged. Contact the nursing department of the Division of Continuing Education to receive notice of scheduled specific activities.

Senior Citizens Enrollment
The Division of Continuing Education coordinates the Senior Citizens Higher Education Act of 1974, as amended and as applicable to the University. Under the terms of this act, eligible Virginia residents over 60 years of age with a taxable income of less than $5,000 are entitled to enroll in courses offered for academic credit on a space-available basis without payment of tuition and fees.

Additionally, the act provides for audit of course(s) offered for academic credit and also for enrollment in noncredit course(s) without payment of tuition and fees on a space-available basis. Tuition, however, may be charged for those courses which are designed exclusively for senior citizen groups. Interested senior citizens should contact the Division at (703) 323-2436.

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

Guest matriculants enrolled in graduate programs at other accredited institutions are urged to contact the Graduate
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 credit courses designed to meet the specific needs of a business, government agency, school system, or association. These contract courses are approved by the appropriate college or school of the University.

The offering of a contract course can be initiated by an academic department, the organization requesting the course, or the Division. Students enrolled in a contract course are selected by the University or the organization to fulfill specific educational needs.

A contract course may also be offered on a noncredit basis; in this case, it is specifically designed for a particular audience, and no academic credit is given. It may be a onetime offering for a specific need, and students may receive Continuing Education Units (CEU’s) or some other recognition of achievement.

For more information about contract courses, contact the Coordinator, Off-Campus Instruction, at (703) 323-2436.

## Community Service Activities

Northern Virginians have expressed the need for continuing education in the areas of professionally-oriented conferences, workshops, seminars, and institutes. The Division of Continuing Education has encouraged the academic departments of the University to work with public agencies to offer one- and two-day conferences, conducted by University faculty and other experts, to provide educational opportunities of interest.

Most community service seminars, conferences, workshops, programs, and institutes are held in the Student Union, a facility which includes lounges, conference rooms, and banquet services. Because community services has access to all University resources and facilities, the Division has been able to expand its activities to include training conferences in business, education, and health-related fields.

Continuing Education Units (CEU’s) are awarded for participation in previously designed activities in the community service area. The CEU is a way of measuring participation in an organized educational experience, under reliable sponsorship, capable direction, and qualified instruction. One CEU represents 10 contact hours of participation in a continuing education experience that qualifies for CEU’s. Students who successfully complete the activity receive a Continuing Education Unit certificate of award, and a record of that participation is maintained by the University.

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Bachelor of Individualized Study Degree Program

The Degree Program

The Bachelor of Individualized Study (BIS) degree program offers mature Northern Virginians an academically sound program providing an alternative to traditionally structured baccalaureate degrees. It provides each student, guided by a George Mason University academic adviser, an opportunity to formulate a course of study which complements individual needs and interests. The choices in any given instance are inter-institutional, individualized, and interdisciplinary, without a major subject as required traditionally.

The Bachelor of Individualized Study (BIS) degree is conferred by George Mason University in partial fulfillment of its service obligation to Northern Virginians.

The student in the BIS may fulfill an individualized program of study by calling upon the undergraduate resources of the Consortium for Continuing Higher Education in Northern Virginia. The Consortium institutions include George Mason University, Northern Virginia Community College, Falls Church Regional Center of the University of Virginia, and Marymount College of Virginia.

All courses in the curriculum of each participating undergraduate Consortium institution are available, as appropriate, to help meet student program needs. In addition, a student may draw upon such nontraditional modes of instruction as newspaper, television, and correspondence courses, CLEP subject exams, USAFI service-connected schools, and independent study for knowledge and progress toward completion of a program as agreed to by the academic adviser.

In acquiring credits toward a BIS degree, a student may proceed at 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.

The program recognizes the breadth of an adult student's background by providing for generous transfer of credits earned elsewhere and by providing procedures to translate knowledge gained from prior experiential learning or self-education into academic credits as appropriate. A maximum of four semester hours may be earned for prior experiential learning.

The design of a program of study is a joint venture between the adult student and the George Mason University academic adviser, and it reflects the individual student needs and interests. The requirements of the BIS degree program add to its integrity. The student-developed core of individualized study prevents the degree from being merely an assemblage of credits. The general education requirement provides some experience in three broad areas of basic knowledge commonly integral to a university education, while allowing flexibility of course selection within these areas. The educational requirements also specify that the student successfully complete BIS 490 and six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102. The individualized study core may be an interdisciplinary or highly individualized selection of courses rather than the traditional major. Other features add to the program's flexibility: the absence of on-campus residence requirements and time limits for program completion, a minimal number of hours (30) to be completed within the Consortium, and a general philosophical approach which respects the student by providing an opportunity to fashion an individualized curriculum.

Tuition and Fees

At George Mason, all University tuition and fees apply; for details, see the section of this catalog on tuition and fees. For information about costs at the other Consortium institutions, consult their appropriate publications.

Eligibility for the Program

The program is designed for mature students who have been out of high school at least eight years and who have indicated their commitment to adult continuing education by accumulating 30 semester hours of college-level credit acquired at any regionally accredited institution.

At least 15 of the 30 semester hours required for acceptance into the program must be of conventional classroom instruction; the remaining 15 hours of the initial 30 may have been earned by CLEP and USAFI subject examinations, correspondence, television, or other nontraditional modes of imparting and measuring knowledge, and independent study administered by an accredited institution of higher learning. Additional hours earned by nontraditional methods may be applied after entry into the program. The hours presented for acceptance, however, may not include credits awarded by other colleges or universities for prior experiential learning by means other than by examination. Knowledge claimed on the basis of prior experiential learning must be validated by George Mason following acceptance into the program.

Persons seeking acceptance must be able to show a 2.000 grade point average (GPA) on a 4.000 scale on work presented for acceptance but may include in the graded transfer work hours of D offset by higher grades. If necessary, the 30 hours required for acceptance may be selected from a larger number of courses taken in order to show the requisite 2.000 GPA on entry credits.

No time limit is attached to the validity of transfer coursework.
Application for Admission and Acceptance

A potential BIS student must first meet with the BIS Coordinator in the University’s Division of Continuing Education. The applicant must also seek undergraduate admission to George Mason University through the admissions office. Concurrent with admission application to the University, a student’s application for acceptance into the BIS program is evaluated based on a personal counseling session which can be arranged in the Division of Continuing Education by calling (703) 323-2436. During a personal interview a BIS counselor helps each student determine objectives, plans, and career orientation; each student is asked to develop a written narrative of these prior to acceptance into the BIS program. If a student’s request for BIS program status is denied, the student may decide to pursue a more conventional degree. However, the student may appeal the decision to the dean of the Division.

Requirements and Transfer

It is theoretically possible for students after acceptance and academic approval to transfer all credit hours required for the program except for the three-credit-hour project (see “Project” below); but 30 of the total hours must be completed within the Consortium.

A student theoretically may accumulate as many as 102 semester hours in this program by means other than normal enrollment in and attendance at conventional classes. Hence, the program accommodates various combinations of nonconventional and conventional work almost without internal limitation. Only 15 hours of conventionally earned credits and the three-hour project mentioned below—a total of 18 program hours—may not be acquired by nontraditional methods.

Counseling and Advising

After a student is accepted into the BIS program, the BIS Coordinator arranges program planning and academic advising. A student planning a program at any member institution in anticipation of the BIS degree may be accepted after accumulating 30 semester hours of coursework. Conversely, it is theoretically possible that a student might, under certain circumstances, delay entry by continuing to select courses at any Consortium school, transferring to George Mason only to complete the required project. In this case, however, the courses selected before entry must contain 30 semester hours of work that is acceptable to the George Mason adviser as constituting an individualized core of study appropriate to the student’s needs or interests. The degree program does not require any fixed amount of coursework to be completed at any one participating institution, except for the Bachelor of Individualized Study project.

The BIS Coordinator is responsible for general orientation for a BIS acceptance decision, for counseling students about program procedures and requirements, and for administering or coordinating examinations used to validate knowledge gained through nontraditional means. Professional counselors refer each accepted BIS student to one or more approved advisers from the George Mason faculty with whom the student will plan and under whose supervision the student will carry out the academic program, especially the “Individualized Study Core.” The selected academic adviser is deemed permanent for the duration of the program. However, a change may be made if there is a significant change in the student’s primary focus.

Credits Earned for Prior Experiential Learning

The BIS program is designed for adult students, most of whom will have acquired experience and knowledge through work, reading, and travel. However, no credit is granted within the program for prior experiential learning per se (including military service, regardless of the length of service, rank attained, or duties performed). Academic credit for knowledge gained through self-instruction, work, or other life experiences is granted only when the student’s possession of academically relevant information has been validated. Students who wish to qualify for credit based on their experience and knowledge should arrange to have it appropriately presented for evaluation.

Validation is normally accomplished by examination—by a nationally prepared and normed test, an end-of-course examination, or a specially prepared local examination. A student receives full course credit by scoring in the 50th percentile or higher on the appropriate nationally prepared examination or by scoring 60 percent or higher on the appropriate local examination.

If no examination can be devised to validate knowledge for which credit is sought, the academic adviser may assemble a committee of three persons qualified to evaluate the knowledge and fix the credit to be granted. Such a committee is used only as a last resort. The prior experiential learning must be explicit enough to be validated with reasonable objectivity and precision. A committee may grant credit not to exceed four semester hours; no student, however, may be awarded more than four semester hours of credit for prior experiential learning except by examination.

Requirements Within the BIS

Three distinctive phases are involved in the BIS program but are not sequentially related.

1. General Education. While this degree program is designed to meet the widest possible range of individualized educational objectives, there are three general areas of knowledge that cannot be wholly omitted from university education: humanities, social and behavioral
sciences, and science and mathematics. In order to gain substantial exposure to the arts and sciences, the student must earn credit equivalent to six semester hours in each of these three general areas. In addition, six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102 are specifically required. Courses need not be in a single discipline within a given area, and those selected may also count, if appropriate, as parts of the individualized study core. Transfer credits and credits obtained by extra‐classroom means may be used to satisfy the areas of study. The list of general areas and disciplines follows:

Area A: Humanities
English
Fine and Applied Arts
Humanities
Language
Literature
Music
Philosophy
Religion
Speech

Area B: Sciences and Mathematics
Astronomy
Biology
Botany
Chemistry
Computer Science
Geology
Mathematics
Physics
Physiology
Zoology

Area C: Social and Behavioral Sciences
Anthropology
Economics
Geography
History
Linguistics
Political Science
Psychology
Regional Culture
Sociology

2. Individualized Study Core. The adult student, with an academic adviser, designs an individualized study core of at least 30 semester hours, with at least 12 of the 30 hours of upper-division level or its equivalent as measured by the curriculum of George Mason. The core consists of a pattern of study selected according to the objectives and interests of the student. It may be developed across traditional disciplinary lines in order to provide a thematic program, drawing upon the resources of several disciplines—e.g., environmental studies, regional studies, public administration. The student may also opt for a more traditional approach by concentrating in one discipline. When designing the pattern of courses, the student may draw upon the full curricular resources of the Consortium, plus nontraditional resources and/or modes of instruction as agreed upon by the student and the academic adviser. No more than six semester hours of D grades may be included in the concentration.

3. Project. At the beginning of the program, the student with the adviser designs a project directly related to the individualized study core to be completed during the program. The project may be integrative in character, or may augment study by providing an in-depth analysis of some work-related task or phase of study. Once the project proposal is approved by the academic adviser and accepted by the BIS Coordinator, actual work on the project begins at a time appropriate to the nature of the project and its relation to the student's total program. In the semester in which completion of the degree program is anticipated, the BIS candidate should register for BIS 490: Bachelor of Individualized Study Project (3). The completed project must be submitted to the academic adviser at least two weeks prior to the last day of classes of the semester in which credit is sought.

The project is evaluated by a three-member committee consisting of the academic adviser and two other Consortium faculty members—one selected by the student and one chosen by the academic adviser. An acceptable project must have at least a grade of C. The three
semester hours of credit earned upon successful completion of the project are in addition to the 12 hours of upper-division work required in the core.

When the work of BIS 490 is not completed within a semester, a mark of IP (In Progress) is entered on the record. IP is not treated as an unsatisfactory grade. In BIS 490 it is not subject to the time limit prescribed for IN.

Summary

The student's program is completed when the admitted and accepted student has:
1. accumulated the equivalent of 120 semester hours; 30 of these hours must be completed within the Consortium;
2. successfully completed six semester hours of a composition/literature sequence the equivalent of ENGL 101 (or 100), 102.
3. presented work equivalent to six semester hours of credit in each of the following areas: humanities, sciences and mathematics, social and behavioral sciences;
4. finished an individualized core of study equivalent to at least 30 semester hours of credit, at least 12 of which must be upper division, with no more than six semester hours of D grades; and
5. successfully completed BIS 490: Bachelor of Individualized Study Project with at least a grade of C for three semester hours credit.

University Courses

Committee on University Curriculum Matters

John M. Smith, Chairperson (Department of Mathematics)
Jane M. Flinn (Departments of Physics and Psychology)
Josephine F. Pacheco (Department of History)
Raleigh F. Steinhauer (School of Business Administration)

On January 26, 1977, the Faculty Senate of George Mason University voted to establish a new category of courses, University Courses. University Courses were first offered during the Spring 1978 semester.

University Courses are special academic offerings which are interdisciplinary, in-depth presentations of broad interest. Proposals for University Courses are developed by faculty, usually by several acting together. After review and approval by the University Faculty Standing Committee on Curriculum Matters, these courses are administered by the Office of the Vice President for Academic Affairs. Unless specific prerequisites are indicated, the courses are open to all students.

UNIV 401: Visions of the End in America (3). Offered Spring 1978.
UNIV 402: Myths of the Twilight Years (3). Offered Spring 1978.
UNIV 404: Brothers and Strangers: Jews and Judaism in Western Culture (3). Offered Fall 1978.
UNIV 405: Anthropology of Health (3). Offered Fall 1978.
UNIV 406: The Opportunities and Dangers of the Peaceful Use of Nuclear Energy (3). Offered Spring 1979, Spring 1980.
UNIV 408: The Nature of Time (3). Offered Fall 1979.
UNIV 409: Japan: The Living Tradition (3). Offered Fall 1979.
UNIV 410: Assassination and Terrorism as Political Weapons (3). Offered Fall 1980.
UNIV 411: Electronic Communication (Television) and the Representation of Reality (3). Offered Fall 1980.

UNIV 412: Family Law (3). Offered Fall 1980.
UNIV 413: Life in the Universe (3). Offered Fall 1980.

University Courses

Descriptions of University courses are listed in the Course Dictionary under UNIV.

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 Program in Gerontology

Committee

Catharine Kopac (Department of Nursing)
Jeanne Mellinger (Department of Psychology)
Mary Montebello (Department of Education)
Douglas McAdam (Department of Sociology)
Frederick Schack (Department of Health and Physical Education)

The certificate program in gerontology is designed both for students who wish to train for work with older people and for professionals already working with the elderly. The program provides a background of basic knowledge in gerontology and then permits the students to train in professional skills in areas such as counseling, recreation, social services, nursing, and administration.

Students who wish to enter the certificate program may obtain an application form from any of the participating departments and should submit the completed form to Dr. Jeanne Mellinger, Department of Psychology. Inquiries concerning the program should be directed to a member of the above-listed committee.

Program Requirements

The certificate program in gerontology consists of 24 semester hours of courses. Students receiving the certificate must either hold a baccalaureate degree or be receiving a baccalaureate degree from George Mason University at the time they receive the certificate. Students are required to have as prerequisites for the certificate program eight hours of biology or anatomy or physiology and three hours of psychology or sociology.

The 24 semester hours required in the certificate program are divided as follows:
1. Six semester hours in introductory gerontology courses: Fundamentals of Aging I and II (crosslisted as EDUC 397, 398; NURS 397, 398; PHED 397, 398; PSYC 397, 398; SOCI 397, 398) (3, 3)
2. Three to six semester hours in a practicum in gerontology: NURS 485, 486 (3, 3)
PHED 445 (3)
PSYC 421, 422 (3, 3) or PSYC 750 (550) (3, 3)
EDUC (to be arranged)
3. A minimum of nine semester hours selected from the following courses:
   - NURS 486: Health Maintenance and Health Aspects of Aging (3)
   - PHED 470: Leisure and Recreation Programming for Older Adults (3)
   - PSYC 514 (415): Psychological Factors in Aging (3)
   - SOCI 441: Sociology of Aging (3)

4. Three to six hours of elective courses selected from the following:
   - Gerontology Graduate Electives:
     - EDUC 598, NURS 798, PSYC 796 (598): Research in Gerontology (3)
     - NURS 635: Gerontologic Nursing I (3)
     - NURS 636: Gerontologic Nursing II (3)
     - PHED 530: Exercise Physiology and Fitness Programs for Older Adults (3)
     - PSYC 786 (586): Functional Assessment and Treatment in Gerontology (3)
   - Gerontology Undergraduate Electives:
     - EDUC 440, 441; NURS 494, 495, 499; PHED 499; PSYC 460;
     - SOCI 499: Reading and Research in Gerontology (1-3)
     - NURS 486: Coping With Death and Dying (3)
   - Cognate Electives:
     - EDGC 654 (EDUC 540), 656 (EDUC 541), 606 (EDUC 636)
     - EDUC 525, 526
     - HEAL 220, 330
     - PHED 616 (516)
     - PSYC 326, 728 (528)
     - PUAD 502, 503
     - SOCI 390, 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 six hours in which D grades have been received.

Coursework for Gerontology Certificate Program

Descriptions of all courses applicable to this program (as indicated in the above requirements) are listed in the Course Dictionary of this catalog.

Certificate Program for Psychology Technicians

Inquiries should be directed to Dr. Carol Erdwins of the Department of Psychology.

Purpose of Program

The psychology technician program includes a sequence of courses which provide the theoretical background and behavioral skills necessary for successful performance at the paraprofessional or introductory level in many human service settings and agencies. Completion of this program enhances the graduate’s ability to perform in settings such as group homes, sheltered workshops, and activity centers for emotionally disturbed children and adults; training centers for mentally retarded persons; adolescent treatment programs; and residential facilities for juvenile offenders and the aged.

Program Content

This certificate program consists of 24 semester hours in psychology beyond the introductory level course (PSYC 100, which is a prerequisite to all other courses). These hours include:

- PSYC 220: Personality Theory 3
- PSYC 325: Abnormal Psychology 3
- PSYC 326: Therapeutic Communication Skills 3
- PSYC 322: Behavior Modification 3
   - One of the following: 3
     - PSYC 210: Child Psychology
     - PSYC 215: Adolescent Psychology
     - PSYC 310: Developmental Psychology
     - PSYC 397: Fundamentals of Aging I
   - One of the following: 3
     - PSYC 320: Psychological Tests and Measurement
     - PSYC 414: Behavior Disorders of Childhood
     - PSYC 420: Clinical Methods of Psychology
     - PSYC 423: Group Psychotherapy Techniques
     - PSYC 421, 422: Practicum in Clinical Psychology 6
   - Total 24

To qualify for the certificate, a student may present all courses applicable to the certificate in which satisfactory grades have been received and up to six hours in which D grades have been received.

Coursework for Gerontology Certificate Program

Descriptions of all courses applicable to this program (as indicated in the above requirements) are listed in the Course Dictionary of this catalog.
Descriptions of each of these courses may be found in the Course Dictionary of this catalog. It is important to note that some of these courses are prerequisites to others and need to be taken in the suggested sequence. Specifically, PSYC 220 is a prerequisite to PSYC 322, 325, and 423; PSYC 325 is a prerequisite to PSYC 326, 414, and 420; and both PSYC 325 and 326 must be completed before beginning the practicum (PSYC 421, 422). This practicum is ordinarily taken during the student’s senior year; it offers the student an opportunity to gain work experience under supervision in a variety of human service agencies. The work placement is for approximately eight to ten hours per week with a minimum of 240 hours during the two 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 two unsatisfactory grades (D) and a minimum grade of B in each semester of the practicum. The certificate is awarded after completion of and in conjunction with the baccalaureate degree unless the student has previously completed this degree with a major in one of the three specified disciplines.

Coursework for Psychology Technician Certificate Program
Descriptions of all courses applicable to this program (as indicated in the above requirements) are listed in 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.
Course Dictionary
Course Dictionary

This dictionary is a comprehensive listing of all credit courses—undergraduate and graduate—offered by the University. Courses are listed in alpha-discipline order beginning with "Accounting" and ending with "Vietnamese." The computer name for courses is included with each heading (i.e., Accounting ACCT); except where obvious (i.e., English), the department offering the courses is also cited in the heading. The following computer names are used:

Accounting........................ACCT
American Studies..................AMST
Anthropology......................ANTH
Art....................................ART
Astronomy..........................ASTR
Biography..........................BIOL
Business Administration.........BUAD
Business Legal Studies...........BULE
Cartography........................CART
Chemistry...........................CHEM
Classics..............................CLAS
Communication.....................COMM
Computer Science................CS
Dance................................DANC
Decision Sciences..................DESC
Economics..........................ECON
Education: Administration/Supervision. EDAS
(Previously EDUC)
Education: Elementary/Secondary. EDCI
(Previously EDUC)
Education: Guidance/Counseling...EDGC
(Previously EDUC)
Education: Reading................EDRD
(Previously EDUC)
Education: Special Education.....EDSE
(Previously EDUC)
Engineering.........................ENGR
English..............................ENGL
European Studies................EUST
Finance..............................FNAN
French...............................FREN
Foreign Language................FRLN
Geography:..........................GEOG
Geology..............................GEOL
German..............................GERM
Government and Politics..........GOVT
Greek...............................GREE
Health Education..................HEAL
History..............................HIST
Information Systems:.............INFS
(Previously DESC)
Japanese............................JAPA
Korean...............................KORE
Latin...............................LATN
Latin American Studies..........LAS
Library Science...................LSCI
Management........................MGMT
Marketing..........................MKTG
Mathematics........................MATH
Music...............................MUSI
Nursing.............................NURS
Philosophy........................PHIL
Physical Education................PHED
Physiology..........................PHYS
Portuguese..........................PORT

Course Numbering System

Undergraduate

1. Courses numbered 499 and below are undergraduate courses. Course numbers in the 100 series are customarily taken by freshmen, the 200 series by sophomores, the 300 series by juniors, and the 400 series by seniors.

2. The number designations of the course descriptions below have the following significance:
   a. A single number (as HIST 301) indicates that the course is complete within a single semester, and that the semester course may be taken separately with credit toward a degree.
   b. A double number separated by a hyphen (as BIOL 124-125) indicates that the course extends through two semesters, that both semesters must be completed before the course may count toward a degree, and that the first semester is prerequisite to the second semester. Students may not take the second semester of a hyphenated course unless they have received either transfer credit for the equivalent of the first semester or advanced placement from the department concerned.
   c. A double number separated by a comma indicates that the subject matter or content of the course extends through two semesters but that either semester may be taken by itself. Unless otherwise specified, the first semester is not prerequisite to the second semester.

3. The credit in semester hours is shown in parentheses in each course description (3).

Graduate

1. Courses numbered 500 and above are graduate courses. Some undergraduate courses are approved for graduate credit, as indicated in the departmental sections of the catalog.

2. A new numbering system for graduate courses becomes effective with the 1980-81 academic year and is to be completed following the 1981-82 academic year. The list below indicates the academic year in which each area will begin using the new graduate course numbering system:

   1980-81
   Business
   Education
   Economics
   Geography and Cartography
   Mathematical Sciences
   Nursing
   Psychology
   Public Affairs
1981-82

<table>
<thead>
<tr>
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<tr>
<td>Biology</td>
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<td>French*</td>
<td></td>
<td>Sociology*</td>
</tr>
<tr>
<td>Foreign Languages*</td>
<td></td>
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</tbody>
</table>

*Graduate courses or undergraduate courses approved for graduate credit.

A graduate course which has been completed successfully now may carry a different number. **Additional credit may not be received for a course under a different number if all requirements have been completed and a satisfactory letter grade has been earned in the course under its original number.** Graduate students are required to determine prior to registration that they have not completed a subject in a prior semester under a different number. Both in the Course Dictionary and in the departmental sections of the catalog, the new number is accompanied by the old number in parentheses. Thus, 791 (591) means that the old course number was 591, and the new course number is 791. Students also may check with the department offering the coursework to be certain that they are not repeating a graduate course for which they already have credit.

3. General Numbers for Graduate Courses

500-599 Graduate courses open only to graduate students (admitted to master’s or doctoral programs), 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.

600-699 Graduate courses open only to graduate students (admitted to master’s or doctoral programs) and to other bachelor’s degree holders.

700-799 Master’s level graduate courses open only to graduate students (admitted to master’s or doctoral programs). These numbers are used only for master’s level coursework.

800-899 Doctoral level graduate courses open only to graduate students (admitted to master’s or doctoral programs). These numbers are used primarily for doctoral level (post-master’s) coursework.

4. Special Numbers for Graduate Courses (Courses with these numbers are reserved for the uses designated.)

600-609 Limited applicability graduate credit courses. Courses intended for 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.

796 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.

797 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 requirements 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, 890 Supervised practicum.

794, 894 Internship.

796, 896 Directed reading and research courses for master’s and doctoral level students.

797, 897 Independent reading and research courses for master’s and doctoral level students.
491 Accounting Seminar (3)
Prerequisites: Senior standing and completion of ACCT 331 and 332. Advanced study of selected topics in accounting, including accounting systems, advanced accounting theory and practice, and topics selected from current accounting literature.

492 Corporate Accounting (4)
May not be taken for credit toward an undergraduate degree in Accounting.
A rigorous study of accounting concepts and techniques with emphasis on corporate financial accounting and analysis. Including an introduction to managerial concepts and techniques. Three lecture hours, three laboratory hours.

American Studies (AMST) English
201, 202 Studies in Popular Culture (3, 3)
Aspects of topography and significance in contemporary society. Topics may include the social and intellectual background of American culture; themes and techniques of major forms of communication; and the role of such media as television, film, comics, advertising, and westerns. The specific content of the courses varies from semester to semester. These courses may be repeated with the permission of the chairperson, American Studies Committee. Students who elect to major in American studies may apply up to six hours of AMST 201, 202 in satisfying the requirements of relevant courses.

302 Introduction to American Studies (3)
Prerequisite: Junior or senior standing. Seminars are limited to 15 students with preference given to American studies majors. Introduction 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 culture. Emphasis is placed on the role of the student in the development and use of contemporary theory and field and laboratory methods. Approxi- mately third of the course is devoted to the interpretation of archaeological remains with an emphasis on cultural adaptation and development in Europe and North America.

314 Human Evolution and Ancestry (3)
An exploration of human origins and nature. The significance of primate social groups and behavior, the fossil evidence for human evolution, the evolution of culture and human society, natural and sexual selection, race and intelligence, aggression, and topics of like interest are considered.

201 Native North Americans (3)
Prerequisite: ANTH 114 or permission of the instructor. An examination of native North American contemporary cultures and selected aspects of Indian-White historical relations. Emphasis on cultural preservation and revitalization.

202 Indigenous Populations of Mesoamerica (3)
Prerequisite: ANTH 114 or permission of the instructor. An examination of Mesoamerican contemporary cultures and selected aspects of historical record.

204 People of the Pacific (3)
Prerequisite: ANTH 114 or permission of the instructor. A survey of the cultures of Melanesian, Polynesian, and Micronesian cultures. By using selected case studies an examination is made of the interplay between contemporary cultural systems and religious attention. Cultural attention is given to social organization, religion and world view, and personality development.

205 Peoples and Cultures of Selected Regions (3)
Prerequisite: ANTH 114 or permission of the instructor. An examination of selected aspects of contemporary cultures of a specific region, e.g., Oceania, Sub-Saharan Africa, India, and Melanesia.

206 Peoples and Cultures of Eastern Asia (3)
Prerequisite: ANTH 114 or permission of the instructor. An examination of selected aspects of the contemporary cultures of the Island Asia cultures with a special emphasis on the cultures of Indonesia, Borneo, and the Philippines.

250 Anthropological Perspectives on Religion (3)
Prerequisite: ANTH 114 or permission of the instructor. An introduction to the study of religion as a symbolic system of great antiquity and of great importance in human adaptation to physical and cultural environments. A naturalistic, evolutionary, and cross-cultural approach is in an effort to understand the contributions which various anthropologists have made to our understanding of this most human of phenomena.

260 Socialization (3)
Prerequisite: ANTH 114 or permission of the instructor. An examination of selected aspects of the cultural transmission process in specific local cultures, selected from various world culture regions, e.g., Oceania, Sub-Saharan Africa, India, with an emphasis on the transmission of cultures.

302 Psychological Anthropology (3)
Prerequisite: ANTH 114. An introduction to the study of the human mind. A survey of the issues in the study of relationships between cultural and psychological variables. Major topics viewed cross-culturally include personality, roles, power, social organization, projection, and self-image.

303 African Studies (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the interactions of the arts and crafts of African cultures.

307 Native North Americans (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of native North America.

309 Prehistoric Siberia (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Siberia.

310 Prehistoric North America (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric North America.

311 Prehistoric South America (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric South America.

312 Prehistoric Europe (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Europe.

313 Prehistoric Asia (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Asia.

314 Prehistoric Africa (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Africa.

315 Prehistoric Oceania (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Oceania.

316 Prehistoric Australia (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Australia.

317 Prehistoric Sub-Saharan Africa (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Sub-Saharan Africa.

318 Prehistoric Central and South America (3)
Prerequisite: ANTH 114 or permission of the instructor. A study of the cultural traditions of prehistoric Central and South America.
Art Courses (ART)

Fine, Performing Arts and Communication

101 Art Appreciation (3)
For non-art majors only. A general introduction to the principles of aesthetics in art through a study of painting, sculpture, and architecture. Historical, prehistoric times to the present, or idea-ational approach using with the instructor.

103, 104 Introductory Drawing (3, 3)
Foundation course in representational drawing and expressive pictorial design. Emphasis upon the figure and basic principles of one- and two-point perspective. Six hours per week.

105 Fundamentals of Design (3)
Conceptual approach to art-making through two and three dimensions. Knowledge of basic art elements gained through problems which employ a variety of media. Six hours per week.

106 Fundamentals of Design (3)
Conceptual approach to art-making through two and three dimensions. Knowledge of basic art elements gained through problems which employ a variety of media. Six hours per week.

107, 108 Introductory Ceramics (3, 3)
A beginning course that introduces the student to the potential of ceramics as a creative medium. Basic manipulation, throwing, glaze technology, and kiln operation will be explained. Six hours per week.

111 Art and Architecture of Ancient Cities (3)
A survey of the arts produced by the civilizations of Egypt, the Near East, and the Mediterranean world, and their rediscovery and influences in modern times.

113 Symbols and Styles in Western Art (3)
A study of Classical and Christian themes and imagery in western art from early Greece to the modern period.

114 History of African Art (3)
Highlights the variety of stylistic and symbolic traits of cultures in Africa producing artistic artifacts. Concentrates on 100, 104, 105, 106, and other equivalent.

115 American Architecture (3)
A study of the rise of American architecture from colonial times to the present, with special emphasis on the buildings in the Washington, Maryland-Virginia area.

120, 121 Visual Thinking (3, 3)
A studio project designed to introduce in drawing, sequential design, printing, and filmmaking imagery. Satisfies non-major Humani- ties requirement. Six hours per week.

201, 202 Introductory Painting (3, 3)
A basic survey of the fundamentals of painting. Structural and conceptual approach in various media, including oil, acrylic, and tempera. Six hours per week.

203, 204 Intermediate Drawing (3, 3)
Prerequisites: ART 103 and 104 or permission of the instructor. Course in advanced drawing. Emphasis upon advanced exploration of techni- ques and approaches. Original compositions from the figure and nature supplemented by problems of line and expressive drawing. Six hours per week.

205, 206 Printmaking—Relief and Intaglio (3, 3)
The first semester (205) covers relief methods of printing: mezzotint, gravure, and lithography, wood engraving, and silk-screen techniques. The second semester (206) covers metal intaglio, engraving, etching, aquatint, soft and lift ground. Six hours per week.

207, 208 Color (3, 3) (Same as THR 207, 208)
The first semester (207) covers studies in color as pigment—examination of various color theories and color psychology, and color paper. The second semester (208) covers theories of color in light and their application using a variety of light sources and color media. Six hours per week.

211, 212 Intermediate Design (3, 3)
Prerequisites: ART 105, 106, 103 or 104 or equiva- lent, or permission of the instructor. A continuation of projects in the structural tradition. Further explorations into materials and processes which affect art-making. Six hours per week.

213, 214 Photography—Black & White (3, 3)
Prerequisites: ART 103, 104, 105, 106, or equivalent. Photography taught as both a technical craft and a way of seeing. Course includes camera and darkroom operations as well as ideas relating to the photographic process. Six hours per week.

215, 216 Introductory Sculpture (3, 3)
A basic course in the fundamentals of realizing volumes, masses, and planes based upon the use of clay and molding plaster. Techniques of subtrac- tion, addition, and basic manipulation processes are explored. Six hours per week.

221, 222 Survey of Western Art (3, 3)
A survey of the arts as expressed through architecture, sculpture, and painting. The first semester covers prehistoric to Renaissance; the second semester covers Renaissance to the present.

225 History of Modern Architecture (3)
Prerequisite: Sophomore standing. A study of the history and development of modernism in architecture from 1920 to the present, and an investigation of stylistic and structural innovations.

227 History of Design (3)
Prerequisite: A 103, 104, 105, 106 or above course in art history or studio art or permission of the instructor. A survey of the role of design in the arts from antiquity to the present.

301, 302 Introductory Painting (3, 3)
Prerequisite: ART 201, 202, or permission of the in- structor. A continuing study of painting in the structural or formal tradition. Individual approaches to subjects, objects, and painting situations are encouraged. Choice of media. Six hours per week.

303, 304 Advanced Drawing Studio (3, 3)
Prerequisites: ART 103, 104, 203, 204, or permission of the instructor. Students in advanced drawing are encouraged to work independently within the drawing studio. Projects are developed individual- ly according to student directions and needs. Six hours per week.

305, 306 Intermediate Printmaking (3, 3)
Prerequisites: ART 103 or 104, 105 or 106, 205 and 206 or equivalent, or permission of the instructor. This course is an extension of the basic printmaking course now implemented. Whereas the basic course focuses on the isolated processes of printmaking (relief and intaglio), this course ex- tends to the exploration of all printing techniques between the individual techniques and by stress- ing individual and unique solutions to the media. Six hours per week.

309, 310 Graphic Design (3, 3)
Prerequisites: ART 103, 104, 105, 106 or equivalent, or permission of the instructor. This course in- troduces and develops the concepts of commer- cial graphic design and its techniques. The course stresses individual solutions to typical problems confronting the graphic artist. Newspaper layout and advertising design in book design. The course is taught as a series of studio problems.

311, 312 Basic Letterpress Typography (3, 3)
Prerequisites: ART 103, 104, 105, 106, 207 or 208 or equivalent, or permission of the instructor. This course introduces the student to the elements of typographical composition by the letterpress process. The technique of setting type by hand is augmented by a discussion of the more mechanici- cal processes in use today. Students are required to develop layouts from concept to final product. Six hours per week.

315 Intermediate Sculpture (3, 3)
Prerequisite: ART 215, 216, or permission of the in- structor. Continued exploration of sculptural problems with emphasis on employing different tech- niques and materials to achieve the desired results. The student is shown the potentiality of a number of methods—e.g., welding, wood construction—and their specific qualities and range of possi- bilities. Six hours per week.

320 History of Ancient Near Eastern Art (3)
Prerequisite: Sophomore standing. Art of the Near East, Egypt, and the Aegian.

321 Greek Art (3)
Prerequisite: Sophomore standing. A study of the history of ancient Greek architecture, sculpture, and painting.

322 Roman Art (3)
Prerequisite: Sophomore standing. A study of the history of Roman architecture, sculpture, and painting.

325 Medieval Art (3)
Prerequisite: Sophomore standing. Architecture, sculpture, and painting in the Early Medieval, Romanesque, and Gothic periods.

326 Early Renaissance Art (3)
Prerequisite: Sophomore standing. Architecture, sculpture, and painting in the Early Renaissance period.

327 High Renaissance Art (3)
Prerequisite: Sophomore standing. The develop- ment of the High Renaissance style in architec- ture, sculpture, and painting and its transforma- tion through Mannerism.

328 History of Baroque Art (3)
Prerequisite: Sophomore standing. Study of the Baroque principles of architecture, sculpture, and painting and of their development and transforma- tion through the Rococo.

330 History of American Art (3)
Prerequisite: Sophomore standing. A history of the architectural, painting, and sculpture produced in the United States from the Colonial period until the present day, emphasizing the historical nature of the objects studied and their relation to European prototypes.

331 History of Nineteenth-Century Art (3)
Prerequisite: Sophomore standing. A study of painting, sculpture, and architecture from the Neoclassical period to 1900.

332 History of Twentieth-Century Art (3)
Prerequisite: Sophomore standing. A study of painting, sculpture, and architecture from 1900 to the present.

333 History of Photography (3)
Prerequisite: ART 101, 221, or 222. The course traces the development of photography from its origins in France in the nineteenth century to the present.

373 (formerly LAC 373) Art for the Elementary School (4)
A developmental approach to creative teaching and learning that combines the principles of perception with visual communication. Intensive study and practice focuses on structuring multi-arts programs that meet the perceptual and cogni- tive needs of all children. Six hours per week. A three hour field experience is required in this course. Students who have taken LAC 273 or LAC 373 cannot take this course.

401, 402 Advanced Painting (3, 3)
Prerequisite: ART 201, 202, 301, 302, or permission of the instructor. Geared toward developing sophisticated visual concepts while firm up technical vocabulary. Contemporary ideas are in-
Astronomy Courses (ASTR) Physics

103 Astronomy (3)
A descriptive introduction to the principles and topics of modern astronomy. The earth, the planets and the sun are discussed. The concept of gravity and the nature of space are discussed. The course is not intended for physics majors.

105, 106 Introduction to Modern Astronomy (4, 4)
A laboratory course in astronomy for nonscience majors. Topics include astronomical instruments, coordinates and time, celestial mechanics, astrophotography, planets, satellites, comets and meteoroids. Distances of the stars, blackbody radiation, colors and temperatures of stars, spectral classification and the H-R diagram, double stars, variable stars, novae and supernovae, gaseous nebulae and dense clouds, the Milky Way galaxy, galaxies and clusters of galaxies, general relativity, black holes, quasars, cosmology, and the universe. This course can be used to fulfill the eight-hour laboratory science requirement and is not intended for physics majors.

328 Introduction to Astrophysics (3)

428 Relativity and Cosmology (3)
Prerequisites: PHYS 214, MATH 214 or 216, and PHYS 315 or 316. Special relativity, four dimensional space-time, general relativity, non-Euclidean geometries, geodesic and field equations, tests of general theory of relativity, black holes, cosmology, models of the universe, 3K blackbody radiation, big bang cosmology, thermodynamics and the universe. Three hours lecture.

505 Fundamental Astronomy (3)
Prerequisites: Graduate standing or permission of the instructor. This course places special emphasis on the connection of astronomy to other disciplines and on the worlds in which we live in the universe. The course is open to all students who are interested in the study of astronomy. The course is not intended for biology majors. Three lecture hours, three laboratory hours.

507 Introduction to Modern Cosmology (3)
Prerequisites: Undergraduate degree in physics or astronomy or permission of the instructor. Special emphasis on the connection of other disciplines and on the worlds in which we live in the universe. The course emphasizes the connection of astronomy to other disciplines and on the worlds in which we live in the universe. The course is open to all students who are interested in the study of astronomy. The course is not intended for biology majors. Three lecture hours, three laboratory hours.

511 Physics and Society (3)
Prerequisites: Undergraduate degree in physics or astronomy or permission of the instructor. This course emphasizes the connection of astronomy to other disciplines and on the worlds in which we live in the universe. The course emphasizes the connection of astronomy to other disciplines and on the worlds in which we live in the universe. The course is open to all students who are interested in the study of astronomy. The course is not intended for biology majors. Three lecture hours, three laboratory hours.

580 Studies for the Doctor of Arts in Education (variable credit)
Prerequisites: By permission of the instructor. Open only to the graduate students in education.

601, 602 Graduate Drawing and Painting (3, 3)
Prerequisites: Undergraduate degree in art or eduction (BA or BFA) or equivalent. Independent drawing and painting workshop with emphasis on individual development.

605, 606 Graduate Printmaking Studio (3, 3)
Prerequisites: Undergraduate degree in art (BA or BFA) or permission of the instructor. Independent printmaking workshop with emphasis on individual projects and development.

University Catalog 1980-1981
George Mason University

http://catalog.gmu.edu
of the microscopic and gross structure of the organ systems of the human body and their integrated functions. Five lecture hours, three laboratory hours. Open first to nursing and medical technology majors. Others may register during the add-drop period with permission of the instructor. Not available for biology major credit or to students who have taken BOL 124-125. Spring.

301 Cell Biology (4) Pre-requisites: Credits in biological science: CHEM 211-212; MATH 103 or 113. The study of cellular structure and function. Topics include cellular fine structure, cellular chemistry, metabolism and cellular regulatory mechanisms. Three lecture hours, three laboratory hours. Fall, Spring.

307 Ecology (4) Pre-requisites: Eight credits of biological science and one credit of calculus or permission of the instructor. The physical environment, energy flow, populations as units of structure and function, the dynamics of communities and succession. The laboratory work includes a study of some ecosystems in the Northern Virginia area. Three lecture hours, three laboratory hours. Fall, Spring, Summer Term C.

312 Biostatistics (4) Pre-requisites: Eight credits of biological science or permission of the instructor. Applied statistical analysis of biological data, including experimental design, descriptive statistics, parametric and related nonparametric inferential statistics, and correlation analysis. Three lecture hours, three laboratory hours. Fall, Spring, Summer Term C.

320 Comparative Chordate Anatomy (4) Pre-requisites: Eight credits of biological science, or permission of the instructor. A comparison of the anatomy and morphology of the major chordate groups. The laboratory emphasizes shark, mudpuppy, cat, and rabbit. Two lecture hours, six laboratory hours. Fall, Spring.

322 Patterns of Animal Development (4) Pre-requisites: Eight credits of biological science and junior standing or permission of the instructor. An introduction to the concepts of vertebrate organization, reproduction, embryogenesis, and organ system development. Provides background for further study of animal structure or development. Three lecture hours, three laboratory hours. Spring.

324 Introductory Animal Behavior (4) Pre-requisite: Eight credits of biological science or permission of the instructor. A comparison of the behavior of animals under natural, semi-natural, and laboratory conditions. Emphasizes function, development, and evolution of behavior. Field investigations and laboratory projects are conducted. Three lecture hours, three laboratory hours. Fall.

326 Animal Physiology (4) Pre-requisites: Credits in biological science and CHEM 211-212. A general consideration of animal function, both invertebrate and vertebrate. Emphasis is placed on the common life problems that animals solve and on the methods for solving them. Such processes as electrolyte balance, excretion, gas exchange, metabolism, thermoregulation, neuroendocrine control and physiological rhythms are examined. Three lecture hours, three laboratory hours. Fall, Spring.

331 Invertebrate Zoology (4) Pre-requisite: Eight semester hours of credit in 100-level biology or permission of the instructor. Survey of the invertebrate phyla, excluding invertebrates, to show the morphology, phylogeny, and general biology of these groups. Three lecture hours, three laboratory hours. Fall.

332 Insect Biology (4) Pre-requisite: Eight semester hours of credit in 100-level biology or permission of the instructor. A survey of the structure and function of the morphology, physiology, behavior, ecology, and economic importance. Three lecture hours, three laboratory hours. Summer Term A.

333 Vertebrate Zoology (4) Pre-requisite: Eight semester hours of credit in 100-level biology or permission of the instructor. The phylogeny and system of the major vertebrate groups. Some emphasis is given to ecological adaptation and the laboratory includes field studies of local fauna. Two lecture hours, six laboratory hours. Spring.

341 Physiology (4) Pre-requisites: Cell biology or permission of the instructor. A study of the biology of algae. Topics covered include taxonomy, reproduction, physiology, ecology, evolution, and economic importance. Three lecture hours, three laboratory hours. Fall of odd-numbered years.

342 Plant Morphology (4) Pre-requisite: Eight credits of biological science or permission of the instructor. A study of the microscopic and gross structure of the plant organ system development. Provides background for further study of plant morphology, physiology, behavior, ecology, and economic importance. Three lecture hours, six laboratory hours. Summer Term A.

351 Plant Taxonomy (4) Pre-requisite: Spring Term B or C. A study of the terminology and identification of flowering plants. Three lecture hours, one laboratory hour. Fall.

354 Plant Communities (4) Pre-requisite: Eight semester hours of credit in 100-level biology or permission of the instructor. Plant associations and their successions in North America. Three Saturday field trips are included. Three lecture hours, three laboratory hours. Fall, Summer Term C of odd-numbered years.

361 Microbiology (4) Pre-requisite: Cell biology or permission of the instructor. An introduction to the biology of microorganisms with an emphasis on bacteria and viruses. Topics include classification, metabolism, genetics, physiology, and their relationships to the environment. Three lecture hours, three laboratory hours. Fall, Spring.

369 Plant Distributions (3) Pre-requisites: Eight semester hours of credit in 100-level biology or permission of the instructor. A consideration of morphology, plant taxonomy, growth and development, physiology, reproduction, and ecology. Laboratory emphasizes classification. Three lecture hours, three laboratory hours. Fall of even-numbered years.

371 Animal Distributions (3) Pre-requisites: Eight semester hours of credit in 100-level biology or permission of the instructor. Relations of the North and South American faunas with other regions in the light of continental drift. Three lecture hours, three laboratory hours. Fall.

412 Microbial Genetics (3) Pre-requisite: General genetics or equivalent. A study of genetic systems in microorganisms, including life cycles, sexuality, reproductive adaptations, and patterns of inheritance. Three lecture hours, three laboratory hours. Fall.

413 Selected Topics in Genetics (3) Pre-requisites: General genetics or equivalent or permission of the instructor. Differences in various topics considered are molecular, developmental, physiological, and classical genetics with emphasis on current problems and research. Three lecture hours. May be repeated once for credit. Permission of the chairperson, Department of Biology.

415 Population Genetics (3) Pre-requisite: General genetics or equivalent. A study of the structure and dynamics of populations, both real and ideal. The effects of and interactions between selection, mutation, mating systems, and sampling error. Applications of population genetics to taxonomy, taxonomy, migration, natural variation, evolutionary change, quantitative inheritance, human populations, and molecular evolution. Three lecture hours.

425 Mammalian Physiology (4) Pre-requisites: Animal physiology and cell biology. A study of the functions of mammals, including regulation of the internal environment, neural and endocrine control mechanisms, the physiology and movement of exercise, and reproduction. Small mammals and humans are subjects for observations of these activities in the laboratory. Three lecture hours, three laboratory hours. Spring.

441 Plant Anatomy (4) Pre-requisites: Eight credits of biological science and junior standing, or permission of the instructor. A detailed study of plant cells and tissues, their development and exercise, and reproduction. Laboratory development is included. Emphasis is on the angiosperms. Three lecture hours, three laboratory hours. Fall of even-numbered years.

442 Development in Flowering Plants (3) Pre-requisites: Plant anatomy or permission of the instructor. The role of cyto-differentiation in developmental sequences of flowering plants. Topics covered include germination, juvenility, flowering, senescence, fruiting, and tuber and bulb formation. The environmental and hormonal influences on these processes is also discussed. Three lecture hours. Spring of odd-numbered years.

444 Paleobotany (4) Pre-requisites: Plant morphology or anatomy or vertebrate or invertebrate paleontology. A study of the evolution of fossil plants through time. The origin of the groups covered, their history, and their extinction are considered, including the various selective pressures responsible for these events. The laboratory focuses on the plant structure and the techniques necessary to elucidate it. Three lecture hours, three laboratory hours. Fall of even-numbered years.

446 Environmental Physiology (3) Pre-requisite: Animal physiology or permission of the instructor. The physiological responses of animals to environmental factors. Topics examined include biological rhythms; changes in physiology during acclimation and adaptation to new environments and the effects of temperature, moisture, altitude, and environmental quality upon organisms. Emphasis on vertebrates. Three lecture hours. Fall.

447 Microbial Ecology (4) Pre-requisite: Microbiology or permission of the instructor. An introduction, in detail, to the principles and methods of microbial ecology. A study of the physiological and ecological consequences of the interactions between microorganisms and their natural environment, and the methodology for observing their biochemical activities in those environments. Three lecture hours, three laborato ries. Spring.

448 Symbiology (4) Pre-requisite: Invertebrate zoology or permission of the instructor. An introduction to concepts of symbiosis and evolution of these relationships from structural, physiological, and behavioral standpoint. Three lecture hours, three laboratory hours.

449 Marine Ecology (4) Pre-requisite: Ecology or permission of the instructor. The plants and animals of marine environments and the physical and chemical conditions that affect their existence. Three lecture hours. Spring of even-numbered years.

451 Virology (3) Pre-requisites: Cell biology and general genetics or permission of the instructor. Fundamental concepts of the nature of viruses, virus classification, and their replication. Replication of representative phage and animal viruses including RNA tumor viruses. Three lecture hours. Fall.

452 Immunology (4) Pre-requisites: Cell biology and microbiology or permission of the instructor. A study of the principles and concepts of immunity. Topics include structure and function of immunoglobulins, role of cell-mediated immunity, protective role of the immune system, and disease and immunity related to malfunctions of the immune system. Three lecture hours, three laboratory hours. Spring.
453 Parasitology (4)
Prerequisites: Cell biology and microbiology. A study of parasitic organisms. Topics include life cycles and ecology, identification and classification, physiology, and aspects of the host-parasite relationship. Three lecture hours, three laboratory hours. Fall.

464 Plant Physiology (4)
Prerequisite: Cell biology or permission of the instructor. An introduction to plant physiology. Plant cells and plant organ systems covering such topics as structure and function of cell organelles, photosynthesis, mineral and water nutrition, plant development and reproduction, and tropic responses to environmental stimuli. Three lecture hours, three laboratory hours. Spring of even-numbered years.

465 Histology (4)
Prerequisite: Eight credits of biological science and junior standing, or permission of the instructor. A study of the microscopic structure of the tissues and organs of animals with emphasis on the mammalian systems. Three lecture hours, three laboratory hours. Fall.

471 Evolution (3)
Prerequisite: General genetics or permission of the instructor. A study of the process of evolution with emphasis on the role of genetics, the properties of populations, and population differentiation. Three lecture hours. Spring.

480 Functional Morphology and Ecology (4)
Prerequisite: Eight credits of biological science or permission of the instructor. An introduction to the study of the fishes, their systems, evolution, physiology, behavior, and ecology. Offered only in even-numbered years. Four lecture hours, four laboratory hours.

482 Ornithology (4)
Prerequisite: Eight credits of biological science or permission of the instructor. A study of the evolution, systemsatics, physiology, ecology, and ethology of birds. Emphasis is placed on field studies. Two lecture hours, six laboratory hours. Spring of odd-numbered years.

483 Field Ornithology (4)
Prerequisite: Eight credits of biological science or permission of the instructor. A study of the evolution, systemsatics, physiology, ecology, and ethology of birds. Emphasis is placed on field studies. Two lecture hours, six laboratory hours. Fall of odd-numbered years.

484 Vertebrate Paleontology (4)
Prerequisite: Eight credits of biological science or comparative anatomy or invertebrate paleontology, or permission of the instructor. A study of the evolutionary patterns of the vertebrates. Emphasis is placed on field studies. Two lecture hours, six laboratory hours. Fall.

490 Tropical Field Studies (3)
Prerequisite: Biology major and senior standing and permission of the instructor. A biological survey of a tropical environment. Total class time: 15 lecture hours, 90 laboratory hours.

495, 496 Special Readings in Biology (1-2)
Prerequisite: Eight credits of biological science majors who have completed 75 hours. Students must have permission of the instructor and the chairperson, Department of Biology. A literature investigation of a specific topic under the guidance of a member of the faculty resulting in a demonstration of mastery of the subject by examination or paper. These courses may be taken only once for credit. The topic chosen may lead to BIOL 497, 498: Special Problems in Biology.

497, 498 Special Problems in Biology (1-4)
Prerequisite: Eight credits of biological science majors in biology with permission of the instructor and the chairperson, Department of Biology. A laboratory or field research project leading to a written report of the research. The research and paper is completed under the guidance of a member of the faculty. The total credit, which can be received for 495, 496, 497, 498 in any combination, will be six hours, not to exceed four credits in any one semester.

501 Advanced General Biology: Classical Principles and Modern Views I (3)
Prerequisite: BIOL 247 or permission of the instructor. An intensive review of the fundamental concepts relating to cellular biology and to the structure and function of living organisms. Prerequisite to 248 is available for credit toward MS in interpretive biology specialization only.

502 Advanced General Biology: Classical Principles and Modern Views II (3)
Prerequisite: BIOL 247 or permission of the instructor. An intensive review of the fundamental concepts relating to genetics, development, evolution, behavior, and ecology. Prerequisite to 248 is available for credit toward MS in interpretive biology specialization only.

503 Field Studies for Interpretative Biologists (3)
Prerequisite: Eight credits of biological science or permission of the instructor. An intensive field course emphasizing techniques for evaluation of communities and ecosystems, methods for study of wild populations, and demonstrations of contemporary concepts in ecology and evolution. Available for credit toward MS in interpretive biology specialization only.

511 Human Genetics (3)
Prerequisite: BIOL 307 or equivalent. A study of the inheritance of man. Emphasis is on current problems, including genetic control of metabolic diseases, the effects of radiation and chemical agents in the environment, and directed genetic change. Three lecture hours.

512 Experimental Design and Analysis for the Life Sciences (3)
Prerequisite: An undergraduate course in statistics (BIOL 312), or permission of the instructor. An advanced course in the application of probability and statistics to research in the life sciences. Examples are drawn from environmental, medical, physiological, genetic, and chemical biology. Three lecture hours.

517 Developmental Genetics (3)
Prerequisite: BIOL 311 or equivalent. A study of genetic approaches to the problem of eukaryotic development with emphasis on current research on the regulation of gene enzyme systems. Three lecture hours.

521 Origin of the Cultivated Plants and Their Impact on Man and Society (3)
Prerequisite: Upper-division botany course. BIOL 311 or equivalent, or permission of the instructor. The geographic origins of the major economic plants of the world, their economic and cultural significance from prehistoric to modern times, and modern economic and nutritional problems of food distribution. Three lecture hours.

522 Methods and Principles of Animal Taxonomy (Insects) (3)
Prerequisite: A previous course in entomology or permission of the instructor. A study of the methods and techniques used in animal classification with emphasis on their practical application to a laboratory problem dealing with the insects. One lecture hour, six laboratory hours.

523 Reproductive Strategies (3)
Prerequisite: BIOL 307 and 311 or permission of the instructor. BIOL 471 is recommended. The evolution of reproductive tactics, including sexual and asexual reproduction, sex ratios, parental investment, preyage sizes and numbers, mating systems, and sex determination. The evolution of behavioral and morphological strategies. Three lecture hours.

524 Coevolution of Plants and Animals (3)
Prerequisite: BIOL 471. This course includes the mechanisms of evolution of plant and animal interactions, chemical communication, population dynamics, energetics of ecosystems, and development of the interactions over time. Three lecture hours.

525 Animal Navigation (3)
Prerequisite: A previous course in animal behavior or statistics, or permission of the instructor. A lecture and seminar course exploring the mechanisms by which animals orient and navigate while homing or whenever a navigational landmark is placed on the vegetation. Three lecture hours.

526 Paleocology (4)
Prerequisites: Two of the following or their equivalents: BIOL 207, 208, or 207 BIOL 102, or permission of the instructor. A study of the origin and evolution of the interrelationships between the components of the earth's major ecosystems. Three lecture hours, two laboratory hours.

527 Current Problems in Evolutionary Theory (3)
Prerequisite: A previous course in evolution equivalent to BIOL 471 or permission of the instructor. A course on contemporary evolutionary thought. Three lecture hours.

531 Food, Energy, and Insects (3)
Prerequisite: A course in entomology or permission of the instructor. A study of the ecological aspects of animal behavior. Three lecture hours.

534 Speciation and Field Studies in Flowering Plants (3)
Prerequisites: A course in taxonomy or permission of the instructor. The lecture concerns modes of speciation in flowering plants. The lab emphasizes a wide spectrum of habitats by means of field trips, the collection, preparation and identification of plants, and examples of various stages of speciation. One lecture hour, six laboratory hours.

540 Environmental Biology I (3)
Prerequisites: A previous course in ecology or permission of the instructor. A course for ecologists and environmental biologists in ecological patterns resulting from biotic adaptation to climatic variation, weathering and soil formation, and surface and ground water movements. The basic descriptive and dynamic characteristics of the physical environment on both a global scale and a local one with emphasis on their effects on plant and animal species and communities. Three lecture hours.

541 Environmental Biology II (3)
Prerequisite: BIOL 344 or 534 or permission of the instructor. A study of the morphology and speciation of the more complex families such as Fabaceae, Poaceae, Cypereaceae, and Asteraceae. The laboratory emphasizes identification of specimens and acquaintance with taxonomic literature. One lecture hour, six laboratory hours.

545 Freshwater Ecology (4)
Prerequisite: A course in ecology. The physical and chemical features of freshwater lakes and streams that affect the biology of the biota. Local streams and lakes are investigated. Three lecture hours, three laboratory hours.

546 Estuarine and Coastal Ecology (4)
Prerequisites: A course in ecology and permission of the instructor. A study of estuarine and coastal ecosystems. The physical and chemical environment and the role of the ecosystem. Three lecture hours, three laboratory hours.

547 Analysis of Terrestrial Ecosystems (4)
Prerequisite: A course in ecology. Knowledge of statistics is recommended. Ecosystem organiza-
tion in relation to patterns of energy flow and mineral cycling; functional comparison of major world ecosystems and discussion of ecosystem models. Laboratory work emphasizes techniques of studying growth, population dynamics, predation, and measuring rates of ecosystem processes. Three lecture hours and three laboratory hours.

548 Population Ecology (3)
Prerequisite: BIOL 301 or permission of the instructor. A course in evolution and knowledge of calculus are recommended. A survey of ecological models and theory. Topics covered include population growth and regulation, predation, competition, predator-prey relationships, and models of community structure. Three lecture hours.

549 Biological Resource Management (3)
Prerequisite: BIOL 548, or permission of the instructor. Modern ecological theories and methods applied to biological resource management covering problems in population, community structure, resource modeling, problems in achieving optimum productivity of specific resources, application of systems analysis. Three lecture hours.

555 Selected Topics in Plant Biology (3)
Prerequisites: Eight semester hours of credit in Introductory Biology, one upper-division course in botany, and permission of the instructor. A problem in contemporary botany is discussed. The topic depends upon the specialty of the instructor. May be repeated only with permission of the chairperson, Department of Biology. Three lecture hours, or two lecture hours and three laboratory hours.

558 Tropical Ecosystems (4)
Prerequisites: A course in ecology and senior undergraduate standing in a related major, or permission of the instructor. A consideration of terrestrial, aquatic, and marine ecosystems in the tropics with special emphasis on plant communities and plant-animal interactions. The physical environment, plant and animal diversity, and the role of man in the tropics are discussed. A field trip to the tropics is offered and, as part of the laboratory, is required. Three lecture hours, three laboratory hours.

560 Biological Ultrastructure (3)
Prerequisites: BIOL 501, Cell Biology; CHEM 313-314, Organic Chemistry; and permission of the instructor. An introduction to the techniques involved in electron microscopy and to the interpretation of electron micrographs of both plants and animals. Two lecture hours, three laboratory hours.

561 Comparative Animal Physiology (3)
Prerequisite: BIOL 501, or an equivalent course in physiology and two semesters of biochemistry or permission of the instructor. A presentation of organ function in both invertebrates and vertebrates. The emphasis is on understanding the successes in the understanding of physiological mechanisms in diverse animals. Three lecture hours.

562 Problems in Development (3)
Prerequisite: A previous course in embryology or developmental biology or permission of the instructor. Readings and seminars utilizing the current literature in developmental biology. Emphasis is placed on major problems including those of morphogenetic movements, differentiation, regeneration, aging, and malignancy. The student becomes familiar with experimental organisms and systems, and participates in developmental biology. Three lecture hours.

565 Environmental Hazards to Human Health (3)
Prerequisite: A course in animal physiology or permission of the instructor. A study of the impacts of human activities resulting from the impact of man's industries and activities on the environment. Physiological effects of chemical pollutants of air, water, and food; problems related to air pollution, radiation, overcrowding. Methods of identifying, evaluating, and controlling problems are considered. Three lecture hours.

567 Molecular Genetics (3)
Prerequisites: BIOL 311 or permission of the instructor. A study of the molecular structure of genetic material and the control of gene expression. Includes DNA, protein, and nucleic acid synthesis. Three lecture hours.
product planning, pricing, and target market determination. Case discussion; readings. (See School of Business Administration, Special Regulations.)

630 (531) Computer Systems for Management (3) Study of computer applications and their effect on management process. Approaches to analysis, design, implementation, and use of computer information systems. Both hardware and software. Lecture and laboratory.

640 (550) Statistical Foundation for Business Decision Making (3) Prerequisites: Six credits of college mathematics. MATH 108 (formerly MATH 106, 109) is recommended. Uses statistical methods as scientific tools in the analysis of practical problems in business decision making. Topics covered include: descriptive statistics, probability theory; probability distribution; sampling distribution, inference; simple and multiple regression; hypothesis testing; elementary decision theory; time series analysis; linear regression and correlation; the analysis of variance.

641 (551) Quantitative Methods of Managerial Analysis (3) Prerequisites: BUAD 640 (550), or equivalent. Scientific approach to managerial decision making. Systematic analysis and model development, using statistical decision theory, linear programming, and multivariate methods, are applied to business problems. Lecture and laboratory. (See School of Business Administration, Special Regulations.)

650 (530) Legal Concepts and Trends Affecting Business (3) Presentation of principles necessary for comprehension of legal issues affecting business environment. Special emphasis is placed on contracts, the Uniform Commercial Code, business organizations such as corporations and partnerships, and government regulations.

660 (540) Management Theory and Practice (3) Development, theories, and practice of business management. Particular emphasis is given to the evolution of management theory and the application of theoretical concepts to managerial operations. Implications of theory in practice are explored.

661 (591) Cases in Organizational Behavior (3) Prerequisite: BUAD 660 (540) or equivalent. Study and application of principles of individual and group behavior to the solution of human problems in organizations. Relationships with supervisors and subordinates in formulating and accomplishing personal and organizational goals. Discussion, reading, and research. (See School of Business Administration, Special Regulations.)


706 (506) Advanced Auditing Theory and Practice (3) Prerequisite: BUAD 601 (501). The study of generally accepted auditing standards and the theory supporting them. Approaches to auditing techniques, including statistical sampling. Legal liability of the auditor, role of the auditor in securities regulation, and auditing in a computer environment. Lecture and case study.


708 (508) Seminar in Controllership (3) Prerequisite: BUAD 601 (501). The study of the nature and scope of the controllership function in public or private organization, particularly in regard to the development of policy and the evaluation of performance. Lecture and case study.

709 (509) Seminar in Accounting (3) Prerequisite: Completion of 24 semester hours in the graduate program. Study of selected areas in accounting theory, practice, and methodology and the influence of specific areas of other disciplines upon the development of accounting concepts. Research and discussion.

712 (512) Security Analysis (3) Prerequisite: BUAD 640 (550). The analysis of equity securities and debt instruments given the implications of the efficient market hypothesis and modern capital market theory. Lecture, discussion, and research.

713 (517) Portfolio Analysis (3) Prerequisite: BUAD 610 (510), BUAD 640 (550). Examination of the theory and mathematical techniques utilized in the management of investment portfolios. Lecture, discussion, and research.

715 (514) Financial Markets and Institutions (3) Prerequisite: BUAD 611 (511). An analysis of the fundamentals of money and capital markets including consideration of the pivotal roles of financial institutions as intermediaries in these financial markets. Lecture, discussion, and laboratory.

719 (519) Current Topics in Finance (3) Prerequisite: BUAD 611 (511). Topics of current or recent interest in the area of finance, including industrial, governmental, international, or institutional applications. Primary emphasis upon techniques and methods of financial practice and influence of new legislation. Readings, discussion, case studies, and research.

722 (522) Marketing Seminar (3) Prerequisite: BUAD 621 (521). Selected problems in contemporary marketing. Developing new marketing segments, research problems, and computer marketing games. Lecture, discussion, and laboratory.

724 (524) Promotional Strategy in Marketing (3) Prerequisite: BUAD 621 (521). Examination of the several types of promotion activities as applied to both profit and nonprofit organizations. The approach is to develop basic issues in promotional strategy, then to focus on managerial issues and problems as encountered by promotion executives.

725 (525) Marketing Research (3) Prerequisite: BUAD 621 (521) and BUAD 641 (551). A study of the concepts, theories, principles, techniques, and models underlying the marketing research process.

726 (526) Advanced Consumer Behavior (3) Prerequisite: BUAD 621 (521). The application of behavior theory to consumers of goods and services, and the relationship of this theory to one or more behavior models. Research in practical applications.

727 (592) Purchasing and Materials Management (3) Prerequisite: BUAD 621 (521). Principles and practices of purchasing and materials management for the private firm, within the broader context of an industrial materials management system. Government procurement practices examined to a limited degree. Case discussion, readings, and research.

732 (532) Computer Based Information Systems (3) Prerequisites: BUAD 601 (501), 630 (531), and 641 (551). This course examines the organization, development, implementation, and management of computer based information systems from the perspective of both users and developers. The knowledge of computer capabilities and of the information processing environment in different practical areas of business is integrated. A term project involving one of the phases of analysis/design, implementation or evaluation of management information is required. Lecture, cases, and discussion.

733 (533) Management of the Computer Resource (3) Prerequisite: BUAD 630 (531). Managerial involvement with the technical needs in different practical areas of business is examined from a variety of viewpoints from management of the facilities themselves, through higher level supervision via steering committee membership, to participation in the resource through the role of the user. Case discussions are used to develop an understanding of the information needs necessary to manage the computer resource.

734 (534) Analysis and Design of Computer Systems (3) Prerequisites: BUAD 630 (531). A comprehensive coverage of the computer systems life cycle with emphasis on information requirements analysis, feasibility studies, hardware and software selection, and the implementation process. Students are assigned system development projects to work with users to define system requirements and systems development plans.

742 (555) Management Science (3) Prerequisite: BUAD 641 (551). Introduction to operations research techniques and their application to managerial decision making. Computer simulation, Markov processes, queuing theory, inventory models, PERT and CPM, mathematical programming, Research, lecture, and laboratory.

743 (555) Seminar in Applications of Management Science (3) Prerequisite: BUAD 742 (555). Focuses on the problems of model development and implementation involved in the practice of operations research in management science. Selected studies in both classical and contemporary applications; case analysis, research.

744 (554) Contemporary Issues in Decision Analysis (3) Prerequisite: BUAD 641 (551). Application of analytical techniques and tools to practical problems in business administration. Designed for students in all traditional areas of business to enhance their abilities to confront complex decisions from a managerial perspective. Issues examined are analysis and solution implementation, emphasizing contemporary approaches to decision analytic techniques. Lecture and cases.

762 (541) Seminar in Personal Administration (3) Prerequisite: BUAD 650 (540). Current and emerging theories and practices of manpower management. Problems of white-collar and professional employees in "knowledge" industries. Research in contemporary problems. Cases and discussion.

763 (542) Seminar in Labor-Management Relations (3) Prerequisite: BUAD 650 (540). The U.S. labor movement and its present political-economic status. Legal environment surrounding labor relations and recent rulings by regulatory bodies. Executive orders and political forces influencing unions in the public sector. Emphasis on negotiations and administration of labor contracts at the local level. Lecture, cases, discussion, readings.

764 (543) Organization Analysis and Development (3) Prerequisite: BUAD 661 (591). Application of theory and research in the study of organizational effectiveness. Emphasis on the diagnosis of contributing factors; use of models; and the design and implementation of organization development programs. Reading, discussion, case development, and research.
BUAD 1

756 (545) Strategic Planning and Control (3)
Prerequisite: BUAD 621 (521). BUAD 641 (551). BUAD 661 (591). Study of theories and applications of modern strategic planning and control. Focus on strategy development within the supportive framework of a strategic planning system. Emphasizes the methodological "how to do it" aspects of strategy formulation, planning, and control. Lecture, readings, discussion, case analysis, and projects.

766 (575) Business in its Social Environment (3)
Prerequisite: BUAD 661 (591). A study of small business and its economic, competitive, and social environment. Lectures, case studies, and research are used to illustrate and develop solutions to potential problems of initiating, organizing, and managing a small business.

769 (549) Seminar in Current Management Problems (3)
Prerequisites: BUAD 661 (591). Examination of selected problems currently facing managers. Emphasis is on development of practical solutions to these problems and applying them. Readings, discussion, case analysis, and action exercises.

772 (561) Managerial Economics I (3)
Prerequisites: ECON 502, BUAD 621 (521). The use of economic theory as it applies to specific business problems. Analysis and decision-making with respect to the reallocation of scarce resources, price determination, costs, competition, profits, supply/demand, and regulation. Lecture, cases, and discussions.

773 (562) Managerial Economics II (3)
Prerequisite: BUAD 772 (561). The application of economic analysis to business management; government economic policy; the use of national economic policy to guide economic trends and developments; forecasting. Current economic problems and their effect on business. Lecture, cases, and discussions.

775 (571) Theory and Policies of International Business (3)
Prerequisites: BUAD 611 (511), 621 (521), 661 (591). Management of international business operations as segments or subsidiaries of U.S. firms. Problems of political stability, operations in developing countries, influences of U.S. trade and foreign policies. Lecture and discussion.

776 (572) International Business Management (3)
Prerequisite: BUAD 775 (571). Analysis and discussion of problems in international business. Emphasis on international market entry and expansion; financial considerations in the international context; and operating policies and procedures of multinational companies. Lecture, cases, and discussions.

777 (573) International Accounting (3)
Prerequisite: BUAD 601 (501). An introduction to the principles, practices, and techniques used by multinational enterprises in international trade and investment. Topics cover financial accounting and intercompany transfers; foreign currency translations, and U.S. tax policy toward the multinational firm.

778 (575) Seminar in Comparative Business Management (3)
Prerequisite: BUAD 661 (591). Comparative analysis of business practices and management systems in different countries and unification of economic, social, and political systems. Generic characteristics of management and business enterprises as modified in varying environments. Seminar and term paper.

782 (513) Land Use Planning and Private Development (3)
Prerequisite: BUAD 610 (510) or permission of instructor. Examination of Comprehensive Planning Law, the public comprehensive land use planning and land use control processes at the local, regional, state, and federal levels in the United States and selected other countries; the private development process; and the interaction and relationship between the public planning agencies and principals and professionals in the private development process.

783 (516) Real Estate Investment Analysis (3)
Prerequisite: BUAD 610 (510) or permission of the instructor. Designed to improve the understanding of the financial requirements, decision-making processes, and the various skills required to function effectively in this investment environment.

784 (585) Real Estate Market Analysis (3)
Prerequisite: BUAD 610 (510) or permission of the instructor. Examines the analytical tools of market analysis in real estate and sources of data; and studies specific problems and techniques that apply to each of the analyses of various types of real estate.

785 (515) Mortgage Markets and Finance (3)
Prerequisites: BUAD 610 (510) or permission of the instructor. A study of the mortgage banking process with special emphasis on the primary and secondary mortgage markets, mortgage instruments, and the financial environment and techniques of financing real estate of all kinds.

786 (586) Cases in Mortgage Finance (3)
Prerequisite: BUAD 785 (515). Provides the student an opportunity to put knowledge of mortgage financing to practical use by studying and preparing actual cases for submission to a mortgage lender.

796 Independent Study and Directed Readings (3)
Prerequisite: Foundation and core courses. By special arrangement with professor and approval of the assistant dean for the graduate program.

100 Business Policy (3)
Prerequisite: Completion of 27 graduate semester hours beyond the 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. Cases, readings, and discussions.

798 (598) Seminar in Business Research (3)
Prerequisite: Completion of 30 semester graduate hours beyond the foundation coursework. Study of research design plans, methodologies, data collection and analyses, and their application to business research projects. Student prepares a written report covering an approved research topic in a specialty area.

799 (599) Thesis (6)
Prerequisite: Must have completed 30 hours of graduate coursework beyond the foundation.

Business Legal Studies Courses (BULE) School of Business Administration

301 Business Law I (3)
A survey of the more important general principles of law which apply to the daily activities of business operations: discussion of concepts and principles relating to the law of contracts, bailments, agency, sales, negotiable instruments, partnerships, bankruptcies, and other topics.

302 Business Law II (3)
Prerequisite: BULE 301. A continuation of BULE 301.

311 Legal Environment of Business (3)
The study of the nature, formation, and application of law and its impact on business and its decision-making process. The legal system approached from the standpoint of its sources, philosophy, contemporary problems, and trends with special emphasis on business relations.

Cartography (CART) Public Affairs

550 Mapping Foundations (3)
Prerequisite: Elementary Cartography and graduate standing or permission of the instructor. Introduction to the basic concepts, methods, and techniques of topographic map preparation. Elements of the various subfields within the field of cartography as they are applied in map preparation from research and compilation through production.

551 Thematic Cartography (3)
Prerequisite: Graduate standing or permission of the instructor. Analysis of the nature of perceptual organization and visual systems in thematic map communication portrayal, graphic handling and aesthetic participation of data elements through the use of semiotic matrixes and thematic maps.

552 Computer Applications in Cartography (3)
Prerequisite: A course in Statistics or Calculus, or permission of the instructor, and graduate standing. An advanced treatment of computer generation of spatial imagery.

563 Design (3)
Prerequisites: GEOG 310 or equivalent, and graduate standing, or permission of the instructor. An examination of user requirements, principles of graphic design, and design aspects of planning and map production.

579 Remote Sensing (3)
Prerequisites: Graduate standing or permission of the instructor. Analysis of the nature of electromagnetic radiation, principles and operations of sensors, techniques and systems of correction, enhancement and production of imagery. Interpretation and applications in geomorphic, atmospheric, hydrologic, vegetation, land use, and regional analysis.

590 Selected Topics in Cartography (3)
Prerequisites: BULE courses, or permission of the instructor. This course is designed to introduce topics of immediate interest; for that reason the content varies. See Schedule of Classes for course description.

Chemistry Courses (CHEM)

CHEM 211-212 is prerequisite to all other undergraduate chemistry courses except those numbered below 200.

103-104 Chemical Science in a Modern Society (4-4)
A terminal course in chemistry for non-science and nursing majors. A survey of the principles and applications of chemistry with emphasis on pertinent topics, such as environmental pollution, medicine, synthetics, earth and marine science. Three lecture hours, three laboratory hours.

106 Chemistry in a Changing World (4)
A study of the chemical nature of the world in which we live. Emphasis is given to the nature and importance of chemical pollutants in our environment, to energy, and to medical problems, to consumer and agricultural chemistry, and to the relationship between chemistry and health. Students who have completed CHEM 103-104 or 211-212 are not eligible to take this course. Three lecture hours, three laboratory hours.

211-212 General Chemistry (4-4)
A survey of the basic facts and principles of chemistry, including atomic and molecular structure, the gas laws, kinetics, equilibrium, electrochemistry, and nuclear chemistry. The properties associated with those more important elements and their compounds. Students majoring in science, engineering, or mathematics should choose this course. Three lecture hours, three laboratory hours.

222 General and Biochemical Equilibrium (2)
Prerequisite: CHEM 211-212. Study of equilibrium in ionic and biochemical solutions and of related homogeneous and heterogeneous separations. Topics include polyfunctional acids and bases, complex ion formation, chromatography, and ion exchange. To obtain credit for CHEM 222, students must take this course before taking CHEM 321.

313-314 Organic Chemistry (3-3)
Prerequisites: CHEM 211-212, corequisites for 313 CHEM 315, corequisites for 314 CHEM 316 or 320. The theoretical, synthetic, industrial, and biological aspects of the chemistry of carbon compounds. In the first semester all students take concurrently the same laboratory course, CHEM 315. In the second semester, students may choose...
either of two accompanying laboratory courses, CHEM 318 or 320. Those majoring in chemistry are required to take both, and others may do so. Three lecture hours.

315 Organic Chemistry Laboratory I (2)**
Corequisite: CHEM 313. Elementary laboratory techniques and reactions arranged to accompany CHEM 314. Three laboratory hours, one hour recitation.

318 Organic Chemistry Laboratory II (2)**
Corequisite: CHEM 314. Continuation of CHEM 315 with emphasis on specialized techniques and preparations. This course is arranged to accompany CHEM 314. Three laboratory hours, one hour recitation.

320 Organic Chemistry Laboratory II (2)**
Corequisite: CHEM 314. Continuation of CHEM 315 with emphasis on separation and identification of organic compounds using both classical and instrumental methods. This course is arranged to accompany CHEM 314. Three laboratory hours, one hour recitation.

321 Elementary Quantitative Analysis (4)
Prerequisite: CHEM 211-212. Chemical principles with particular emphasis on ionics equilibria. The laboratory work consists of gravimetric, volumetric, and instrumental methods illustrating the principles of determination. Two lecture hours, six laboratory hours.

331 Physical Chemistry (3)
Prerequisite: CHEM 211-212; MATH 113, 114. Prerequisite or corequisite: PHYS 101 or 200. This course and CHEM 332 constitute a year-long survey of physical chemistry covering topics such as thermodynamics, equilibria, kinetics, solution properties, statistical thermodynamics, electrochemistry, atomic and molecular structure, and nuclear chemistry. Three lecture hours.

332 Physical Chemistry II (3)
Prerequisite: CHEM 331. Continuation of CHEM 331. Three lecture hours.

335 Physical Chemistry for the Life Sciences (3)
Prerequisite: CHEM 211-213. This course deals with physical chemistry principles which have an application to biology and health sciences. Rigorous mathematical approaches to the theory of physicochemical processes are avoided. Topics covered include gas laws and kinetic theory, structure of solids and liquids, applied thermodynamics, kinetics and chemical equilibria. Where possible, examples applicable to the life sciences are used. Not open to students who have passed CHEM 331. Credit is not allowed toward a major in chemistry. Three lecture hours.

336 Biochemical Laboratory I (2)*
Prerequisite or corequisite: CHEM 331. Quantitative experimental study of physical chemical principles. This course and CHEM 337 constitute a year-long laboratory program introducing theories of experimental physical chemistry. Three laboratory hours, one hour recitation.

337 Physical Chemistry Laboratory II (2)*
Prerequisite: CHEM 331. Continuation of CHEM 336. Three laboratory hours, one hour recitation.

341 Fundamental Inorganic Chemistry (3)
Prerequisite: CHEM 211-212. The descriptive chemistry, physical properties, chemical reactions, and reaction mechanisms, of inorganic elements and compounds. Topics include main group and transition elements, organometallic compounds, and coordination complexes. Three lecture hours.

413 Special Topics in Organic Chemistry (3)
Prerequisite: CHEM 313-314. An advanced study of synthetic and mechanistic organic chemistry with particular emphasis on selected topics such as heterocyclics, natural products, and biologically active compounds. Finally, the relation of applied organic chemistry to consumer products, including drugs and agricultural chemicals, are examined.

422 Instrumental Analysis (4)
Prerequisite: CHEM 314, 321, 331, or permission of the instructor. A study of the application of physicochemical methods to analytical chemistry, i.e., a systematic study of chemical reactions by the use of modern analytical instrumentation. It offers the student an introduction to the theory and practice of spectroscopy; ultraviolet, visible, and infrared spectroscopy, electrochemistry, gas chromatography, atomic absorption, fluorescence, emission spectrometry, neutron activation, and spark source mass spectrometry. The most recent advances and potential applications to trace metal determinations in environmental samples are stressed.

431 Chemical Thermodynamics (3)
Prerequisite: CHEM 331, 332. Applies the laws of thermodynamics to the study of chemistry. Topics surveyed include gas phase reactions, solutions, phase transitions and equilibria, electrochemical cells, free energy and chemical spontaneity, surface phenomena, and chemical reaction mechanisms. Three lecture hours.

432 Atomic and Molecular Structure (3)
Prerequisite: CHEM 331. An introduction to modern atomic and fundamental theories of chemical bond and application of these theories to dynamics of chemical systems. Studies are made of the various experimental techniques which are applied to the elucidation of molecular structure. Three lecture hours.

441 Properties and Bonding of Inorganic Compounds (3)
Prerequisite: CHEM 313-314; corequisite or prerequisite: CHEM 331, 332. Interpretation of physical and chemical properties of inorganic compounds in terms of currently used bonding concepts. Topics include structure and bonding of ionic compounds; covalent bonding; valence-bond, crystal field, and molecular orbital theories; and the stereochemical, electronic, and magnetic properties of elements.

445 Organometallic Chemistry (3)
Prerequisite: CHEM 321. Application of the techniques of inorganic chemistry to the preparation and purification of selected substances. One lecture hour, laboratory hour.

451, 452 Special Projects in Chemistry (2, 2)
Prerequisite: Senior standing in chemistry and permission of the departmental research committee. An individualized approach to a special topic or problem. May be repeated once with a different topic or problem. De signated for those who have had no previous exposure to the specialized techniques used in biochemical research. Three laboratory hours, one hour recitation.

463 Biochemistry Laboratory I (2)
Prerequisite: CHEM 331, 332, and CHEM 461. Introduction to experimental methods used to study the chemical and physical properties of proteins, carbohydrates, lipids, and nucleic acids. Compounds, light, colorimetric, and spectrophotometric techniques. Designated for those who have had no previous exposure to the specialized techniques used in biochemical research. Three laboratory hours, one hour recitation.

464 Biochemistry Laboratory II (2)
Prerequisite: CHEM 461 and 463. Continuation of CHEM 463. Three laboratory hours, one hour recitation.

500 Selected Topics in Modern Chemistry (3)
Chemical topics of current interest from areas in biochemistry and in physical, organic, inorganic, and theoretical chemistry. Recommended for teachers of general science and chemistry.

501 Laboratory Demonstration Techniques in the Teaching of Chemistry (3)
A laboratory instructional structure for developing proficiency in the conducting of laboratory demonstrations. Recommended for teachers of chemistry and general science.

581 Protein Biochemistry (3)
Prerequisites: CHEM 461, 462 or permission of the instructor. An in-depth study of the various aspects of protein structure and function. Topics include the structural, transport, and immunological roles of proteins with special emphasis on the unique role of proteins as biological catalysts. Current theories of enzyme catalysis as well as pertinent experimental techniques are discussed. Also covers the important structural proteins from muscle and connective tissue as well as free and membrane-bound transport proteins.

800 Studies for the Doctor of Arts in Education (variable credit)
Prerequisite: Open only to DAEd students admitted to study in chemistry. A program of studies designed and approved by the student's doctoral committee which brings the student to participate in the current research of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DAEd seminar summer. Enrollments in this course are repeated according to each student's program.

Classics Courses (CLAS) Foreign Languages and Literatures

250 Classical Myths and Legends (3)
Prerequisite: ENGL 101, 102 or equivalent, or permission of the instructor. A study of the myths and legends of Greece and Rome, with illustration of their role in classical and modern literature and art. All coursework in English. May be taken to fulfill the general requirement in literature for bachelor's degrees.

300 Homer and Greek Tragedy (3)
Prerequisite: ENGL 101, 102 or equivalent, or permission of the instructor. An introduction to the texts of the Iliad and Odyssey and selected plays by Aeschylus, Sophocles, and Euripides. Discussion of the social setting of both types of literature. Three hours of classroom lecture and one-hour laboratory. Prerequisite taken to fulfill the humanities requirement in "Literature."

Communication Courses (COMM) Fine, Performing Arts and Communication

101 Introduction to Communication (3)
An introduction to the elements affecting speech communication at the individual, small group, public and mass communication levels with emphasis on the student's effective practice of communication and appreciation.

110 Introduction to Oral Interpretation (3)
A basic course in the fundamental principles involved in the oral communication of the written word from writer to reader, to audience. Practice in the oral communication of prose, poetry, and drama.

120 Introduction to Public Speaking (3)
Principles of the practical aspects of speech, with emphasis on expository and persuasive speaking. Intensive practice in composition and delivery.

130 Introduction to Small Group Discussion (3)
Introduction to the processes and techniques of problem solving, emphasizing the development of presentational ability in a group, decision making group maintenance, and leadership and participant skills. Preliminary study of group dynamics.

http://catalog.gmu.edu
140 Forensics Seminar in Creative Arts (1, 1, 1)  
Prerequisite: Audition. Intensive work in various types of creative forensics events—rhetorical criticism, evidence examination, speaking, persuasive speaking, extemporaneous speaking, after-dinner speaking, and impromptu speaking. May be taken four times for credit. Three hours per week.

141 Forensics Seminar in Re-creative Arts (1, 1, 1)  
Prerequisite: Audition. Intensive work in various types of re-creative forensics events—dramatic duo, mixed interpretation, poetry and prose presentation, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

142 Forensics Seminar in Debate: Affirmative Strategies (1, 1, 1)  
Intensive work in the theory and practice of affirmative strategies in intercollegiate debate. Work in affirmative research, case construction, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

143 Forensics Seminar in Debate: Negative Strategies (1, 1, 1)  
Intensive work in the theory and practice of negative strategies in intercollegiate debate. Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

261 Theories of Argumentation (3)  
The critical analysis of argument within communicative settings with emphasis on deductive and inductive logic, evidence and argumentation, tests of evidence, and the models for such analysis.

300 Public Communication (3)  
Prerequisite: Three hours 100- or 200-level credit, or junior standing. An investigation of the theories and principles of public communication with emphasis upon methods of persuasion, propaganda, speech and audience; the roles of the public and specific evaluations of public communication.

301 Interpersonal Communication (3)  
Prerequisite: Three hours 100- or 200-level credit, or junior standing. An investigation of the theories and principles of interpersonal communication with emphasis upon models of communication, verbal and non-verbal message systems, and analysis of communicative relationships.

302 Mass Communication (3)  
Prerequisite: Three hours 100- or 200-level credit, or junior standing. An investigation of the principles of mass communication covering the history and development of mass media, the techniques and effects of advertising, the characteristics of various types of mass media, the responsibility of the media to the public, and the role of the media in today's society.

310 Advanced Oral Interpretation (3)  
Prerequisite: COMM 110. An advanced course in the principles and theories of oral interpretation. Practice with advanced problems in solo interpretation including the lecture-recital.

326 Rhetoric of Social Movements and Political Controversy (3)  
Prerequisite: Three hours of communication credit. An investigation of the major social and political forces of the contemporary era from a communication perspective with special emphasis on political leadership, pressures for social/political change, and transformations in the communicative environment.

332 Nonverbal Communication (3)  
Prerequisite: Three hours of communication credit. An investigation of the theory, principles, and methods of analysis of nonverbal communication. Emphasis is given to such dimensions as physical behavior, facial expression, personal space and territoriality, physical appearance, vocal cues, and environment.

335 Organizational Communication (3)  
Prerequisites: COMM 100, 120, or 301, or permission of the instructor. An examination of the theory, practice, and methods of analysis of communication within organizations. Emphasis is given to the process and structure, interaction formats, and interpersonal and organizational career paths in organizational communication.

340 Forensics Seminar in Creative Arts (1, 1, 1)  
Prerequisite: Four credits COMM 140 or junior standing, or permission of the instructor. Intensive work in various types of creative forensics events—rhetorical criticism, epidictic, informative, persuasive, extemporaneous, after-dinner, and impromptu speaking. May be taken four times for credit. Three hours per week.

341 Forensics Seminar in Re-creative Arts (1, 1, 1)  
Prerequisite: Four credits COMM 141 or junior standing, or audition. Intensive work in various types of re-creative forensics events—dramatic duo, mixed interpretation, poetry and prose presentation, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

342 Forensics Seminar in Debate: Affirmative Strategies (1, 1, 1)  
Prerequisite: Four credits COMM 142 or junior standing, or audition. Intensive work in the theory and practice of affirmative strategies in intercollegiate debate. Work in affirmative research, case attacks, and oral presentation directed toward affirmative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

343 Forensics Seminar in Debate: Negative Strategies (1, 1, 1)  
Prerequisite: Four credits COMM 143 or junior standing, or audition. Intensive work in the theory and practice of negative strategies in intercollegiate debate. Work in negative research, case attacks, and oral presentation directed toward negative analysis of the intercollegiate debate proposition. May be taken four times for credit. Three hours per week.

345 Newspaper Workshop (1)  
Prerequisite or Corequisite: COMM 351. Practical experience and training for the student newspaper, coordinated with the instruction in COMM 351. May be taken three semesters for a total of three credit hours.

346 Yearbook Workshop (1)  
Prerequisite or Corequisite: COMM 351. Practical experience at writing and editing for the student yearbook, coordinated with the instruction in COMM 351. May be taken three semesters for a total of three credit hours.

347 Literary Magazine Workshop (1)  
Supervised practical experience in editing, make-up, and design for the University's literary magazine. May be taken three semesters for a total of three credit hours.

350 Mass Communication and Public Policy (3)  
Prerequisite: Three hours 300, or permission of Instructor. An investigation of the manner in which matters of public importance are communicated via the various channels of mass communication. Emphasis is placed upon regulations designed to minimize the influence of mass media on public decision making, and manipulation of the media by pressure groups, politicians, and the media gate-keeping functions.

351 Journalism (3)  

352 News Editing (3)  
Prerequisite: COMM 351. Techniques of copy editing and production, headline writing, news judging, and newspaper make-up. Designed to introduce students to working on newspaper copy desks, but has applications for anyone requiring practical knowledge of the writing and production procedures of newspapers.

399 Special Topics in Speech Communication (3)  
Prerequisite: Permission of the instructor. A study of speech communication by topics, such as the basics of speaking, successful speaking, forensic and public rhetoric, communication reticence. The topic will vary with each offering of the course.

400 Research Methods in Communication (3)  
Prerequisite: Junior standing or permission of the instructor. An examination of the primary research methodologies used in communication. Both the rhetorical and the experimental-statistical methodologies are considered.

410 Values and Methods of Mass Communication (3, 3)  
Prerequisite: COMM 110. A study of the development and current concepts of group communication of literature. Adaptation of literary material with practical application in direction and performance.

420 Theories of Communicative Interaction (3)  
Prerequisite: Junior standing or permission of instructor. An investigation of theories of persuasive communication including traditional and contemporary theories and systems, and the relationship between speaker, message, and audience; and the relationship between attitude and behavior change.

434 Interviewing (3)  
Prerequisite: Junior standing or permission of the instructor. An investigation of the theory, principles, and practical skills essential to the interview process. Emphasis is given to such specific interview situations as the information-gathering interview, the journalistic interview, the employment interview, and the performance-appraisal interview.

450 Internship in Communication (3-8)  
Prerequisites: Junior and senior communication majors with adviser approval. This course is an opportunity for students to obtain firsthand experience in communication through approved field-work study programs. Internships are arranged and supervised by the Department of Fine, Performing Arts and Communication through an internship coordinator or adviser, and credit is granted on the basis of hours per week to be spent on the job with the department advisor.

489 Independent Study in Communication (3, 3)  
Prerequisites: Juniors and seniors, with approval of the independent study committee. The course is designed to encourage in-depth study of a selected area in public, interpersonal, or mass communication. Through the independent study format students are able to concentrate in special studies utilizing specific areas of faculty expertise.

800 Studies for the Doctor of Arts in Education (variable credit)  
Prerequisites: Open only to DAE students admitted to the study in communication. A program of studies designed by the student's disciplinary director and approved by the student's doctoral committee. Coursework is designed 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 DAEd summer seminar. Enrollments in this course are repeated according to each student's program.

Computer Science Courses (CS)  
Mathematical Sciences

161 Introduction to a Programming Language (1)  
Prerequisite: Knowledge of algebra will be assumed. This course allows the student to learn and use a language on the computer. It does not expect the student to become proficient in programming or software construction, but it does expect the student to become proficient in the structure of a computer.

261 Computers and Their Uses (3)  
Prerequisite: MATH 101 or pass the math proficiency test or transfer credit in the mathematical sciences. An introduction to data processing, including the organization of a computer system; the organization and structure of computer software, and the organization and types of data. This course provides a thorough understanding of a computer's capabilities and limitations. Topics covered include the study of a high-level programming language (FORTRAN) and an introduction to the use of a computer package for

For more information, please visit the George Mason University Catalog 1980-1981 at http://catalog.gmu.edu.
statistical analysis of data (SPSS). Emphasis is placed on the user-to-programmer interaction of top-down structured programming needed to allow development and use of larger computer programs.

262 An Introduction to Computer Statistical Packages (3)
Prerequisite: CS 161 and a course in statistics. An introduction to the use of computer packages in the statistical analysis of data. Topics covered include data entry, checking and manipulation as well as the use of computer statistical packages for data analysis. An examination of computer output.

263 Computer Science I (3)
Prerequisite: CS 161 and three semester hours of mathematical sciences. An intensive computer programming course with emphasis on algorithms. Topics covered include: algorithms and procedures, functions and subroutines, programming techniques, program debugging, numerical errors, and applications. The general concepts taught are reinforced by several programming assignments using a high-level computer language.

264 Computer Science II (3)
Prerequisite: CS 263. An intensive computer programming course with emphasis on information processing. Topics covered include: data structures, their use, systems simulation, and other applications. A high-level computer language is taught in this course. Students are expected to demonstrate their knowledge in several programming projects.

363 Comparative Programming Languages (3)
Prerequisite: CS 263 or equivalent. This course gives a comparative survey of several widely used programming languages and addresses the broad base of experience in the languages covered and the strengths and weaknesses of each of them. Most emphasis is placed on FORTRAN, COBOL, and PL/I.

364 Intermediate Digital Computer Programming (3)
Prerequisite: CS 263. An introduction to symbolic assembler, assembly language, and addressing scheme, load and execution, program relocation, subroutine linkage, input-output through the operating system.

370 Introduction to File Processing (3)
Prerequisite: Principles of file organization methods and access methods for secondary storage; examination of sequential and direct file structure on tapes and direct access devices.

465 Data Structures and Algorithm Analysis (3)
Prerequisite: CS 370. Analysis and design techniques for nonnumeric algorithms which act on data structures. Use of algorithmic analysis and design criteria in the selection of methods for data manipulation in the environment of a data base management system.

469 Advanced Programming (3)
Prerequisites: CS 264, 364. Introduction to assemblers, compilers, systems structures, operating systems and machine architecture.

501 Introduction to Operations Research (3)
An introduction to computer organization. BASIC and FORTRAN programming languages. Provides experience in interactive and batch processing modes. Primarily for individuals with no prior computer experience. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but may be applicable toward a degree in other fields.

502 The Use of Computer Statistical Packages (3)
Prerequisite: A course in statistics. This course is intended to introduce the student to the use of computer statistical packages. Primarily for individuals with no prior computer experience. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but may be applicable toward a degree in other fields.

465 Data Structures and Algorithm Analysis (3)
Prerequisite: CS 370. Analysis and design techniques for nonnumeric algorithms which act on data structures. Use of algorithmic analysis and design criteria in the selection of methods for data manipulation in the environment of a data base management system.

469 Advanced Programming (3)
Prerequisites: CS 264, 364. Introduction to assemblers, compilers, systems structures, operating systems and machine architecture.

501 Introduction to Operations Research (3)
An introduction to computer organization. BASIC and FORTRAN programming languages. Provides experience in interactive and batch processing modes. Primarily for individuals with no prior computer experience. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but may be applicable toward a degree in other fields.

502 The Use of Computer Statistical Packages (3)
Prerequisite: A course in statistics. This course is intended to introduce the student to the use of computer statistical packages. Primarily for individuals with no prior computer experience. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but may be applicable toward a degree in other fields.

250 Intermediate Modern Dance (3, 3, 3, 3, 3, 3)
Prerequisite: DANC 252 or permission of the instructor. May be taken eight times for credit. Six hours and fifteen minutes per week.

341 Advanced Ballet (3, 3, 3, 3, 3, 3)
Prerequisite: DANC 241 or permission of the instructor. Performance/laboratory course dealing with the study of ballet at the advanced level incorporating the styles and techniques of the French, Russian, and Danish schools. Emphasis is placed on alignment and body placement as well as virtuosity. This course may be taken eight times for credit. Three hours per week.

350 Advanced Dance Improvisation (3)
Prerequisite: Permission of the instructor. Lecture/performance course which provides an opportunity for intensive study of ideas and practices gained from dance improvisation. Each student is responsible for creating as well as directing advanced problems in dance improvisation. Three hours per week.

360 Choreography (3)
Prerequisite: DANC 252 or permission of the instructor. Students engage in the process of learning to choreograph a dance work. Students assume the responsibilities of choreographing, implementing, staging, lighting, selecting musical accompaniment, and composing original movement material.

370 Dance Performance (3, 3, 3)
Prerequisite: Permission of the instructor. Practical experience in the areas of performance, production, and/or repertory—through participation in University dance productions or special guest appearances. May be taken four times for credit. Three hours per week.

Decision Sciences Courses (DESC) School of Business Administration

201 Introduction to Statistical Analysis (3)
Prerequisite: MATH 109. The use of statistical methods as scientific tools in the analysis of practical problems in business and economics. Topics covered include descriptive statistics, probability distribution estimation and hypothesis testing, Chi-square tests, analysis of variance, regression and correlation analysis, time series analysis, index numbers, non-parametric methods.

301 Business Decision Models (3)
Prerequisites: MATH 108, DESC 202. Introduces both the viewpoint and methodology of the quantitative approach to decision making problems. Em-
Economics Courses (ECON)

Individual courses taken for credit under their former numbers may not be taken again for credit under their present numbers.

103 Contemporary Economic Principles and Issues (3) (May be taken after ECON 104.)
An introduction to microeconomics in the context of current problems. The course explores the way market mechanisms allocate scarce resources among competing users. It places the basic tools of supply and demand and production and distribution theory to analyze problems as diverse as public education, environmental quality, poverty and distribution of income and wealth, pollution, energy, price controls, and illegal activities.

104 Contemporary Economic Principles and Issues II (3) (May be taken after ECON 103.)
An introduction to macroeconomics in the context of current problems. Topics considered include national income analysis, money and banking, economic growth and stability, unemployment, inflation, and the role of government in the economy.

150 The Urban Economy (3)
A study of metropolitan economic activity. A problem-oriented course designed to develop a general understanding of the nature and applicability of economic analysis. Topics covered include: housing and urban renewal; pollution; transportation; poverty and discrimination; urban, suburban, and regional development and growth; and metropolitan finance.

306 Intermediate Microeconomics (3)
Prerequisite: ECON 104. An examination of basic factors of price and distribution theory, including analysis of demand, costs and production, and supply relationships, and price and output determination in various market structures.

309 Economic Problems and Public Policies (3)
Prerequisite: ECON 103 or permission of the instructor. A detailed study of important economic concepts in light of current and proposed public policies.

310 Money and Banking (3)
Prerequisite: ECON 103 or permission of the instructor. An analysis of the role of money and of the banking system in the economy. Its function as a medium of exchange is stressed, and special emphasis is placed on the communication of results to management.

353 Intermediate Applied Statistics for Business (3)
Topics covered include trend analysis, moving averages, exponential smoothing, adaptive models, regression and correlation, forecasting, the techniques are applied to such business areas as finance. Use of computer packages for analysis is emphasized.

354 Decision Theory and Networks (3)
Prerequisite: DESC 307. This course studies the systematic evaluation of alternative actions as a basis for choice among them. Analytic techniques such as tree diagrams, Bayesian inference, and network models are utilized.

355 Cases in Management Science (3)
Prerequisite: DESC 352. The application of management science to problems from such areas as marketing, finance, accounting, planning, and operations management are studied through the use of case methodology. Problems and cases as well as solutions are stressed, and special emphasis is placed on communication of results to management.

451 Optimization Models (3)
Prerequisite: DESC 307. An examination of optimization models as applied to business problems. Both linear and nonlinear models are considered, including dynamic, integer, and goal programming. Applications to management, finance, and marketing are treated.

452 Forecasting Methods for Management (3)
Prerequisite: DESC 302. An introduction to forecasting, examining alternative models and their application to a variety of business applications. Topics covered include trend analysis, moving averages, exponential smoothing, adaptive models, regression and correlation, time series analysis.

306 Intermediate Microeconomics (3)
Prerequisite: ECON 104. An examination of basic factors of price and distribution theory, including analysis of demand, costs and production, and supply relationships, and price and output determination in various market structures.

309 Economic Problems and Public Policies (3)
Prerequisite: ECON 103 or permission of the instructor. A detailed study of important economic concepts in light of current and proposed public policies.

310 Money and Banking (3)
Prerequisite: ECON 103 or permission of the instructor. An analysis of the role of money and of the banking system in the economy. Its function as a medium of exchange is stressed, and special emphasis is placed on the communication of results to management.

353 Intermediate Applied Statistics for Business (3)
Topics covered include trend analysis, moving averages, exponential smoothing, adaptive models, regression and correlation, forecasting, the techniques are applied to such business areas as finance. Use of computer packages for analysis is emphasized.

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Prerequisite: DESC 307. This course studies the systematic evaluation of alternative actions as a basis for choice among them. Analytic techniques such as tree diagrams, Bayesian inference, and network models are utilized.

355 Cases in Management Science (3)
Prerequisite: DESC 352. The application of management science to problems from such areas as marketing, finance, accounting, planning, and operations management are studied through the use of case methodology. Problems and cases as well as solutions are stressed, and special emphasis is placed on communication of results to management.

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452 Forecasting Methods for Management (3)
Prerequisite: DESC 302. An introduction to forecasting, examining alternative models and their application to a variety of business applications. Topics covered include trend analysis, moving averages, exponential smoothing, adaptive models, regression and correlation, time series analysis.
tant current economic problems are studied and discussed in seminar form. 

499 Independent Study (1-5) Prerequisite: Economics majors with senior standing and with the permission of the department and the instructor. Individual study of a selected area of economics. A directed research paper is required.

Departmental Course Prerequisites

ECON 306 and 311, or their equivalents, are prerequisites to all graduate courses except ECON 500 and 502. Additional prerequisites are noted for some courses. With the consent of the instructor, prerequisites may be waived.

500 Current Issues in Economics (3) Prerequisite: Graduate standing or permission of the instructor. A special course for students with little or no background in economics. Topics include supply and demand, the operation of a free market system, stock and bond markets, and the rule of the U.S. in the world economy. Current economic problems are discussed. This course may be used in partial fulfillment of the course requirements in the teaching discipline for the master’s degree in economics.


502 Economic Analysis (3) Prerequisite: Baccalaureate degree. This course cannot be taken for graduate credit toward the MA degree in economics. A rigorous, concentrated introduction to micro- and macro-economic analysis. Emphasis is placed on economic concepts, tools of analysis, and applications.

505 Welfare Economics (3) The topics covered include Pareto optimality, social welfare functions, the voting paradox, individual and societal preferences, output and price policy in public enterprise. Qualifications of the basic welfare theorem caused by noncompetitive market structures, external economies and diseconomies and secondary constraints. As time permits, Kaldor, Hicks, Scitovskiy, Arrow, Little, Bergson, and Samuelson are discussed.


513 Macroeconomic Theory (3) Classical, neoclassical, Keynesian, and post-Keynesian theories of income and employment determination. Theories of inflation and growth. The demand for money and its implications for the effectiveness of monetary vs. fiscal policy.

517 Seminar in Monetary Theory and Policy (3) Selected topics of current interest are discussed.

520 Labor Economics (3) Focuses on labor demand, supply, utilization, and wage determination. The determination of factor shares in an open economy. The theory of collective bargaining and the impact of trade union wage rates and resource allocation. The measurement, types, and causes of unemployment. Benefit-cost analysis of manpower training and development projects.

521 Social and Labor Economics (3) An intensive study of union and management decision-making processes, the government’s role in labor negotiations and dispute settlement, the economics of wage rates and discrimination and poverty, and the effectiveness of wage-price controls.

522 Economics of Income Distribution (3) Prerequisite: ECON 501 and 513, or permission of the instructor. Theoretical and empirical investigation of income distribution and determination. Examination of their empirical testing. Microeconomic functional income 

come (shares to factors of production) and personal income (payments to individuals). Human capital, screening, education, and family background are discussed. Macroeconomic issues in income distribution theories (neo-classical, neo-Keynesian, and stochastic) are discussed.

533 Public Finance (3) Theoretical and empirical analysis of government expenditures, taxation, debt management, and intergovernmental fiscal relations. Allocative and distributional effects of alternative tax and subsidy programs. Analysis of the cost-effectiveness of government decisions.

534 State and Local Public Finance (3) 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. Provision of specific state and local services, including education and police and fire protection.

541 Mathematical Economics I (3) Among the topics covered are set theory, function, differential calculus, integration, series, and matrix algebra, with the special emphasis on the economic applications.

542 Mathematical Economics II (3) Prerequisite: ECON 541, or permission of the instructor. Mathematical treatment of economic theories. Static and dynamic analysis of macro-models. Among the techniques such as Lagrangian multipliers, linear programming, nonlinear programming, and game theory. General equilibrium theory: existence, uniqueness, stability.

544 Econometrics I (3) Prerequisite: MATH 109-DESC 202 or permission of the instructor. Techniques of estimating relationships between economic variables. Introduction to multiple regression and problems associated with the single equation model-autocorrelation, multicollinearity, and heteroscedasticity.

546 Econometrics II (3) Prerequisite: ECON 544, or permission of the instructor. Econometric models and simultaneous equation systems. The problems of identification of parameters and least squares bias. An analysis of alternative estimation methods and block recursive systems.

552 Urban and Regional Economics (3) Prerequisite: ECON 501, or permission of the instructor. The economics of regional development and metropolitan growth, including the locational decisions of households and firms, and problems associated with their interaction. Applications in urban economics, such as neighborhood effects, traffic congestion, pollution, discrimination, and spatial monopoly.


556 Economics of the Environment (3) Analysis of economic models of ecosystems and pollutant discharges into the environment. Examination of models that attempt to enhance economic efficiency by incorporating pollution control incentives. Review of public policies designed to enhance environmental quality.

560 Economic Development (3) An analysis of the forces contributing to and retarding economic progress in developing countries. The role of foreign trade, economic integration, tariffs, international aid, and technological transfers. Development strategies, including balanced vs. unbalanced growth, import substitution, and planning.

563 Seminar on Latin American Development (3) Analysis of Latin American economic problems with emphasis placed upon promising new areas of the discipline which may eventually become formalized into a
specific field. May be repeated for credit as new topics develop.

598 Directed Reading and Research (3) Independent reading and a research paper on a topic agreed to by the student and a faculty member.

599 Thesis (3-6) Those students who take ECON 598 and then elect the thesis option receive three credits for ECON 599 upon completion of the thesis. Those students who do not elect the thesis option receive two credits for EON 599 upon completion of the thesis.

800 Studies for the Doctor of Arts in Education (variable credit) Open only to DAEd students admitted to study in economics. A program of studies designed by the student's discipline director and approved by his doctoral committee which brings the student to publish significant original research of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DAEd seminar for graduate courses (those numbered 500 and above) and apply the credit earned toward the degree. Undergraduate students electing this option must have completed all prerequisite hours and courses for the graduate course in which they wish to enroll.

200 Human Growth and Development (3) An introduction to the study of human development from conception through adolescence. Major theories of development and hazards of development are considered. Included are studies of cognitive, intellectual, physical, social, emotional, and language development. Field experiences in public schools are required.

300 Foundations of Elementary Education (3) This course introduces early childhood and upper elementary education majors to the teaching profession through an examination of the role of a teacher in today's schools, the nature of American schools, and the student's potential contributions to the process of teaching and learning in public and private schools are an integral part of the course.

301 Foundations of Education (3) Open only to secondary education majors. The historical, philosophical, and sociological foundations of education are surveyed with emphasis on the development of American education and those persons influencing it. A survey of the area of teaching as a profession is made, including current issues and problems in education. The relationships between educational objectives, the structure of the educational system, and curricula are considered. Field experiences in public schools are required.

305 (formerly LAC 305) Children's Literature (3) Prerequisite: Nine semester hours of English. Survey of literature written for children from the earliest years of instruction through 12th grade, with emphasis on children in kindergarten, and the elementary school. The historical development, types, representative authors, and illustrations are studied. Critical analyses of selected works are made. The habits and interests of children at these levels are studied. The techniques of storytelling and presentation of literature to children are studied and practiced.

308 Historical and Philosophical Backgrounds of Industrial Arts (3) An introduction to industrial arts and its beginnings in Europe, Scandinavia, and the U.S. Emphasis is placed on the current trends related to curriculum and methods used to accomplish the practical aspects of the course related to the needs of students served at each level of instruction. Information about teacher preparation for the profession is covered. Field experiences are required.

309 History and Philosophy of Trade and Industrial Education (3) An introduction to the history and philosophical background of trade and industrial education in Europe and America. Emphasis is placed on current trends in curriculum and methods used to accomplish the philosophical goals of trade and industrial education. Information about teacher preparation for the profession is covered. Field experiences are required.

313 Educational Psychology (3) Acquaints the prospective teacher with the principles of psychology and their application to teaching. Included in the course are learning theory, various aspects of the learning process, individual differences, motivation, and assessment of measuring devices. Interpretation of standardized tests in the area of intelligence, achievement, aptitudes, and personality are given consideration. Observation and interpretation of measuring devices used in the classroom are emphasized. No field experiences in public schools are required.

325 Production and Utilization of Instructional Materials (3) A study of media production and utilization. A lab-centered course emphasizing individual projects. All field experiences in public schools are required.

359 Industrial Arts for Elementary Teachers (3) This course is designed for any teacher who wants to use construction as a teaching method for reinforcing the elementary school curriculum. Students use the same tools, materials, and craft activities as children to learn about materials, mechanical arts, and concepts of language arts, science, social studies, and mathematics. Models of activities which integrate with the total elementary curriculum are prepared. No field experiences in public schools are required.

361 Occupational and Job Analysis (3) This course focuses on the selection, development, and placement of students in the occupational structure of society according to their needs and capabilities, occupational and job analyses, testing procedures, occupational counseling, and sources of occupational information. Field experiences are required.

362 Methods of Laboratory Organization and Management (3) Students plan and organize laboratory facilities for instruction to be offered. Systems for personnel, equipment, tool storage and supply, system for maintenance, and recordkeeping are developed and tested. Selected laboratories are examined and standard conditions receive recommendations for improvement of organization, management, or safety. Some emphasis is placed on laboratory planning, educational specifications, and facility evaluation for safety and appropriateness. Field experiences are required.

363 Public Relations in Trade & Industrial Education (3) The principles, philosophy, and practices involved in developing desirable relationships between the schools, the trade and industrial communities, and the general public. Emphasis is on the role of the trade and industrial educator in the industrial community.

364 Communications Technology in Industrial Education (3) This laboratory course combines practical experiences in the broad field of communication technology with techniques for teaching the course to industrial arts students. All aspects of communication including editing, recording, telephone, public address, TT's, and computers, are studied. Activities are developed to teach these technical areas using projects or experiments. Products which interrelate technical areas are designed and produced by class members.

365 The World of Manufacturing (3) This laboratory course combines experiences in manufacturing technology with techniques for teaching this broad cluster to industrial arts students. Manufacturing processes, materials, management, and personnel organization are applied to production programs in order to teach these concepts in industrial arts techniques, projects and activities developed by the industrial arts curriculum project are presented. Organizational techniques from other resources are tried and adapted by class members for use in teaching construction.

366 The World of Construction (3) This laboratory course combines experiences in construction technology with techniques for teaching this broad cluster to industrial arts students. Students design, build, and test concrete, steel fabrication, and watch the architectural, framing, masonry, utility, and other aspects of this industry. In order to teach these concepts of contracting, building, and servicing of the industrial arts, the field experiences, projects and activities developed by the industrial arts curriculum. Organizational patterns and learning activities from other sources are adapted by class members for use in teaching construction.

367 Power and Transportation (3) This laboratory course provides an overview of the broad field of the power and transportation industries. Techniques and practical experiences involving engine, power, sources, and controls with the techniques of teaching these to industrial arts students. Emphasis is placed on systems which integrate with the individual student's needs. Projects are developed, experiments performed, and revisions made with power devices or vehicles.

368 Shop Organization, Lab Safety, Lab Organization and Equipment (3) Students plan and organize laboratory facilities for instruction to be offered. Systems for personnel, equipment, tool storage and supply, system for maintenance, and recordkeeping are developed and tested. Selected laboratories are examined and standard conditions receive recommendations for improvement of organization, management, or safety. Some emphasis is placed on laboratory planning, educational specifications, and facility evaluation for safety and appropriateness. Field experiences are required.

379, 398 Fundamentals of Aging I, II (3) Prerequisites: Eight hours of biology, anatomy, or physiology, anatomy, or physiology; and three hours of psychology or social science. An interdisciplinary approach to the study of aging. The physical, psychological, and social aspects of normal aging are examined as well as issues in health care, mental health, education, and public policy in the field of gerontology. Three to six hours field experience are required.

400 Inservice Educational Development (2, 3, 4, 6) Prerequisites: Employment by a professional capacity by sponsoring school division, or educational agency, acceptability to the University, or permission of the Department. Offered upon request of a school division, or educational agency upon recommendation of this Title on the part of a group of educational personnel. Provides an opportunity for instruction in various educational areas, such as reading, thinking, curriculum, evaluation, instruction, media, methods, teaching, and other areas. The course may take any form appropriate to the area involved to include practicums and workshops. May be repeated. If applicable to a specific degree program, may be accepted toward
413 Teaching Science in the Elementary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach the subject areas of science and social studies to young children. Emphasis is placed on the development of children's concepts of the physical world. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

414 Teaching Mathematics in the Elementary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach mathematics to young children. Emphasis is placed on the development of children's concepts of number, measurement, and geometry. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

415 Student Teaching in the Elementary School (6)
Prerequisite: Admission to teacher education program and permission of the department chair.
A supervised teaching experience in the elementary school. The student teaches a class under the direction of a cooperating teacher and observes other teachers in the school. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

420 Teaching Social Studies in the Secondary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach social studies to older children. Emphasis is placed on the development of children's concepts of the social and political world. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

421 Student Teaching in the Secondary School (6)
Prerequisite: Admission to teacher education program and permission of the department chair.
A supervised teaching experience in the secondary school. The student teaches a class under the direction of a cooperating teacher and observes other teachers in the school. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

425 Teaching English in the Secondary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach English to older children. Emphasis is placed on the development of children's concepts of language and literature. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

426 Student Teaching in the Secondary School (6)
Prerequisite: Admission to teacher education program and permission of the department chair.
A supervised teaching experience in the secondary school. The student teaches a class under the direction of a cooperating teacher and observes other teachers in the school. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

430 Teaching English in the Elementary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach English to younger children. Emphasis is placed on the development of children's concepts of language and literature. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

431 Student Teaching in the Elementary School (6)
Prerequisite: Admission to teacher education program and permission of the department chair.
A supervised teaching experience in the elementary school. The student teaches a class under the direction of a cooperating teacher and observes other teachers in the school. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

440 Teaching Science in the Secondary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach science to older children. Emphasis is placed on the development of children's concepts of the physical and natural worlds. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

441 Teaching Mathematics in the Secondary School (3)
Prerequisite: Admission to teacher education program and permission of the department chair.
A study of the theories, methods, materials, and resources necessary to teach mathematics to older children. Emphasis is placed on the development of children's concepts of number, measurement, and geometry. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

442 Student Teaching in the Secondary School (6)
Prerequisite: Admission to teacher education program and permission of the department chair.
A supervised teaching experience in the secondary school. The student teaches a class under the direction of a cooperating teacher and observes other teachers in the school. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

445, 446, 447 Directed Field Experiences (1, 1, 1)
Prerequisite: Permission of director of Field Experiences.
Students may register for credit in teaching experiences conducted in conjunction with field experiences. Field experiences include the supervised teaching of classes, the planning of lesson plans, and the participation in departmental meetings.

448 Directed Field Experiences (1, 1, 1)
Prerequisite: Permission of director of Field Experiences.
Students may register for credit in teaching experiences conducted in conjunction with field experiences. Field experiences include the supervised teaching of classes, the planning of lesson plans, and the participation in departmental meetings.

449 Directed Field Experiences (1, 1, 1)
Prerequisite: Permission of director of Field Experiences.
Students may register for credit in teaching experiences conducted in conjunction with field experiences. Field experiences include the supervised teaching of classes, the planning of lesson plans, and the participation in departmental meetings.

450 Teaching Methods in the Secondary School—Foreign Languages (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach foreign languages to older children. Emphasis is placed on the development of children's concepts of the languages and cultures of other countries. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

451 Teaching Methods in the Secondary School—Social Studies (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach social studies to older children. Emphasis is placed on the development of children's concepts of the social and political world. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

452 Teaching Methods in the Secondary School—Mathematics (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach mathematics to older children. Emphasis is placed on the development of children's concepts of number, measurement, and geometry. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

453 Teaching Methods in the Secondary School—Science (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach science to older children. Emphasis is placed on the development of children's concepts of the physical and natural worlds. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

454 Teaching Methods in the Secondary School—English (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach English to older children. Emphasis is placed on the development of children's concepts of language and literature. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

455 Teaching Methods in the Secondary School—History (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach history to older children. Emphasis is placed on the development of children's concepts of the past. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

456 Teaching Methods in the Secondary School—Art (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach art to older children. Emphasis is placed on the development of children's concepts of美的 and creativity. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

457 Teaching Methods in the Secondary School—Music (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach music to older children. Emphasis is placed on the development of children's concepts of rhythm and harmony. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

458 Teaching Methods in the Secondary School—Physical Education (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach physical education to older children. Emphasis is placed on the development of children's concepts of health and fitness. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

459 Teaching Methods in the Secondary School—Health (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach health to older children. Emphasis is placed on the development of children's concepts of safety and well-being. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

460 Teaching Methods in the Secondary School—Home Economics (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach home economics to older children. Emphasis is placed on the development of children's concepts of family life and consumerism. Field experiences include lesson planning, preparations for instruction, and supervised teaching experiences.

461 Competency-Based Instruction in the Secondary School (3)
Prerequisite: Approval of the department chair.
A study of the theories, methods, materials, and resources necessary to teach secondary school students in a competency-based format. Emphasis is placed on the development of individualized learning plans and the use of formative assessment.
503 Philosophy of Education (3)
A critical examination of selected ancient and contemporary philosophies and their impact upon educational thought and practice.

504 Comparative Education Systems and Organizations of the World Country (3)
A comparative study of selected educational systems and international educational organizations and their significance in today's world, with emphasis on cooperation in international education.

505 Social Problems in Education (3)
An appraisal of the changing role of the American school society in relationships to other institutions, the social purpose of the school, and major social problems involving the school and possible solutions.

508 Human Relations for Educators (3)
Helps students develop an awareness of self and self-concept, learn communication skills for improving interpersonal relations, and create a non-discriminatory school environment.

525 Advanced Human Growth and Development (3)
An advanced course relating to human development through the life span including the development of the child through education, the unfolding of human abilities in terms of personal adjustment and achievement.

526 Advanced Educational Psychology (3)
An advanced course relating to learning theory, motivation, personality development, social and emotional behavior and student attitudes.

527 Evaluation of Student Progress (3)
Teacher evaluation of the learner through observation of performance and through measurement devices in the classroom. Teacher interpretation of standardized tests given in the schools.

531 Educational and Psychological Measurement (3)
Techniques and principles used in the construction, administration, and interpretation of measuring devices for evaluation purposes; interpretation of standardized tests of ability, aptitude, achievement, interest and personality.

533 Mental Health in the School Program (3)
Mental health problems in the school emphasizing control of the school environment as an influence on mental health. Dynamics of behavior, personal and social maladjustments.

565 Production of Instructional Materials (3)
Prerequisite: A basic course in instructional media. Prepares teachers with basic knowledge needed to produce inexpensive teaching materials. Planning, production techniques, and evaluation standards are emphasized. Students are given an opportunity to work on individual projects in the lab.

571 Role and Function of the School Psychologist (3)
A survey of the roles and functions of the school psychologist within the educational environment. Certification and ethical standards of the school psychologist are also considered along with current issues and trends.

579 School Psychologist Practicum (3)
Prerequisite: Permission of the department. Students work in the field with a practicing school psychologist. Placement is in a school division. Students spend two days per week in the placement.

590 Education Research (3)
Development of skills, insights, and understandings basic to performing research, with major emphasis, however, on interpretation and application of research results. The primary focus is on critique of research and use of findings in educational settings.

591 Education Statistics (3)
An introductory course with emphasis on practical and applied aspects of statistics in education. Selected techniques and inferential statistics. Statistical data processing.

598 Directed Reading, Research, and Individual Projects (1, 2, 3, 4, 5, 6)
Prerequisites: Permission of the director to a degree program and permission of the department. By arrangement. Various subjects and projects; principally by directed study, discussion, research, and participation under the supervision of a member of the graduate faculty. May be repeated. No more than six semester hours of EDUC 500, 598, and/or 600 may be applied to degree credit.

599 Thesis
Prerequisites: EDUC 590 and 591. The study of a significant problem of interest to the student, utilizing accepted research methods under the supervision of a member of the graduate faculty.

600 Workshop in Education (1, 2, 3, 4, 5, 6)
Concentrated full-time workshops, weekend seminars, and workshops utilizing selected topics in educational psychology, etc. May be repeated. No more than six semester hours of EDUC 500 and/or 600 may be applied to degree credit.

610 Practical Research in School Psychology (4)
Prerequisites: Completion of required courses in school psychology program and permission of the program director. School psychology students who do not choose a master's thesis may complete a project in the school system under the supervision of a faculty member. Students complete a paper on their project and have it approved by their adviser and at least one other faculty member.

625 Utilization of Instructional Technology (3)
A consideration of the effective utilization of educational technology in the teaching-learning situation.

650 School Psychology Internship (3, 3)
Prerequisite: Completion of required courses in school psychology program and permission of the program coordinator. A one-school year supervised field experience where the advanced school psychology student functions as a full-time staff member. Activities include psychoeducational assessment; consultation with teachers, parents, and administrators; and involvement in the complete range of functions required for the school psychologist. Internship is graded pass or fail.

695 (ENGL 695) Northern Virginia Writing Project In-Service Program (1, 2, 3)
Prerequisite: Permission of the department or completion of an assistant program or permission of the department. Offered at the request of a school division or other educational agency. Content of the course varies. This course may be repeated for credit with the permission of the department, but no more than six semester hours of credit in EDUC 695/ENGL 695 and/or ENGL 699 (600) may be applied toward a master's degree.

800 DA Ed Entry Seminar (no credit)
Prerequisite: Admission to the Doctor of Arts in Education (DA Ed) program. An assessment seminar to orient the individual to the components of the DA Ed program and to prepare the student for the process of program planning. Full-time participation required for first two weeks; variable scheduling for remaining weeks. Active participation required.

805 Doctoral Seminar in Education (2)
A seminar in which students participate in an information exchange with other students, faculty members, and other scholars about current research interests and ideas. Provides an opportunity for students to present their own research in a professional forum. A maximum of 12 credits in EDUC 805 may be credited toward minimum DA Ed requirements.

911 Doctoral Projects Seminar (2)
Prerequisites: Admission to candidacy in the Doctor of Arts in Education program, successful completion of the doctoral qualifying examination, and EDUC 590 or its equivalent. A seminar designed for the development of proposals for individual projects in the DA Ed program. May be repeated. No more than nine hours of EDUC 911 and 998 may be applied toward the minimum degree requirements.

924 Advanced Internship in Education (3-6)
Prerequisites: Admission to candidacy in the DA Ed program, successful completion of the doctoral qualifying examination, and approval of the student's doctoral committee. Internship is conducted in a setting related to the student's major area of study. Each internship requires a minimum of 100 hours completed over at least a five-week period. Each intern is assigned to work with an appropriate staff member in a cooperating school, school system, or other educational institution or agency. The internship must be taken in a setting different from the one in which the student is regularly employed. No more than nine hours of EDUC 994 may be applied toward the minimum degree requirements.

912 Doctoral Projects Research (3-6)
Prerequisites: Admission to candidacy in the DA Ed program, successful completion of the doctoral qualifying examination, and EDUC 590 or its equivalent. Provides continued faculty assistance on an individual basis in the completion of projects, planned in EDUC 911 and the initiation of new projects. May be repeated. No more than nine hours of EDUC 911 and 998 may be applied toward the minimum degree requirements.

Education Courses

501 (EDUC 501) School-Community Relations (3)
The principles, philosophy, practices, and agency involved in developing and maintaining desirable relationships between schools and the communities they serve.

502 (EDUC 502) School Law (3)
Provides background in the law of school education; a review of the school law as it relates to school administration and the law of school activities.

503 (EDUC 503) School-Administra­tion (3)
Prerequisites: A basic course in school administration; an advanced course relating to human development and a professional forum. A maximum of 12 credits in EDUC 805 may be credited toward minimum DA Ed requirements.

507 (EDUC 507) Supervision of Instruction (3)
Prerequisites: Teaching experience and an advanced course in educational psychology. Provides continued faculty assistance in the evaluation and facilitation of instruction. Emphasis is placed on individual and group processes in supervision. Field experience is required.

508 (EDUC 508) Practicum in School Administration and Supervision (3 or 6)
Prerequisite: Permission of the department or completion of an assistant program except for practicum, or enrollment in the final term of the program. Students translate administrative and supervisory theory into practice through a supervised practicum experience. Placement is in elementary school, middle school, high school, or central office positions according to student's program.

511 (EDUC 511) Preparing the Pre-Elementary Environment (3)
An advanced course in the general procedures, materials, and organization of environments for young children (infancy-kindergarten). Field experiences are required for students without previous teaching or administrative experience at the pre-elementary levels.

512 (EDUC 512) Practicum in School Relations in Pre-Elementary Education (3)
An examination of the patterns and problems of family life for the purpose of improving communication between teachers and parents of young children.

513 (EDUC 513) Play as a Growth Process in Pre-Elementary Education (3)
A seminar on the basis of creative work, which is directed toward constructive learning processes, the recreation and direction of individual and group activities, and the development of the child's relationship to the environment. The process is approached from the viewpoint of the teacher as it is presented in the classroom, and as an integral part of the child's living.
development. Play is studied as an effective means of facilitating the growth of young children. Teachers learn skills applicable to the classroom.

514 (EDUC 514) Administering and Supervising Pre-Elementary Education (3)
Examines a variety of programs and techniques relating to the administration and supervision of pre-elementary education programs. Emphasis is placed on the director's role in staff recruitment, hiring, and direction of the pre-elementary school. Administration and management techniques are also studied and analyzed.

517 (EDUC 517) Introduction to Bilingual Education (3)
An analysis of the concepts, principles, and issues of bilingual education. Students are exposed to the history of bilingual education, its present status, and the direction of current programs in bilingual education and their relationship with curricula in English as a second language are examined. An overview of classroom bilingual methodology is included.

518 (EDUC 518) Introduction to Multicultural Education (3)
A survey of multicultural education which examines problems faced by an individual in an alien culture, theories of multicultural/bilingual education, relationships between nonverbal communication and language systems, and interpersonal skills of understanding and appreciating minority communities.

519 (EDUC 519) Methods of Teaching in Bilingual English-as-a-Second-Language Settings (3)
Examination of methods of teaching in English-as-a-Second-Language classrooms. Students analyze various conceptual models of bilingual education, study methods of evaluating diagnostic instruments and classroom materials, and demonstrate specific competencies unique to teachers working in Bilingual/English-as-a-Second-Language settings.

650 (EDUC 550) Curriculum Development in the Elementary School (3)
Development of the curriculum in the pre-elementary, lower elementary, and upper elementary levels; historical backgrounds; present programs; development of new programs; methods of implementing new programs; and evaluative methods and procedures.

651 (EDUC 549) Curriculum and Instruction in the Middle School (3)
Development of curriculum in the middle school grades; historical backgrounds; present programs; development and implementing current programs; program evaluation, instructional and organizational implications.

652 (EDUC 551) Curriculum Development in the Secondary School (3)
Development of the curriculum in the secondary school; historical backgrounds, present programs; development of new programs; methods of implementing new programs; and evaluative methods and procedures.

657 (EDUC 557) Teaching Language Arts in the Elementary School (3)
Study of methods, curricula, current issues, and research literature in English-language arts programs of the elementary school. Emphasis is placed on recent innovations in methodology and the traditional concerns of the communication arts.

658 (EDUC 558) Teaching Social Studies in the Elementary School (3)
Prerequisite: A basic course in teaching social studies in the elementary school. An advanced course in the methods, materials, content, and organization of social studies programs in the elementary school.

660 (EDUC 560) The Diagnostic Teaching of Reading in the Elementary School (3)
Prerequisite: A basic course in reading. An advanced course in the use of diagnostic techniques, diagnostic instruments, and evaluation to individualize the instruction in the classroom. Primarily designed for classroom teachers.

661 (EDUC 561) Literature in the Elementary School (3)
Prerequisite: A basic course in children's literature. An advanced course relating to children's literature.

662 (EDUC 562) Teaching Music in the Elementary School (3)
Prerequisite: A basic course in music for the elementary school. An advanced course for elementary school teachers in the principles and practices of music for children.

663 (EDUC 563) Teaching Science in the Elementary School (3)
Prerequisite: A basic course in teaching science in the elementary school. An advanced course in the subject matter, methodology, and materials involved in teaching physics and chemistry to elementary school children.

664 (EDUC 564) Teaching Art in the Elementary School (3)
Prerequisite: A basic course in art for the elementary school teacher. An advanced course designed to present elementary teachers with skills and knowledge necessary for the development of arts programs in various media and materials.

666 (EDUC 566) Teaching Mathematics in the Elementary School (3)
Study of the curricula, current issues, and research literature in elementary school mathematics. Analysis of current methodologies and goals of mathematics at the elementary school level. Emphasis is placed on the development of different styles of teaching.

667 (EDUC 567) Teaching Social Studies in the Secondary School (3)
An advanced course in the methods, materials, content, and organization of social studies programs in the secondary schools. Offered Spring semester only.

669 (EDUC 569) Teaching English in the Secondary School (3)
An advanced course in the methods, materials, content, and organization of English programs in the secondary school. Offered Spring semester only.

672 (EDUC 572) Teaching Mathematics in the Secondary School (3)
Study of the curricula, current issues, and research literature in secondary school mathematics. Analysis of current methodologies and goals of mathematics in secondary schools. Emphasis is placed on the development of different styles of teaching. Offered Spring semester only.

673 (EDUC 573) Teaching Science in the Secondary School (3)
An advanced course in the methods, materials, content, and organization of science programs. Emphasis is placed on current methodologies and trends in science education in secondary schools. Offered Spring semester only.

782 (EDUC 582) Seminar in Pre-Elementary and Elementary School Teaching (3)
Prerequisite: Student must have completed graduate program except for seminar, or be in final semester of program, or have permission of the department. Application of graduate coursework to instructional situations through discussion, projects, and reports related to practice and research.

783 (EDUC 583) Seminar in Secondary School Teaching (3)
Prerequisite: Student must have completed graduate program except for seminar, or be in final semester of program, or have permission of the department. Application of graduate coursework to instructional situations through discussion, projects, and reports related to practice and research.

Education Courses
Guidance/Counseling (EDGC)

604 (EDUC 536) Analysis of the Individual (3)
Prerequisite: EDUC 531. Development of a framework for understanding the individual in counseling situations. Application of diagnostic and interpreting individual and group tests; the study of individual differences; use of case study techniques.

605 (EDUC 636) Counseling Theory and Practice (3)
Prerequisite: EDUC 525 or 526. A study of the basic theories, principles, and techniques of counseling and their applications to counseling settings. Attention is given to supervised practice sessions.

608 (EDUC 528) Group Processes and Analyses (3)
Prerequisite: EDUC 606 (EDUC 563). Includes theories appropriate to various types of groups, as well as design of group processes, methods, dynamics, and facilitation skills. Attention is given to application of theory to practice.

610 (EDUC 637) Career and Educational Counseling (3)
Prerequisites: EDUC 531; EDUC 604 (EDUC 536) and 606 (EDUC 636). Vocational choice theory, sources of occupational and educational information, approaches to career decisionmaking processes, and career development exploration techniques. Attention is given to application of theory to practice.

Study of the basic philosophy and nature of guidance services in the elementary school situation. Emphasis is placed on the role of various school personnel in helping to meet the developmental needs of the elementary school pupil.

629 (EDUC 638) Organization and Administration of a Guidance Program (3)
Prerequisite: EDUC 528 or 634 (EDUC 539). Principles of organizing and administering a guidance program with emphasis on the role and functions of school in various organizational programs, and the major services of the adequate guidance program.

634 (EDUC 539) Principles and Practices of Guidance (3)
An introductory survey of guidance in the school: definitions, scope, principles, historical background, organization, service, emerging trends and issues.

644 (EDUC 544) College Student Personnel Work (3)
The introductory course for students interested in entering student personnel work at the college level. The study of theory, nature, and background of student personnel work in higher education. Structure, organization, and administration of services and programs.

648 (EDUC 548) College Students and Campus Groups (3)
Prerequisite: EDUC 644 (EDUC 544). Study of the nature, characteristics, and needs of college student subcultures on campus. Analysis of college student development programs relating to campus groups, group activities, and development of student leadership.

648 (EDUC 548) Seminar in College Student Personnel Work (3)
Prerequisites: EDUC 644 (EDUC 544) and 646 (EDUC 546). Current and social legal issues in college student personnel work, including professional ethics and standards. Role of counseling, consulting, and collaborating with students and other educators in fostering student development and self-direction.

654 (EDUC 540) Guidance and Counseling in the Community Agency (3)
Study of guidance and counseling services within community agencies. Emphasis is placed on the types of services and facilities provided, needs and problems of the client population served, roles and functions of the counselor or guidance worker in the agency setting, and personnel needs of the individual agency.

656 (EDUC 541) Case Studies in Agency Counseling (3)
Prerequisite: EDUC 606 (EDUC 636). 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.

University Catalog 1980-1981
George Mason University
or enrollment in the final semester of the program; and permission of the program coordinator. Supervised practice in the Educational Child/Youth Study Center, work with individuals and small groups, and related field experiences. Participation in scheduled group sessions required.

794 (EDUC 609) Internship in Reading (3)
Prerequisites: Admission to and completion of graduate program except for practicum, and permission of the program coordinator. A program of supervised teaching and participation as a reading specialist in a public school system. Participation in scheduled group sessions required.

Education Courses

Special Education (EDSE)

630 (EDUC 654) Characteristics and Identification of Gifted (3)
Study of characteristics associated with gifted and talented youngsters. Techniques and procedures for identification emphasized. Laboratory experience may be required.

631 (EDUC 655) Curriculum and Methods—Gifted and Talented (3)
Study of teaching the gifted and talented with emphasis upon cognitive styles, strategies for developing creative thinking, and curriculum content modification. Laboratory experience may be required.

632 (EDUC 658) Socialization of the Handicapped in Regular Education (3)
Survey of management/discipline theory and related socialization intervention techniques specifically applied to handicapped children and youth enrolled in regular education. Students apply classroom management interventions in simulated and actual situations. Laboratory experiences may be required.

641 (EDUC 652) Survey of Special Education (3)
A comprehensive overview of exceptional individuals. Emphasis is on historical developments of special education, assessment, identification, and legislation. This course serves as a foundation for students of special education. Field observations and volunteer experiences required.

643 (EDUC 657) Emotional and Behavioral Disorders of Children (3)
Prerequisite: EDSK 641 (EDUC 652) or permission of the special education coordinator. In-depth study of characteristics of individuals experiencing emotional and/or psychological disturbance. Implications for educational intervention are introduced. Field experiences required.

645 (EDUC 651) Educational Considerations of Learning Problems (3)
Prerequisite: EDSK 641 (EDUC 652) or permission of the special education coordinator. Study of medical and behavioral characteristics of individuals experiencing receptive, integrative, and/or expressive learning disabilities. Implications for educational intervention are introduced. Field experiences required.

646 (EDUC 649) Curriculum and Methods—Mental Retardation (3)
Prerequisite: Graduate status and approval of the special education coordinator. Study of educational programming for the mentally retarded: design, implementation, and evaluation of current programs. Emphasis is upon the behavioral and academic achievement of mentally retarded individuals to their highest potential. Concurrent experiences in Child/Youth Study Center required.

647 (EDUC 662) Medical and Health Aspects of Handicapping Conditions (3)
Prerequisite: EDSK 641 (EDUC 652) or EDSE 6525 or permission of the special education coordinator. An in-depth study of the nature and causes of disabling and/or special health conditions. Exploration of screening and evaluation techniques, treatment goals, and intervention procedures. Focuses on educational implications.

648 (EDUC 656) Psychoeducational Assessment in Special Education (3)
Prerequisite: A basic course in tests and measurements, a basic state, and approval of the special education coordinator. Administration, scoring, and interpretation of a wide range of formal and informal education evaluation instruments with emphasis on the generated educational recommendations and implications for classroom experiences in Child/Youth Study Center required.

650 (EDUC 663) Precision Teaching for the Severely Handicapped (3)
Prerequisite: Graduate status and approval of the special education coordinator. A course in applied behavior analysis for instruction of handicapped children. A systematic approach to developing individual programs for teaching social, motor, self-help, readiness, and academic skills. Field experiences required.

652 (EDUC 659) Language Development and Disorders (3)
Influence of conflicting theories concerning language acquisition; analysis of verbal and non-verbal communication; techniques of language assessment; and strategies for language intervention.

653 (EDUC 653) Teaching Remedial Mathematics (3)
Study of techniques for assessing and remediating difficulties in mathematics. Laboratory experience required.

654 (EDUC 647) Curriculum and Methods—Emotionally Disturbed (3)
Prerequisite: Graduate status and approval of special education coordinator. A course designed to introduce the teacher’s role in providing curricular and instructional approaches for developing academic skills and modifying behavior disorders. Emphasis on individualized educational programming for individual students with learning disabilities and/or expressible learning disabilities. Concurrent experiences in Child/Youth Study Center required.

657 (EDUC 664) Curriculum and Methods—Learning Disabilities (3)
Prerequisite: Graduate status and approval of the special education coordinator. Study of individualized educational programming procedures for children experiencing receptive, integrative, and/or expressive learning disabilities. Concurrent experiences in Child/Youth Study Center required.

659 (EDUC 660) Curriculum and Methods—Early Childhood (3)
Prerequisite: Graduate status and approval of the special education coordinator. Emphasis placed on planning, organizing, and implementing educational programs for handicapped children ages two to eight years. Students are required to develop curricula designed for children having specific handicapping conditions. Foci on planning, implementing, and evaluating educational programs appropriate to the student’s needs. Laboratory field experiences required.

661 (EDUC 661) Curriculum and Methods—Severely Multi-Handicapped (3)
Prerequisites: Graduate status and approval of the special education coordinator. Emphasis on recognition of influence of handicapping conditions on learning processes and socialization; formulation, implementation, and evaluation of individualized educational programs for children having specific handicapping conditions; focus on development of self-case and educational skills of daily living. Laboratory field experiences required.

663 (EDUC 664) Seminar in Special Education: Severely Handicapped (3)
Corequisites: EDSK 790D (EDUC 650) or 790E (EDUC 650), or permission of the department. May not be taken for joint credit with other special education courses. Focuses on the special education needs of handicapped students with severe handicaps. Field experiences required.

790 (EDUC 665) Internship in Special Education (1, 2, 3, 6)
Each student completes a total of six semester hours placed according to individual program need in one of the following areas of specialization: Emotionally Disturbed (ED), Learning Disabilities (LD), Mentally Retarded (MR), Early Childhood Handicapped (ECH), or Severely Multi-Handicapped (SVMH).
Prerequisite: Approval of the special education committee is required. In addition the student must be enrolled in special education courses listed below: Psychology—ED-643, 649, 657; MR-649, 646; ECH-647, 649, 659; SVMH-647, 649, 661.

must have no grade lower than B in the following:
ED-643, 649, 661

Prerequisite: Approval of the special education and implementation of education programming for handicapped youngsters in a public school system, approved private school, hospital, or clinic. This course serves as a culminating experience for students who have completed all coursework in the area of specialization. Participation in scheduled group sessions required.

Engineering Courses

ENGR Physics

100 Introduction to Engineering (1)
Introduction to the 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. One hour lecture.

110 Engineering Computations (3)
Corequisite: MATH 113 or permission of the instructor. Study of computational processes as algorithms. Simulation of engineering problems and their implementation on computers. Techniques and algorithms are discussed in the context of the use of BASIC and FORTRAN languages. Experience with both of these languages in writing and running of programs to solve problems from an engineering viewpoint.

181 Engineering Graphics I (2) (181 and 182 replace 191)
Fundamentals of engineering drawing, descriptive geometry, technical illustration, and graphical analysis. One hour lecture, two hours laboratory.

182 Engineering Graphics II (2)
Prerequisite: ENGR 181. Application of engineering graphics to specific topics of engineering analysis and design. One hour lecture, two hours laboratory.

205 Engineering Mechanics: Statics (3)
Prerequisites: MATH 114, PHYS 113 Resolution and composition of forces by analytical methods. Analysis of forces in structures and machine members in equilibrium. Centroids, friction, moments of inertia. Three hours lecture.

206 Engineering Mechanics: Dynamics (3)

208 Mechanics of Materials (3)
Prerequisites: ENGR 205 and PHYS 114, or permission of instructor. Treatment of stress and strain, elasticity and plasticity, combined stress, torsion, stresses and deflection of beams, statically indeterminate members, unsymmetrical bending, buckling of columns. Three hours lecture.

285 Electric Circuits (3)

301 Digital Electronics (3) (Same as PHYS 301)
Prerequisites: PHYS 213, 215, or permission of the instructor. Introduction to digital systems, circuits, and computers. Topics include: binary systems, logic gates and gate-level circuits, binary codes, multiplexers, shift registers, counters, A/D converters, microprocessors, computer architecture and interfacing techniques. Two hours lecture, two hours laboratory.

302 Electronics (4) (Same as PHYS 302)
Prerequisite: PHYS 213, 215, or permission of the instructor. Six hour course in electronics, semiconductor physics, electronic devices and circuits, feedback, design and operational characteristics of power supplies, amplifiers, digital logic gates, and digital logic circuits. Two hours lecture, six hours laboratory.

307 Engineering Thermodynamics (3)
Prerequisites: MATH 213, PHYS 114. Classical concepts of energy and temperature, first and second laws and their application to closed and open thermodynamic systems. Properties of pure substances. Thermodynamics of chemical and physical processes and systems. Application to engineering systems. Three hours lecture.

441 Machine Language and Programming (3)
Prerequisite: ENGR 201 or equivalent. Digital computer internal structure and assembly language. Programming of various computers in machine language. Addressing techniques, interrupts, central processing units and instruction set design and data path design. Three hours lecture.

442 Digital Computer Design and Interfacing (3)
Prerequisite: ENGR 301 or equivalent. Design of digital computers, microprocessor systems, and interfacing techniques. Digital logic circuits, flow diagrams, memory systems, I/O equipment. Two hours lecture, three hours laboratory.

English Courses

ENGL 101 is the usual prerequisite for ENGL 102. With the approval of the department, international students may use ENGL 100 instead of ENGL 101 as the prerequisite for ENGL 102. Students may not receive credit for both ENGL 100 and ENGL 101.

100 Composition for Foreign Students (4)
A course for non-native speakers of English with limited prior English instruction. Principles and practice of expository writing, with intensive drill in grammar, vocabulary, and principles of organization. A student must attain a minimum grade of C in order to have this course fulfill degree requirements.

101-102 Composition and Introduction to Literature (3, 3)
Prerequisite: ENGL 101 (or 100) is a prerequisite to ENGL 102. Expository writing, ranging from paragraphs to essays of some length and complexity. Study of the logical, rhetorical, and linguistic structures of written language. Methods and conventions of preparing research papers, and introduction to analysis and appreciation of major literary types. A student must attain a minimum grade of C in order to have these courses fulfill degree requirements.

Six credit hours of English in 100-level courses are prerequisites for all 200-level courses. Six credit hours of English in 100-level courses and six credit hours of English in 200-level courses are prerequisites for all English 300- and 400-level courses. Students who have completed six credit hours of English composition may enroll in ENGL 310. (2) Non-degree students who have completed six credit hours of English composition may enroll in courses numbered 300-309.

Any two English courses on the 200 level, taken in any order, may be used to fulfill the general degree requirements in literature.

203, 204 Western Literary Masterworks (3, 3)
Great works of Western civilization.
205 Writing courses: 300w, 301, 302, 303, 304, 305
206 Examinations in English and American Literature (3, 3)

English and American literature by types.
ENGL 205 focuses on selected English and American poetry and drama by such writers as Marlowe, Shakespeare, Shaw, O'Neill, Albee, Donne, Keats, Whitman, Frost, Eliot, and Auden. ENGL 206 focuses on selected English and American novels, short stories, and the essay by such writers as Lawrence, Hemingway, Faulkner, Melville, Crane, E. Bronle, Fitzgerald, and Barth.

251, 252 Survey of English Literature (3, 3)

Major literary movements and works of English literature, focusing on the writings of such authors as Chaucer, Spenser, Shakespeare, Donne, Milton, Pope, Johnson, Wordsworth, Keats, Browning, Yeats, Eliot, and Joyce.

253 Survey of American Literature (3)
Major literary movements and works of American literature by such authors as Franklin, Poe, Emerson, Whitman, Hawthorne, Melville, Dickinson, Twain, James, Crane, O'Neill, Hemingway, Eliot, Faulkner, Stevens, Lowell, Williams, Bellow, and Barth.

The Department of English offers ENGL 300-308 to encourage the study of literature, film, and writing. These courses count for credit towards the major only with the permission of their advisers.

300 Introduction to Film (3)
An introduction to the film medium as an art form.

301 Special Topics in Film (3)
American and foreign films selected by type, period, or director with the emphasis varying from year to year. Emphasis may be placed on such directors as Griffith, Welles, Penn, Hitchcock, Bergman, Truffaut, and Antonioni. Types could include the Western, the epic, the thriller, the situation comedy, the documentary, and the experimental short. Required viewings, student discussion, and written critiques.

303 Significant Directors (3)
One or two major authors, such as Shakespeare, Dickens and Hardy, or Tolkien and C. S. Lewis, as announced.

306 Science Fiction: A Critical Examination (3)
An examination of major works of science fiction in terms of mode, themes, and narrative techniques, especially the role of hypothesis in science fiction. The course focuses on novels and short stories from the early nineteenth century to the present.

307, 308 Special Topics in Literature (3, 3)
A study of literature by topics, such as women in literature, science fiction, and literature of the avant garde. The topic changes each time the course is offered.

309 Independent Writing (3)
Practice in analyzing and writing such expository forms as the essay, memoir, article, and technical and scientific reports, depending upon the needs of the individual student. (Not a remedial course.)

310 Technical and Report Writing (3)
Study and practice of technical, especially report writing. Intended for students in any major who are preparing for careers in government, industry, business, or academic administration.

313 Critical Approaches to Literature (3)
Study in depth of a selected approach to literary criticism, as announced, with exercises in critical analysis. Examples: new criticism, structuralism, psychoanalysis, Marxism. This course may be repeated with permission of the Department.

320 Myth and Symbol in Western Literature (3)
A study of the traditional myths and archetypes of the past which have affected the development of Western literature. Sources such as the Bible, classical mythology, and primitive myths and rituals are studied as well as literature consciously influenced by mythic structures. Some myth theory is included.

330 American Folklore (3)
Introduction to full range of American folklore materials including folktales, personal narratives, legends, proverbs, folk songs, folk art, folk craft, and folk architecture. Consideration given to ethnicity, community, family, festival, folklore in literature, and oral history. Discussion of traditions in student's area. By such scholars as Taus, M. N. P. and others.

331 Literary Approaches to Popular Culture (3)
A literary approach to the study of popular culture. Emphasis is placed on popular fiction and the adaptation of popular prose genres (for example, science fiction) to media which have strong verbal and visual elements. The relationship between verbal and non-verbal elements of such media as film, comics, and radio are included in the course.

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341 Chaucer (3)
The major works of Chaucer, with emphasis on The Canterbury Tales.
342 Literature of the Middle Ages (3)
Selected English narrative, dramatic, and homiletic literature written between 1300 and 1500 A.D., excluding Chaucer.
345 English Poetry and Prose of the Sixteenth Century (3)
Poetry and prose of the early Renaissance in England.
346 Spenser (3)
A study of the major portion of the poetry of Edmundo Spencer, with central emphasis upon The Faerie Queene.
351, 352 Shakespeare (3, 3)
Twenty selected plays. First semester emphasizes histories and comedies; second semester, tragedies and romances.
353 English Renaissance Drama (3)
Major dramas and dramatists of the English Renaissance, exclusive of Shakespeare.
354 English Poetry and Prose of the Seventeenth Century (3)
English poetry and prose from 1660 to 1688, excluding Milton.
355 Milton (3)
Milton's major poetic works, with emphasis on Paradise Lost.
356 Restoration and Eighteenth-Century Drama (3)
Restoration comedy of manners, sentimental comedy, neoclassical and bourgeois tragedy. Some emphasis on theories of drama, on staging, and on comic elements in the plays. (Offered in cooperation with the Department of Film.)
357 The Augustan Age (3)
The development of English literature from the late seventeenth century to the middle of the eighteenth century, with emphasis on works of Dryden, Swift, and Pope.
358 The Age of Johnson (3)
The development of English literature of the late eighteenth century, readings from Dr. Johnson and his contemporaries with attention to the Neo-Romantics.
359 English Poetry of the Romantic Period (3)
362 English Poetry of the Victorian Period (3)
Works of Tennyson, Browning, Arnold, Hopkins, Swinburne, and Rennais.
365 English Poetry of the Twentieth Century (3)
English poetry from 1900 to the present, with an emphasis on the work of Hardy, Yeats, Lawrence, Graves, Auden, and Hughes. A work of fiction which employs poetic techniques, such as Joyce's Ulysses, may also be studied.
370 English Novel of the Eighteenth Century (3)
The English novel from its beginnings through the turn of the nineteenth century. Works by such authors as Defoe, Richardson, Fielding, Sterne, Smollett, Scott, and Austen are studied.
371 English Novel of the Nineteenth Century (3)
The English novel of the nineteenth century. Works by such authors as Dickens, Thackeray, E. Bronte, Eliot, Trollope, Meredith, and Hardy are studied.
372 English Novel of the Twentieth Century (3)
The English novel from the beginning of the twentieth century to the present. Works by such authors as Conrad, Ford, Bennett, Forster, Lawrence, Joyce, Wolfe, Huxley, Greene, Orwell, Beckett, Lessing, and Murdoch are studied.
373 Literary Modes (3)
The theoretical analysis of such modes as tragedy, comedy, tragicomedies, romance, and satire, considered in separate semesters and drawn from a variety of periods ranging from biblical times to the present. Final exam includes a play analysis from drama, and fiction. This course may be repeated with permission of the department.
374 English and Irish Drama of the Twentieth Century (3)
English and Irish drama from Yeats to Pinter. Plays by such authors as O'Casey, Synge, Eliot, Frye, Osborne, Wesker, Behan, Delaney, and Pinter are studied.
375, 376 Contemporary Drama (3, 3)
Representative plays of contemporary dramatists of Europe and America, with emphasis on dramatic styles such as realism, expressionism and existentialism. Among the authors studied are Ibsen, Strindberg, Hauptmann, Shaw, O'Neill, O'Casey, Sartre, Lorca, Ionesco, and Brecht.
377, 378 Selected Continental Novels in Translation (3)
Selected European novels in translation. ENGL 377 concerns the continental novel from the eighteenth century to the end of the nineteenth century, and includes works of such writers as Balzac, Gogol, Stendhal, Turgeniev, Flaubert, Dostoevski, Tolstoy, and Galdos. ENGL 378 deals with the continental novel from the beginning of the twentieth century to the present and includes such writers as Proust, Mann, Gide, Silone, Kafka, Sartre, Celan, Moravia, and Grass. Attention is given to the influence of this literature on the novel in English. (Offered in cooperation with the Department of Foreign Languages and Literatures.)
380 Recent American Fiction (3)
A study of major American short story writers and novelists from World War II to the present, with emphasis on such writers as Mailer, Barth, Hawkes, Cheever, Oates, Gass, Kozinski, Pynchon, Vonnegut, Bellow, Nabokov, Updike, and O'Connor.
382 Literature of the Renaissance (3)
The major writers of the American Renaissance (1800-1865), and the works of such writers as Emerson, Thoreau, Hawthorne, Melville, Whitman, and Poe.
383 American Jewish Writers (3)
The study of the 19th century and early 20th century American Jewish writers, including works by such authors as Roth, Singer, Friedman, Malamud, and Bellow.
384 Literature of the Modern South: 1920 to the Present (3)
Novels, short stories, drama, poetry, and essays of the American South, from post-World War I to recent times; the work of Southern writers, including Faulkner, Warren, Tate, Wright, Porter, McCullers, Stylon, and O'Connor.
385 American Poetry of the Twentieth Century (3)
Major American poets of this century, with emphasis on such writers as Frost, Hughes, Williams, Pound, Crane, Eliot, and Lowell. A work of fiction which employs poetic techniques, such as Faulkner's The Sound and the Fury, may also be studied.
386 Literature of Black America (3)
Significant works of poetry, fiction, drama, and autobiography written by American black writers in the twentieth century, reflecting the black experience. Works by such authors as Toomer, Hughes, Wright, Brooks, Ellison, Baraka, and Bullins are studied.
387 Development of the American Novel to 1914 (3)
Major American novels of the pre-World War I period with emphasis on the work of Brown, Cooper, Hawthorne, Melville, Twain, Howells, James, Crane, Dreiser, Norris, and Dos Passos.
388 Development of the American Novel since 1914 (3)
The American novel from the end of World War I to the present; the course includes the work of such authors as Fitzgerald, Hemingway, Faulkner, Dos Passos, Wolfe, Bellow, and Nabokov.
389 American Drama of the Twentieth Century (3)
American drama of the twentieth century, with special attention to works of Eugene O'Neill, Thornton Wilder, Arthur Miller, Tennessee Williams, and Edward Albee.
390 Recent American Poetry (3)
Major American poets from World War II to the present. May have an emphasis on the work of such poets as Roethke, Wilbur, Dickey, Lowell, Merwin, Kinnell, and Ammons.
391 General Linguistics (3)
Introduction to general linguistics: phonics, morphemics, syntax.
392 History of the English Language (3)
Introduction on historical principles to the developments of the English language, including study of Old English, Middle English, and Modern English. Course credit is accepted for the BA non-Western requirement but may not be counted toward the requirements for the English major.
393 Chinese Literature in Translation (3)
Selected literary masterpieces in translation from ancient and modern Japan, including a court romance (The Tale of Genji), essays (The Pillow Book), classical poetry, haiku poetry, and modern fiction. Review of the genres and traditions represented by those masterpieces. (Course credit is accepted for the BA non-Western requirement but may not be counted toward the requirements for the English major.)
394 Introduction to Poetry Writing (3)
Introduction to the theory and practice of poetry writing. A workshop course in which original student work is read and discussed in class and in conferences with the instructor. The course includes technical exercises in the craft of poetry and may include reading assignments. At the discretion of the instructor, individual students may do some work in fiction or drama, but the course concentrates on poetry.
398 Introduction to Fiction Writing (3)
Introduction to the theory and practice of fiction writing. A workshop course in which original student work is read and discussed in class and in conferences with the instructor. The course includes technical exercises in the craft of fiction and may include reading assignments. At the discretion of the instructor, the course may be repeated with permission of the instructor. Students who have taken 396 may not take this course.
402 Light and Sound (3)
Prerequisite: ENGL 300: Introduction to Film, or ENGL 301: Special Topics in Film, or permission of the instructor. An advanced survey of the history of film art and major theories concerning the nature of film.
410 Medieval Intellectual Topics (3)
This course is identical to HIST 431 and FRLN 431 and may be taken for credit by English or history or area studies majors. An examination of a selected topic in the intellectual history of the Middle Ages. The specific topic may vary from year to year. The prerequisite is a minimum of 18 credits in philosophy, theology, and art may also be considered.
442 Studies in English and American Literary Topics, Periods, or Genres (3, 3)
Study in depth of a selected literary topic, period, or genre, as announced. These courses may be repeated with permission of the department.
444 Selected Major English and American Writers Before 1900 (3)
An intensive study of one or two major authors, such as Donne and Swift, or Melville and Twain, as announced. This course may be repeated with permission of the department.
446 Selected Major English and American Writers of the Twentieth Century (3)
An intensive study of one or two major twentieth-century writers, such as Joyce, Faulkner, or Eliot.
and Yeats as announced. This course may be repeated with permission of the department.

464 Poetry Writing Workshop (3)
**Prerequisite:** ENGL 397 or equivalent and permission of the instructor. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of poetry and study of the imaginative process. Intended for students already writing original poetry. At the discretion of the instructor, technical exercises and assigned reading may be required. (By permission of the department, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major. No more than a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENGL 469 may take 464, 465, or 466 up to a combined total of nine hours in all four courses.)

465 Fiction Writing Workshop (3)
**Prerequisite:** ENGL 398 or equivalent and permission of the instructor. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. A workshop course; intensive practice in creative writing and study of the creative process. The course concentrates on a specialized literary type other than the short story or poetry (for example, playwriting, film-writing, children's literature, young adult literature, autobiography, the gothic novel, translation), and the concentration is announced in the department's Course Description Booklet before preregistration. Intended for students already writing creative work. (By permission of the instructor, the course may be taken a second time for credit; the additional three hours, however, may not be counted toward the requirements for the English major. No more than a combined total of nine hours may be taken in ENGL 464, 465, 466. Students who have taken ENGL 469 may take 464, 465, or 466 up to a combined total of nine hours in all four courses.)

467 Advanced Expository Writing (3)
**Theory and practice of advanced expository writing:** practice in analyzing and writing essays, articles, reviews, and other forms.

469 Seminar in Creative Writing (3)
**Prerequisite:** Permission of the instructor. Intensive practice in the technique of creative writing and study of the nature of the imagination in the creative process. Normally the course concentrates on one literary type each time it is offered (for example, short story, poetry, play, and film-writing). The concentration is announced in advance of preregistration. Intended for students already writing original fiction, poetry, or drama. (By permission of the instructor, the course may be taken a second time for credit. The additional three hours, however, may not be counted toward the requirements for the English major.)

470 Independent Study (1-3)
**Prerequisite:** Permission of the department and the instructor. Open only to English majors with senior standing and 15 credit hours in 300- and 400-level English courses. Intensive study of a particular author, genre, period, or critical or theoretical problem in literature or linguistics, to be conducted by an individual student in close consultation with an instructor. The student produces a significant piece of written work during the semester on the findings of his research. (By permission of the department, the course may be taken a second time for a total maximum of 6 credits.)

485 The Structure of Contemporary American English (3)
A survey of the syntactic, semantic, and phonological structures of contemporary American English, including dialectal variation caused by region, race, sex, national origin, and historical evolution of the language.

503 (403) Techniques of Editing (3)
**Prerequisites:** Six hours of English courses numbered above 300, including one advanced writing course—309, 310, 397, 398, 464, 465, 466, 467—or permission of the department. A course in revising, editing, and preparing specialized writing for printing. Emphasis on methods of achieving clarity, accuracy, and completeness. Lecture and discussion on editing and printing techniques, practical exercise in revision, layout, and production.

522 Modern English Grammar (3)
**Prerequisite:** English 464, 465, or 620 (520) or equivalent. A linguistic overview of the characteristic structural features of current English usage. Special consideration is given to Standard American, Colloquial American, regional and social dialectal variation. Syntactic and phonological structures are explored in depth with consideration given to how these structures can be taught to students of English as a second language.

551 (451) Literary Criticism (3)
Studies of major critical theories and techniques with emphasis on the eighteenth century.

555 (455) Literary Style (3)
The theory and practical analysis of English literary style. Several methodologies, including the impressionistic, the rhetorical, and the linguistic, are examined and applied to the language of various literary texts, including essays, poems, and novels.

557 (457) Survey of Romantic and Victorian Literature (3)
A study of the Old English language, including its phonology, morphology, syntax, and lexicology, aimed at preparing students to read Anglo-Saxon literature. The evolution of English from Old English to Middle English is accompanied by reading from Anglo-Saxon prose and poetry of the seventh through the eleventh centuries. Selections from The Anglo-Saxon Chronicle, Beowulf, the sagas of St. Andrew, and other prose works, as well as such verse as The Dream of the Rood, The Seafarer, and Judith are read and translated.

564 Form of Fiction (3)
**Prerequisites:** ENGL 454 or equivalent and permission of the instructor. Students must submit a typed manuscript of original poetry at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of poetry and study of the creative process. Intended for students already writing original poetry. At the discretion of the instructor, reading may be required.

565 Form of Fiction (3)
**Prerequisites:** ENGL 465 or equivalent and permission of the instructor. Students must submit a typed manuscript of original poetry at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of poetry and study of the creative process. Intended for students already writing original poetry. At the discretion of the instructor, reading may be required.

580 (480) Applied Linguistics (3)
**Prerequisite:** ENGL 391 or permission of the instructor. A study of the applications of linguistic science to the teaching of English language and literature. Special emphasis on the linguistic foundations of teaching English as a second language, the findings of linguistics with regard to composition instruction, and the ways in which linguistics can support the teaching of literature and literary style.

581/PSYC 581 (482/PSYC 482) Psycholinguistics (3)
**Prerequisite:** Six credits in composition or exemption by examination and six credits in literature. Also ENGL 391 or PSYC 305 or permission of both instructors. A study of the mental and psychological aspects of human language, including aphasia, association, autism, language acquisition, verbal concept formation, and perception.

610 (510) Proseminar in Teaching the Reading of Literature (3)
The methods of teaching literature. Includes the study of various methods of literary analysis and of the most effective ways of developing student responses to literature, with some classroom practice. (The course is not intended to meet the Virginia certification requirements in diagnostic or developmental reading.)

615 (515) Proseminar in Composition Instruction (3)
The methods of teaching expository writing. Includes consideration of the planning of courses, practice in teaching and in grading papers, and study of the laboratory method of instruction.

516 The Writing of Literature (3)
The writing of original essays, biographies, documentaries, reports, and other forms of nonfiction.

517 Poetry Writing Workshop (3)
**Prerequisites:** ENGL 564 or equivalent and permission of the instructor. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of poetry and study of the creative process. Intended for students already familiar with traditional and contemporary poetic modes and already writing original poetry. At the discretion of the instructor, reading may be required.

518 Fiction Writing Workshop (3)
**Prerequisites:** ENGL 565 or equivalent and permission of the instructor. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. Intensive practice in the craft of fiction and study of the creative process. Intended for students already familiar with traditional and contemporary fiction and already writing original fiction. At the discretion of the instructor, reading may be required.

519 Graduate Writing (3)
**Prerequisites:** Two graduate writing courses and/or permission of the instructor. Students must submit a typed manuscript at least one week before they intend to register. For specific guidelines, consult the department's Course Description Booklet, the instructor, or the department secretaries. A workshop course; intensive practice in creative writing and study of the creative process. The course concentrates on a specialized literary type other than the short story or poetry (for example, the essay, playwriting, film-writing, children's literature, young adult literature, autobiography, the gothic novel, translation), and the concentration is announced in advance of preregistration. Intended for students already writing original fiction, poetry, or drama. At the discretion of the instructor, reading may be required.

520 Independent Study (1-3)
**Prerequisites:** Graduate standing and permission of the instructor. Intended for students already writing original fiction, poetry, or drama with a special interest in creative writing and study of the creative process. (By permission of the instructor, the course may be taken a second time for credit. The additional three hours, however, may not be counted toward the requirements for the English major.)
620 (S20) Descriptive Linguistics (3)
An introduction to the terminology and methodology of modern linguistic science, and a detailed structural analysis of English phonology, morphology, and syntax.

621 (S21) Applied Linguistics: Teaching English as a Foreign Language
Prerequisite: Linguistics (descriptive or historical, graduate or undergraduate). Theories and basic principles of the acquisition of a second language, especially as applied to the English language, supplying students with methods of teaching English to speakers of other languages.

625 (S25) Studies in English Medieval Literature (3)
Selected literary authors, works, or movements, generally excluding Chaucer, from between 1300 and 1500, studied in Middle English. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Middle English (varies)
B Medieval Drama
C The Poetry of Medieval England (excluding late medieval romance)

630 (S30) Studies in English Renaissance Literature (3)
Selected literary authors, works, or movements, excluding Shakespeare and Milton, of the English Renaissance. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Renaissance Tragedy
B The Pastoral Tradition
C Seventeenth-Century Prose
D Mixed Forms in Renaissance Drama
E Women in Shakespeare

635 (S35) Studies in Eighteenth-Century English Literature (3)
Selected English literary authors, works, or movements of the eighteenth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Sexual Motifs in Eighteenth-Century Poetry, Prose, and Drama
B Education and Self-Realization in Eighteenth-Century Literature
C The Augustan Age
D Johnson and His Circle
E Symbolism, Secrecy, and Self-Realization in English Literature

640 (S40) Studies in Nineteenth-Century English Literature (3)
Selected English literary authors, works, or movements of the nineteenth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Major Victorian Poets
B The Byronic Mode
C Novels of Maturity
D The Morality of Sin
E The Victorian Novel
F Romantic Visionary Poems
G Shelley, Austen, Charlotte Bronte, George Eliot

645 (S45) Studies in Twentieth-Century English Literature (3)
Selected English literary authors, works, or movements of the twentieth century. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A The "Theatre of Cruelty" in Recent British Drama
B Developments Since World War II in English Literature
C Contemporary English Drama

650 (S50) Studies in Seventeenth- and Eighteenth-Century German Literature (3)
Selected literary authors, works, or movements of colonial and early federalist America. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A From Matthew Arnold to the Present
B Recent Trends in Critical Theory

765 (S65) Seminar in Shakespeare (3)
Intensive study of the achievement of Shakespeare and the major critical approaches to this work. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Shakespeare's Comedies and Histories
B Shakespeare's Tragedies and Romances

770 (S70) Seminar in Major Figures of English Literature Before 1800 (3)
Intensive study of the work of one or two major figures of English literature before 1800. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Milton
B Donne (Not open to students who have taken "E")
C Blake
D Chaucer
E Donne and Herbert (Not open to students who have taken "B")
F Fielding and Sterne

775 (S75) Seminar in Major Figures of English Literature After 1800 (3)
Intensive study of the work of one or two major figures of English literature after 1800. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Wordsworth
B Keats
C Joyce
D Lawrence and Hardy
E Yeats
F Virginia Woolf

780 (S80) Seminar in Major Figures of American Literature (3)
Intensive study of the work of one or two major figures of American literature. Specific content varies from semester to semester and is announced before registration. This course may be repeated for credit with the permission of the department. Past offerings are listed below:
A Twain (Not open to students who have taken "H")
B Eliot and Pound
C Stevens
D Faulkner (Not open to students who have taken "G")
E James and Cather
F Melville (Not open to students who have taken "H")
G Frost and Faulkner (Not open to students who have taken "D")
H Melville and Twain (Not open to students who have taken "A" or "F")
I Hawthorne and Whitman
J Hemingway

798 (S98) Directed Reading and Research (3)
Prerequisite: Open only to degree students who have completed 15 credit hours including ENGL 701 (S01) and have preregistered for the course. Reading and research on a specific project, under the direction of a department member. An oral or written report is required.

799 (S99) Thesis (3-6)
Students who take ENGL 798 (S98) and then elect the thesis option receive three (3) credits for ENGL 799 (S99) upon completion of the thesis. Students who do not take ENGL 798 (S98) receive six (6) credits for ENGL 799 (S99) upon completion of the thesis.

800 Studies for the Doctor of Arts in Education (variable credit)
Prerequisite: Open only to DA Ed students admitted to study in English. A 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 the discipline director. The student presents a research paper in a subsequent DA Ed summer seminar. This course may be repeated as required by a student's program.
European Studies Courses (EUST)

300 Foundations of European Civilization (3)
Prerequisite: At least sophomore standing or permission of the instructor. An examination of the Greek, Roman, and Judeo-Christian origins of Europe’s intellectual and cultural traditions, concentrating upon those political ideas, philosophical precepts, and cultural values basic to European thought.

350 Classicism and Romanticism (3)
Prerequisite: EUST 300 or permission of the instructor. An examination of classicism and romanticism through literary and other cultural forms of expression in seventeenth, eighteenth, and nineteenth-century Europe.

400 The Twentieth Century in European Culture (3)
Prerequisite: EUST 300 or permission of the instructor. An examination of how the arts interact in reflecting historical, intellectual, and aesthetic aspects of nineteenth- and early twentieth-century European culture. Representative examples from music, theater, dance, architecture, and the visual arts are studied. Is there a fusion of the arts? How do the various art forms interact?

450 The Twentieth Century in Europe (3)
Prerequisite: EUST 300 or permission of the instructor. An examination of the main currents of European thought and the works of the period, culminating in the avant-garde and the situationist movements of the Middle Ages. The specific topic may vary from year to year. Primary emphasis is literary and historical, depending on the discipline of the instructor. Relevant material drawn from philosophy, theology, and art may also be considered.

450 Methodology of Foreign Language Teaching (3)
Prerequisite: GERMAN 415 or 420 for German majors; FRENCH 355 or 461 for French majors; SPANISH 320 for Spanish majors; or permission of the instructor. Study of the major theories and methods of foreign language teaching. Practical application of these theories to the specific activities of the classroom. This course is cross-listed as EDUC 450.

600 Workshop in Foreign Languages (1, 2, 3, 4, 5, 6)
Prerequisite: Graduate standing or permission of the instructor. Concentrated workshops, educational tours, special seminars dealing with selected topics in literature, language, bilingualism, culture, methodology, etc. This course may be repeated for credit with permission of the department, but no more than six semester hours of credit in FRLN 600 may be applied toward a master’s degree in Spanish.

French Courses (FREN) Foreign Languages and Literatures


151, 152 Elementary French (4, 4)
Basic grammar, listening, speaking, reading comprehension, and elementary reading and writing. Language laboratory instruction is an integral part of the course. 151 and 152 must be taken in sequence. Four classroom hours, two laboratory hours per week.

153 Review of Elementary French (4)
Intensive review of elementary French, including basic grammar, vocabulary, oral and written exercises, and development of oral skills. Reading and writing proficiency. Language laboratory instruction is an integral part of the course. 153 may not be taken for credit in combination with 151 or 152. Four classroom hours, two laboratory hours per week.

251 Intermediate French (4)
Prerequisite: 152 or 153 or equivalent. Intensive review of grammar, speaking, and writing practice in reading comprehension and of oral skills; study of the life and culture of French-speaking countries. Language laboratory instruction is an integral part of the course. Four classroom hours, two laboratory hours per week.

252 French Conversation (3)
Prerequisite: FREN 251 or equivalent. Development of oral proficiency in French. Discussion of selected topics touching on practical aspects of everyday life. Enrollment limited to 15 students.

255 French Literary Masterpieces (3)
Prerequisite: FREN 251 or equivalent. Reading of selected works in major literatures by major French writers. Students may elect to take their examination in French or in English.

325 Major French Writers (3)
Prerequisite: ENGL 102 or equivalent, or permission of the instructor. Study of the works of major French writers (e.g., Camus, Sartre, Beckett) in translation. The writers to be studied vary and are announced in each semester’s Schedule of Classes. All coursework in English. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees. Course may be repeated for credit with prior approval of the department.

329 Problems of Western Civilization in French Literature (3)
Prerequisite: ENGL 102 or equivalent, or permission of the instructor. Basic philosophical, moral, social, and political dilemmas reflected in the literature of major French writers. The problems to be studied are announced in each semester’s Schedule of Classes. All coursework in English. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees. Course may be repeated for credit with prior approval of the department.

351 Advanced French Grammar (3)
Prerequisite: Graduate standing or permission of the instructor. 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)
Prerequisite: FREN 252 or 351 or permission of the instructor. Development of speaking and writing skills. Oral and written reports on current events.

355 Phonetics and Oral Expression (3)
Prerequisite: FREN 251 or permission of the instructor. Intensive study of French pronunciation and diction. Practice in discriminating French phonemes and alphabet, memorizing in phonetic symbols. Recitation of poems and rhythmic prose. Two laboratory hours in addition to classroom hours. Enrollment limited to 15 students.

356 Interpretation (3)
Prerequisite: FREN 251 or permission of the instructor. Initial orientation and practice in the techniques of simultaneous, consecutive, and contract interpretation. Recommended for students who wish to use language skills and who intend to use them professionally.

357 Translation of Specialized Fields (3)
Prerequisite: FREN 251 or permission of the instructor. Translations from French to English, English to French of texts selected from current periodicals and reference works, including the natural and social sciences. Recommended for all students who wish to improve and use their language skills.

375 Civilization From Ancient Gaul to the French Revolution (3)
Prerequisite: FREN 251 or permission of the instructor. A study of the outstanding contributions of France to world civilization, with emphasis on the development of her ideas, arts, sciences, and institutions. Offered in alternate years.

376 Chinese Civilization: From the Revolution to Contemporary China (3)
Prerequisite: FREN 251 or permission of the instructor. See FREN 375.

377 Survey of French Literature: Middle Ages to 1800 (3)
Prerequisite: FREN 251 or permission of the instructor. A study of the main currents of French literature through the centuries, with reading and analysis of representative texts of the major authors. Offered in alternate years. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

380 Survey of French Literature: 1800 to Present (3)
Prerequisite: FREN 251 or permission of the instructor. See FREN 377.

418 Explanation of Texts (3)
Prerequisite: 15 semester hours of French or permission of the instructor. A structured approach to
the reading and analysis of French literary texts. Offered in alternate years.

491 French Medieval and Renaissance World (3) Prerequisite: FREN 251 or equivalent or permission of the instructor. Study of styles used in private/official, commercial, managerial, Civil Service formats. Familiarization with business and governmental documents, notes, reports, and various common documents of commerce, export banking. Designed primarily for students equipping themselves for multinational business and foreign service.

405 French Literature of the Renaissance (3) Prerequisite: 15 semester hours of French or permission of the instructor. The development of the humanism, ideas, notes, and works of the French century, especially as reflected in the works of Rabelais and Montaigne. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

413 French Literature of the Seventeenth Century: Classical Drama (3) Prerequisite: 15 semester hours of French or permission of the instructor. A study of the dramatic literature of the seventeenth century, with emphasis on the major works of Corneille, Racine, and Molére. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

414 French Literature of the Seventeenth Century: Prose and Poetry (3) Prerequisite: 15 semester hours of French or permission of the instructor. Reading and analysis of representative texts of the major authors. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

421 French Literature of the Eighteenth Century: Montesquieu and Voltaire (3) Prerequisite: 15 semester hours of French or permission of the instructor. The study of Montesquieu, Voltaire, and other writers of the first half of the century. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

422 French Literature of the Eighteenth Century: Diderot and Rousseau (3) Prerequisite: 15 semester hours of French or permission of the instructor. The study of Diderot, Rousseau, and other writers of the second half of the century. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

431 French Literature: 1800-1850 (3) Prerequisite: 15 semester hours of French or permission of the instructor. The poetry, theatre, and novel of the period. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

432 French Literature: 1850-1900 (3) Prerequisite: 15 semester hours of French or permission of the instructor. The poetry, theatre, and novel of the Realist, Naturalist, and Symbolist movements. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

441 Twentieth-Century Prose Fiction (3) Prerequisite: 15 semester hours of French or permission of the instructor. Influence of the novel on Proust and Gide to Beckett and the “New Wave” woman. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

442 Twentieth-Century Drama and Poetry (3) Prerequisite: 15 semester hours of French or permission of the instructor. French drama from Surrealism to the “New Wave.” French poetry from Symbolism to contemporary poets. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

451 Writers of French-Speaking Africa and the Caribbean (3) Prerequisite: 15 semester hours of French or permission of the instructor. Study of selected poems, plays, tales, and novels expressing the culture and aspirations of the peoples of Africa and the Caribbean. Subjects such as Senghor, Cesaire, Fontaine, and others are included. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

481 Linguistic Structure of Modern French (3) Prerequisite: 15 semester hours of French or permission of the instructor. A descriptive analysis of the phonology, morphology, and syntax of modern standard French. Optional laboratory work.

490, 491 Independent Study (1-3, 1-3) Prerequisite: Senior standing as a major in French and permission of the department chairperson. Research and analysis of a selected problem in literature or linguistics in consultation with a member of the department. A maximum of six hours of independent study may be applied to fulfillment of requirements in the major.

497, 498 Senior Honors Tutorial (3, 3) Prerequisite: Senior standing as a major in French, with a cumulative GPA of 3.000 or higher in the major field. Students who meet these requirements are admitted to candidacy upon submission of a letter of application to the department and approval of the Honors Committee. The course is designed to enable each student to complete a program of study under the supervision of a member of the French faculty.

525 Studies in Modern French Literature (3) Prerequisite: Graduate standing or permission of the department. Selected writers, works, themes or trends of French literature in the modern era. Specific topics vary and are announced before registration. All work of the course is in French. A maximum of six hours may be earned.

550, 551 Special Topics (3, 3) Prerequisite: Graduate standing or permission of the department. Various topics concentrate in dependence on major historical periods of French culture and literature. The specific topic, theme, or genre varies from semester to semester and is announced before registration. All work of the course is in French.

General and Health Sciences Courses (GHS) Biology

GHS 401 Clinical Chemistry and Biology (3) Prerequisite: Acceptance by an American Society of Clinical Pathologists accredited School of Medical Technology. Theory and procedures of clinical chemistry, physics and techniques, clinical bacteriology, parasitology, mycology, histology, cytology, serology, hematology, and urinalysis. Practical experience in performing clinical laboratory procedures.

Geography Courses (GEOG) Public Affairs

101 Major World Regions (3) A geographic analysis of the patterns, problems, and prospects of the world’s principal human-geographic regions: Western Europe, Far East, Latin America, and the Soviet Union. Emphasis is upon the causes of areal differentiation and the role geographic differences play in the interpretation of the current world scene.

102 Physical Geography (3) Interrelated aspects affecting the global distribution and character of climate, soils, vegetation, hydrography, and landforms, elements of mapping.

103 Cultural Geography (3) Study of relationships between geography and human activities including population distribution, cultural patterns, and economic development.

110 Maps and Map Reading (3) Introduction to concepts and techniques of map reading, map interpretation, map analysis, and orientation. Major types of maps and other spatial imagery, their sources, and their use.

199 America Before Columbus (1) A survey of the development of the native peoples of North and South America before the landing of Columbus. This course studies the regional paleoecology and paleophysiography that were inhabited by the indigenous peoples of the New World. It also focuses upon the cultural geography of the Native Americans.

201 Geography of Latin America (3) A regional survey of physical resources, populations, cultural characteristics, and economic activities in Latin America.

206 Introduction to Meteorology and Climate (3) Examination of meteorology; analysis of world distribution of meteorological controls as the bases of regional climatic variations.

215 Geography of the United States and Canada (3) A study of the great diversity of physical and cultural landscapes in the United States and Canada, emphasizing the role of the environment in shaping patterns of demographic distribution and economic activity.

220 Geography of Europe (3) A study of the environmental, economic, social, and political factors influencing the regional structure of Europe. The effect of the new European economic and social communities (E.E.C., COMECON) upon the urban network, the regions, and their relationships.

225 Geography of North Africa and the Middle East (3) A study of the environmental, economic, and social factors of differentiation of the regional structure and distribution of resources in the North African and Middle Eastern countries.

230 Geography of the Soviet Union (3) A study of the economy, its bases in the history, economic development, and geopolitical situation of the Soviet Union. Ethnic diversity and population problems in a multinational state are stressed.

280 Geography of Virginia (3) An introduction to the natural and cultural forces which molded the landscape of the state of Virginia. The study of the physical geography of Virginia and an analysis of the particular human and environmental characteristics of these regions.

301 Political Geography (3) Prerequisite: Sophomore standing or higher. An analysis of the geographical factors involved in the political division of the earth’s surface. The course examines the structures and processes involved in the creation of political space at all levels—city, county, state, national, and international—and emphasizes interrelations between geographical units and problems created by mapping units.

303 Conservation of Resources and Environment (3) Prerequisite: Sophomore standing or higher. An analysis of spatial aspects of world resources and of problems resulting from their unequal distribution or unwise use. Population growth, its implications for resource use, and pollution problems are stressed.

304 Geography of Population: Patterns and Problems (3) Prerequisite: Sophomore standing or higher. Study of the spatial distribution of population, its causes and effects, and of the changing patterns resulting from population mobility. Emphasis on spatial characteristics of variables such as age, sex, race, education, and income. Population problems such
as crowding and poverty are viewed in the spatial context.

305 Economic Geography (3)
Prerequisite: Sophomore standing or higher. An analysis of the pattern of distribution of world economic activity; the spatial econometrics behind this pattern and the influence of this distribution upon the development of cities. The course offers a variety of perspectives on the nature of cities and the opportunities they provide man in their intensive use of space. Urban problems and land use alternatives are analyzed in their spatial context.

310 Cartography (3)
Prerequisite: A course in statistics or permission of the instructor. Exercises in the gathering, analysis, and graphic presentation of data in a spatial format.

399 Selected Topics in Geography (3)
Prerequisite: Open to geography majors and by permission of the instructor to other students. Course content varies from semester to semester according to the regional or systematic specialty of the faculty member teaching the course.

403 Problems in Environmental Management (3)
Prerequisite: Six hours of geography, including GEOG 102. Man’s role as steward of the natural environment, especially the impacts of human activities on atmospheric, hydrologic, geomorphic, and biotic processes.

405 Transportation Geography (3)
Prerequisite: Instructor’s permission. An analysis of the structure, principles, location, and development of world transportation. The course stresses the critical role of transportation in moving people, goods, ideas, and energy in the international, national, regional, and urban levels.

406 Suburban Geography (3)
Prerequisite: Sophomore standing or higher. An analysis of the impacts of man’s social, economic, and political activities within suburban areas. Suburbanization is viewed both as an independent force and as a component of the larger urbanization process.

411 Introduction to Computer Cartography (3)
Prerequisite: Nine hours in geography or permission of the instructor. Introduction to the basic concepts and techniques involved in production and utilization of computer-generated cartography. The course emphasizes the need for graphical representations of manipulated data when the volume of data handled necessitates use of the computer.

412 Aerial Photography Interpretation (3)
Prerequisite: Junior standing or higher. An introduction to the technology of gathering and managing information through use of airborne sensing equipment. Study of the methods and techniques of interpreting and using information contained in aerial photography and space satellite imagery. The application of aerial photography and space satellite imagery interpretation to problems of land use analysis.

413 Photogrammetry (3)
Prerequisites: Junior standing and a college course in mathematics or physics, or permission of the instructor. Theories and processes involved in the collection, measurement, and mapping of remotely sensed imagery. Particular emphasis is given to current technology and applications of topographic and thematic mapping from photogrammetric collection.

415 Seminar in Geography (3)
Prerequisite: Open to junior or senior geography majors. Offers the student an opportunity to integrate and synthesize course work into a comprehensive, interdisciplinary framework and to do in-depth study of some particular aspect of geography. The format varies from semester to semester but stresses field work and readings in the current literature, history, and research techniques of the discipline.

480 Internship (2-5)
Prerequisite: Open to authorized senior majors only. Internships are approved work-study programs for students who have been working for the department with specific employers. Credit is suited to individuals as determined by the department. Contact the department one semester prior to enrollment.

499 Independent Study in Geography (1-3)
Prerequisite: Open to geography majors and senior geography majors with permission of the department and the instructor. Individual study of a selected area of geography. A directed research paper is required.

502 Geography for Teachers (3)
Prerequisites: Graduate standing or permission of the instructor. An introductory study of the role of geography in the education of the secondary school student. This course fulfills the one semester prior to enrollment requirement for the BA degree. Three lecture hours, three laboratory hours.

507 Applied Climatology (3)
Prerequisites: A course in weather and climate, and graduate standing or permission of the instructor. Application of climatic concepts to both natural and man-modified environments. Analysis of climatic change.

517 Applied Geomorphology (3)
Prerequisites: Graduate standing and a course in Geology. Introduction to geomorphology. An in-depth examination of the interaction among land forming processes, settlement, and land-use patterns. Emphasis upon planning and problems associated with urban developement.

540 Hydrology and Water Resources (3)
Prerequisites: Graduate standing or permission of the instructor. An in-depth examination of hydrologic processes and the impact of water resources development upon the environment. Emphasis upon planning and problems associated with land use.

551/571/581 Human Ecology and the Environment (3)
Prerequisite: Graduate standing or permission of the instructor. The student of human ecology is introduced to the concepts of demographic, economic, social, political, and environmental change and to their interaction within the human population. The course includes territoriality, reappropriation, spatial allocation of public facilities, perception of boundaries. Emphasis is placed on the impact of human activities upon land use.

552/572/582 Human Systems in the Environment (3)
Prerequisite: Graduate standing or permission of the instructor. The study of human systems and their impact on the environment. Emphasis is placed on human population, urban and rural systems, and environmental issues. Two lecture hours, three laboratory hours.

571 Applied Geomorphology (3)
Prerequisites: Graduate standing and a course in Geology. An introduction to geomorphology. An in-depth examination of the interaction among land forming processes, settlement, and land-use patterns. Emphasis upon planning and problems associated with urban development.

574 Environmental Impact Analysis and Statement Preparation (3)
Prerequisites: Graduate standing or permission of the instructor. A thorough treatment of the environmental impact analysis and preparation of Environmental Impact Statements.

580 Seminar in Geographic Thought and Methodology (3)
Prerequisite: Graduate standing or permission of the instructor. Examination of the historical development of geographic thought and the current status of geographical analysis. Emphasis is placed on the discipline's systematic courses to a specific region.

581 World Food and Population in Geographical Perspective (3)
Prerequisites: Graduate standing or permission of the instructor. Study of the spatial aspects of population problems, such as migration and distribution. Emphasis is placed on the impact of political processes upon land use.

584 Applied Economic Geography (3)
Prerequisites: Baccalaureate degree or permission of the department. An analysis of the factors and patterns of location of economic activity, its theories and regional systems. Special emphasis on case studies.

585 Geographic Fieldwork and Quantitative Methods (3)
Prerequisites: Baccalaureate degree or permission of the department. Institution to the nature, scope, and objectives of geographic field methods and techniques, including use of base maps, acquisition of data, field research design. Survey of quantitative methods describing and analyzing geographical distributions, network analysis, and spatial transformations.

590 Selected Topics in Geography (3)
Prerequisites: Baccalaureate degree or permission of the instructor. This course is designed to analyze topics of immediate interest and, for that reason, the content varies. The particular topic for any semester is determined by the instructor and expertise. The course may be repeated for credit.

595 Seminar in Regional Analysis (3)
Prerequisites: Baccalaureate degree or permission of the department. Analysis and synthesis of physical and cultural elements of geography in a selected region. This course should be taken near the end of the master's degree program and should provide an opportunity for the student to apply selected knowledge gained in previous systematic courses to a specific region.

Geology Courses (GEOL) Chemistry

101 Physical Geography (4)
Survey of the geologic features of the earth—its rocks and minerals, its surface features, and the processes acting upon and within the earth's crust. Six lecture hours, three laboratory hours. This course satisfies the eight-hour laboratory science requirement for the BA degree. Three lecture hours, three laboratory hours.

102 Historical Geography (4)
Prerequisite: GEOL 101 or permission of the instructor. History and development of the earth as revealed through a sequence of geologic events and processes. Subfields include geologic origins of the earth, succession of life forms, geologic ages and time. The laboratory includes two one-day weekend field trips. Three lecture hours, three laboratory hours.

103 Geology of National Parks (2)
This course applies general concepts of geology to an understanding of the national parks. The course surveys the geological evolution of each region and examines the geological features in each park. One optional field trip. Two lecture hours.

104 Introduction to Field Geology (2)
Prerequisite: GEOL 101. This course consists of four weekend trips (6 a.m. Saturday through 6 p.m. Sunday) to selected locations in Maryland and Virginia. The trips consist of geological observations followed by written student reports, and will be held on the first complete weekend of each month (both Saturday and Sunday in the same month). Students must pay their own room and food costs (estimate $150).

201 Mineralogy (3)
Prerequisites: GEOL 101, 102. The genesis of minerals and their crystallographic, chemical, and physical properties. One optional field trip. Two lecture hours, three laboratory hours.

202 Petrography (3)
Prerequisite: GEOL 101, 102. The classification, evolutionary trends, and distribution of the common invertebrate fossils. Laboratory work includes field collection of fossils, their preparation and identification. Two lecture hours, three laboratory hours.

203 Petrography (3)
Prerequisite: GEOL 101, 102. The study of landscapes, their origin and evolution. A survey of landforms emphasizing the interaction

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of climate, geologic structure, and tectonics in their genesis, maintenance, and evolution. The laboratory work involves three hours each for the most part. Two lecture hours, three laboratory hours.

205 Introduction to Oceanography (3)
Prerequisite: GEOL 101, 102. The study of igneous and sedimentary rocks in folded, faulted, and metamorphosed terranes. Laboratory work includes weekend field trips to structurally deformed parts of the Appalachian Mountains. Two lecture hours, three laboratory hours.

301 Structural Geology (3)
Prerequisite: GEOL 101, 102. The study of general principles of structural geology and their economic importance. The laboratory teaches techniques for the analysis of sedimentary rocks and includes weekend field trips. Two lecture hours, three laboratory hours.

303 Introduction to Field Techniques (3)
Prerequisite: GEOL 101, 102, 201 or 203, or permission of the instructor. This course is an introduction to structural principles as applied to surface and subsurface sedimentary strata. Includes weekend field trips and the preparation of log sheets. Three lecture hours.

305 Optical Mineralogy (3)
Prerequisite: GEOL 101, 102, 201 or 203, or permission of the instructor. This course is an introduction to the physical and engineering properties of minerals, including their color, luster, cleavage, crystal form, and streak. Applications to construction problems are presented. Three lecture hours.

401 Igneous Petrology (3)
Prerequisite: GEOL 101, 102, 201 or 203, CHEM 211-212, or permission of the instructor. This course is a study of the origin and evolution of igneous and metamorphic rocks, with emphasis on the principles of inorganic chemistry applied to crystalline rocks. Two lecture hours, three laboratory hours.

402 Geologic Development of North America (3)
Prerequisite: GEOL 101, 102, 201 or 203, 301 or 302, or permission of the instructor. This course presents the geologic history of North America in terms of plate tectonics. Two lecture hours, three laboratory hours.

403 Geophysics (3)
Prerequisite: GEOL 101, 102, 201 or 203, CHEM 211-212, or permission of the instructor. A study of stable isotope geochemistry, geochronology, water geochemistry, crystal geochemistry, and the application of geophysical methods to water, mineral, and rock analysis by the use of modern instrumentation. One lecture hour, five laboratory hours.

410, 411, 412 Techniques for (GERM) 301, 302, 303
Prerequisites: Senior standing in geology and permission of the departmental research committee.

An introduction to geological research. The course includes a literature search, conferences, and field and laboratory projects. A written report and oral report are required. Six weeks hourly.

500, 501 Selected Topics in Modern Geology (3, 3)
Prerequisite: Baccalaureate degree and permission of the instructor. A research project in a previously chosen topic in modern geology and presentation of findings in a substantial paper.

311 Advanced Convexity and Composition (3)
Prerequisite: 15 semester hours of German or permission of the instructor. An overview of the historical development of German literature from the heroic saga to the advent of the Enlightenment, with emphasis upon the medieval epic and Minnesang, and the drama and picarose novel of the Baroque age. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

350 Early German Literature (3)
Prerequisite: 8 semester hours of German or permission of the instructor. A program of studies leading to intensive treatment of the development of oral and written form in literature for baccalaureate degrees.

360 The Literature of Germany Romanticism (3)
Prerequisite: 15 semester hours of German or permission of the instructor. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

370 German Literature: 1830 to 1880 (3)
Prerequisite: 15 semester hours of German or permission of the instructor. A study of the literature of Germany, including Realism, the prose, drama, and lyric poetry of Heine, Hebel, Buchner, Stifter, Storm, Keller, Meyer, and Fontane is read and discussed. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

380 Special Topics in German Literature (3)
Prerequisite: 15 semester hours of German or permission of the instructor. A study of German literature topics or genres, such as literature of the revolts, literature in lieder and operas, major types of poetry, the novel, the novella, the topic changes each time the course is offered. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

415 Advanced German Grammar (3)
Prerequisite: 18 semester hours of German or permission of the instructor. May take credit by students who have completed GERM 311, 314 with a grade of C or better. Development of verbal skills and proficiency in composition and speech for students who have completed GERM 311, 314.
knowledge is applied in closely guided and supervised written and oral exercises.

420 American Government (3)
Prerequisite: 18 semester hours of German or permission of the instructor. Study of the German language introducing the principles of modern linguistic theory, German phonology, morphology, and syntax. Particularly valuable to the student who intends to teach or undertake graduate study in German.

440 Writing in the Age of Classicism (3)
Prerequisite: 15 semester hours of German or permission of the instructor. May not be taken for credit by students who have completed GER 405 with a grade of C or better. Study of the Enlightenment, Sturm and Rang, Classicism, and early Romanticism. Some theory and selected plays by Lessing, Lenz, Schiller, and Kleist. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

441 Goethe (3)
Prerequisite: 15 semester hours of German or permission of the instructor. May not be taken for credit by students who have completed GER 406 with a grade of C or better. Poetry, drama (including Faust), and some prose works, studied in connection with Goethe's life and thought. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

450 Modern German Literature: 1850-1924 (3)
Prerequisite: 15 semester hours of German or permission of the instructor. May not be taken for credit by students who have completed GER 411 with a grade of C or better. Study of Naturalism, Imagism, Nietzsche, fin de siècle writers, and Expressionism. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

451 Modern German Literature: 1925 to the Present (3)
Prerequisite: 15 semester hours of German or permission of the instructor. May not be taken for credit by students who have completed GER 412 with a grade of C or better. Study of literary trends since 1925, including the works of Thomas Mann, Brecht, Hesse, Boell, Grass, Frisch, and Duerrenmatt. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

490, 491 Independent Study (1-3, 1-3)
Prerequisite: Senior standing as a major in German and permission of the department chairperson. Research and analysis of a selected problem in German literature, language, or culture, under the direction of a member of the department. A maximum of six hours of independent study may be applied to fulfillment of requirements in the major.

497, 498 Senior Honors Tutorial (3, 3)
Prerequisite: Senior standing as a major in German, with an overall grade point average of 3.000 and 3.000 in the major field. Students who meet these requirements are admitted to candidacy upon submission of a letter of application to the departmental Honors Committee in the second half of the junior year, supported by a faculty recommendation and an interview by and with the approval of the Honors Committee. In the first semester, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the German faculty. In the second semester, an independent research and completion of an honors essay under the supervision of a member of the German faculty.

FRFN 450 Methodology of Foreign Language Teaching (3)
Prerequisite: GERM 415 or 420 for German majors; or permission of the instructor. Study of the major theories and methods of foreign language teaching and the application of these theories to the specific activities of the classroom. This course is cross-listed as EDUC 450.

Government and Politics Courses (GOVT) Public Affairs

101 Concepts of Democratic Government (1)
See description for GOVT 103.

102 British-American Democratic Government (2)
See description for GOVT 103.

103 Introduction to Democratic Government (3)
An analysis and comparison of the American presidential and the British parliamentary forms of democratic government examined in light of basic concepts of democratic theory. The course is divided into GOVT 101: Concepts of Democratic Government (1) dealing with introductory concepts basic to democracy, and GOVT 102: British-American Democratic Government (2) presented as an examination of the comparative and analytical phases of the American and British systems. Each may be taken separately. To register for both, enroll in GOVT 101. However, students who have completed GOVT 103 are not open to students who have completed a course in American national government.

132 Introduction to International Politics (3)
An introduction to the nature, organization, functions, and problems of American state and local governments in their challenging and rapidly changing environment.

241 Introduction to Public Administration (3)
Prerequisite: GOVT 103 or permission of the instructor. An examination of administrative structure and processes. Includes organization theory, administrative behavior, personnel, communications, leadership, management, budgetary processes, and administrative responsibility.

250 Introduction to Political Analysis (3)

301 Public Law and the Judicial Process (3)
Prerequisite: Junior or senior standing. An analysis of American judicial organization and operation; the role of the Supreme Court in policy formation, and selected constitutional principles.

302 Political Parties and Interest Groups (3)
Prerequisite: Junior or senior standing. An examination of the nature, roles, characteristics, and functioning of political parties and interest groups in the American polity.

303 Contemporary Constitutional Issues (3)
Prerequisite: Junior or senior standing. Major contemporary issues and problems in the application of basic American constitutional principles. Examination of the Supreme Court's interpretation and clarification of constitutional rights and liberties in the areas of First Amendment freedoms of expression, religion, assembly and association; equal protection of the laws; state and national intrusions between the federal system, and social and economic protection and regulation.

305 Contemporary American Federalism (3)
Prerequisites: GOVT 103 and GOVT 204. An examination of the legislative processes, functions, and roles of the legislature and its members. The course focuses on the U.S. Congress but includes state legislatures and cross-national comparisons as time and resources allow.

309 Government and Politics of Metropolitan Areas (3)
Prerequisites: GOVT 204, and junior or senior standing. An examination of the government, politics, and problems of metropolitan centers and surrounding areas.

311 Political Realism and Opinion (3)
Prerequisite: GOVT 103. An examination of the nature, sources, structure, formation, expression, transmission, change, and measurement of politically relevant public opinion in a democratic system.

319 Black Politics (3)
Prerequisite: Junior or senior standing. Comparative examination of black behavior, with specific attention to the political characteristics of blacks, including attitudes, political thought, participation, and organizational activity.

320 Political Values (3)
Prerequisite: Junior or senior standing. An examination of political values concerning the nature of man, origin and nature of the state, bases of political obligation, problems of consent, concepts of power, and sources of political authority as presented in the works of major writers.

321 Contemporary Political Ideologies (3)
Prerequisites: Junior or senior standing. Study of political ideologies and their major figures, beliefs, and actions of contemporary and past movements. Examination of liberalism, conservatism, socialism, communism, and fascism in theory and in contemporary practice. Problems of totalitarianism and nationalism in post-industrial and developing societies.

331 Government and Politics of Latin America (3)
Prerequisites: Junior or senior standing. Contemporary political systems of Latin America, with emphasis on institutions, political processes, political behavior. Examination of several key Latin American political systems, problems of political development in Latin America.

332 Government and Politics of the Middle East and North Africa (3)
Prerequisites: GOVT 132 and junior or senior standing. A study of the societies of the Middle East and North Africa and their response to the impact of internal socio-cultural-political determinants and external forces. Focus on their contemporary politics—ideologies, popular manifestations, institutions, and operations.

333 Government and Politics of Asia (3)
Prerequisites: Junior or senior standing. Analysis of government structures and political processes of Asian countries. Major problems of nation-building and competitive approaches to revolution and reform. Problems of growth and security in the context of a rapidly changing world.

334 Government and Politics of Western Europe (3)
Prerequisites: Junior or senior standing; GOVT 103 or permission of the instructor. Contemporary democratic political systems of Western Europe, with emphasis on political processes, institutions, and behavior. Examination of the Western European political ideologies. Problems of multi-party systems, coalition governments, Eurocommunism, and stability and change in post-industrial countries.

336 Political Development and Change (3)
Prerequisite: Junior or senior standing. Process of political development and change in the context of modernization and industrialization. Patterns of political development, with emphasis on the Third World.

340 Advanced International Relations (3)
Prerequisite: GOVT 132 and junior or senior standing. Advanced international relations. Theories and concepts of international relations. Major forces and issues in international politics.

342 Diplomacy (3)
Prerequisites: GOVT 132 and junior or senior standing. The foreign service and diplomacy, the tasks, procedures, instruments, and problems of diplomacy. Emphasis on the current and future role of diplomacy.

345 Public Personnel Administration (3)
Prerequisites: GOVT 241 and junior or senior standing, or permission of the instructor. Survey of the techniques and tools employed in the management of public personnel and administrative organizations. Topics covered include: the merit system, recruitment, placement, career systems, public pay systems, employee motivation, public employee labor relations, employee appraisals, manpower planning, employee separations, and retirement systems.
356 Public Budgeting and Finance (3)
Prerequisites: GOVT 241 and junior or senior standing, or permission of the instructor. Survey of the tools and techniques employed in budgeting and financial management in governments in the United States and the future of public planning. Some attention is given to program implementation. Emphasis is placed on the local government level.

358 Public Policy Analysis (3)
Prerequisites: GOVT 241, and junior or senior standing, or permission of the instructor. Methods and impact of public policy research in the governing process. Design and development of alternative courses of government action and evaluation of results. Problems in applying systematic analysis to political issues.

371 Personnel Administration for Police (3)
Prerequisite: Open to pre- and inservice law enforcement students and by permission of the instructor. An examination of the operating environment of police personnel administration: the personnel function, management of human resources, conditions of employment, recruitment, training, selection, evaluation, leadership, promotion, discipline, and collective bargaining are examined.

372 Police Supervision (3)
Prerequisite: Open to pre- and inservice law enforcement students and by permission of the instructor. A review of police supervision as related to organizational environment and goals and to employee discipline, morale, safety, training and career development, cooperation and behavior.

376 Criminal Law and the Public Sector (3)
The study of collective bargaining and the broad concept of labor relations involved in selection and hiring, seniority, promotions, and training. The study of labor and the bargaining process extending from initial hiring to retirement.

377 Public Safety Officers and the Law (3)
An examination of the law applicable to fire, police protection, firefighters and police officers and their relationship to the public, their employers, the courts, and other societal institutions. Emphasis will include the rights and obligations of the union and the police officer, the judicial and criminal historical development of each, Virginia law, and other local topics.

378 Risk and Insurance (3)
An analysis of the theories of risk control and management, applications of the same to the fields of insurance including fire, liability, accident, crime, surety, and property insurance.

401 Police Policy (3)
Prerequisites: Junior or senior standing. An inquiry into the processes, agencies, and politics involved in the proposal, making, implementation, evaluation, and revision of public policy in the United States.

402 Public Policy in Metropolitan Areas (3)
Prerequisite: GOVT 204. The analysis of metropolitan policy in specific areas to deal with them. Emphasis is on the substance and impact of such policies as housing, transportation, land use, crime prevention, service delivery, and health care.

411 Citizen Participation and Local Politics (3)
Prerequisite: GOVT 204. The varieties of ways in which citizens participate in politics at the local level, with an emphasis on recent efforts in neighborhood and community organization. The motivations and impacts of such participation. Field work experience and an introduction to skills of participatory observation and evaluation.

420 American Political Thought (3)
Prerequisites: GOVT 103 and junior or senior standing. Major political values and theories in American politics and the origins and development of the American Republic to the present. Special attention to changes in American political values in crisis and to contemporary American political theory, including pluralism, elite theories of democracy, and empirical political theory.

430 Comparative Political Leadership (3)
Prerequisites: Junior or senior standing. A cross-national study of political leadership relationships between political cultures and types of leadership, patterns of leadership recruitment, and linkages between political elites and citizenry.

441 Issues in Local Government (3)
Prerequisites: GOVT 132 and junior or senior standing. Major issues in the internal systems of local governments. Form of government, finance, enforcement, and other local topics.

451 Administrative Law and Behavior (3)
Prerequisites: GOVT 241 and junior or senior standing, or permission of the instructor. An examination and study of American governmental administrative agencies. Emphasis is given to the functional aspects of the conflict, including nuclear war, conventional war, and insurgency. Techniques of conflict resolution and war prevention. Problems of nuclear deterrence, energy, disarmament.

466 International Law (3)
Prerequisites: GOVT 132 and junior or senior standing. The nature, sources, and subjects of the rules of international law. Ratification, treaties, national laws. Emphasis is given to the relationship between the law of nations, the law and the individual, the power of the court in international law, and the present and future status of international law.

474 Foreign Policy and Analysis (3)
Prerequisites: GOVT 132 and junior or senior standing. Examination of foreign policies and decision making of major world powers.

475 Administrative Law and Behavior (3)
Prerequisites: GOVT 241 and junior or senior standing, or permission of the instructor. An examination and study of American governmental administrative agencies. Emphasis is given to the functional aspects of the conflict, including nuclear war, conventional war, and insurgency. Techniques of conflict resolution and war prevention. Problems of nuclear deterrence, energy, disarmament.

520 Administrative Law and Procedures (3)
Prerequisites: Junior or senior standing. Introduction to the law of public office. An examination of the procedures and machinery by which, and the legal limits on, the administrative agencies and their officers and employees.

471/SOCI 471 Prevention and Deterrence of Crime (3)
Prerequisites: Junior standing; inservice status or permission of instructor. A study of theoretical and practical strategies for crime prevention and deterrence. Social, environmental, and mechanical developments are examined. The police, courts, and correctional elements of law enforcement are analyzed in terms of current effectiveness and future potential for crime prevention.

480 Internship (2-5)
Prerequisite: Open to junior and senior majors only. Contact the department one semester before enrollment. Internships are approved work-study programs established by the department with specific employers. Credit is fixed to suit each situation as determined by the department.

490 Seminar (3)
Prerequisite: A seminar open to junior and senior majors, Department of Public Affairs, and by permission to other students who have completed 42 or more semester hours. May be repeated for elective credit. The subject of the seminar varies from semester to semester according to the specialization of the faculty members in charge. Topics may change each semester, and discussions of seminar papers comprise the content and format. Only three credit hours may be counted within the major program.

Health Education Courses (HEAL) Health and Physical Education

110 Personal Health (3)
Consideration is given to the promotion of optimum individual and family well-being through the integration of physical, psychological, and social components of health. Emphasis is placed on areas involving medical health, use and consequences of alcohol, tobacco, and drugs; human sexuality and sex education; disease; and accidents. Attention is also given to medical care, physical fitness, nutrition, weight control, consumer health, and environmental health.

111 Advanced First Aid & Emergency Care (2)
The identification, care, and treatment of various medical emergencies, injuries, and both illnesses and injuries. One hour lecture, two hour lab.

120 Community Health (2)
Principles and practices of community health programs of official and voluntary health agencies. Emphasis is given to the relationship between the local, state, and national health programs. Organization of community health education programs is emphasized. Field observation required.

205 Principles of Accident Causation and Prevention (3)
The accident problem in the nation with special consideration of concepts and theories of accident prevention, particularly as they relate to use of the highways.

220 Dimensions of Mental Health (3)
An interdisciplinary survey course which integrates behavioral and sociocultural factors in the study of mental health. Focus is placed upon an analysis of factors predisposing to mental health problems and selected personal and community resources for dealing with mental health problems.

305 Health Education in the Elementary School (3)
Designed for Elementary Education students. Appraisal of health interests and needs of children. Relationships between health services, environment, and instruction with emphasis on content, methods, and resource materials in health teaching.

310 Drugs and Health (3)
Analysis of the distinctive characteristics of drug use, misuse, and abuse. Emphasis is placed upon the positive aspects of drug use as well as upon alternatives to drug misuse and abuse. Alcohol and nicotine are covered. Personal responsibility and the general relationship to drug use are given special attention.

315 Foundations of Health Education (3)
Prerequisites: HEAL 110 and HEAL 120. Develops the historical and philosophical foundations of health education. Major emphasis is on general principles and theories governing contemporary programs of health education. Emphasis is placed upon the application and significance to the school, the home, and the community. Career opportunities in health professions are investigated.

325 Health Aspects of Human Sexuality (3)
Prerequisite: HEAL 110. A survey course which integrates biological, behavioral, and sociocultural factors in the study of human sexual behavior. Focus is on a balanced, scholarly, and nontechnical examination of subject matter. Special attention is given to social forces and personal dynamics which appear to be related to sexual problems.

330 Nutrition (2)
Prerequisite: HEAL 110. Identification of the indispensable human nutrients, their primary physiological functions, their major deficiency diseases and some of their principal sources. Emphasis is on the assessment of dietary habits in relation to nutrient requirements and recommended allowances. Introduction of the concept of nutritional status with respect to food intake.

402 Introduction to Driver Education: Driver Task Analysis (3)
Prerequisite: HEAL 205. An introduction to the vehicle operator's task within the highway transportation system. Includes introduction to laboratory experiences in the use of psycho-
physical and psychological tests in the development of driving skills, practice driving instruction, and teaching. Two lecture hours, three laboratory hours.

420 Organization of the School Health Program (3) Prerequisite: Admission to the Teacher Education Program or permission of the department. A study of the three areas of the school health program—health services, healthful school environment, and health education—as the interrelated responsibilities of the school. Emphasis is placed upon the role of the public health educator in terms of responsibilities for planning and implementing instructional methods and materials, and evaluation relative to respect critical and often controversial health issues.

440 Health Education Methods (3) Prerequisite: Admission to the Teacher Education Program or permission of the department. An overview of the dynamics of secondary school health instruction with emphasis placed upon student needs, interests, cultural backgrounds, and community mores. Curriculum construction, instructional materials, lesson plan development, and evaluation techniques are emphasized. Ten hours field experience required.

480 Internship in Community Health Education (6) Prerequisite: Admission to the Teacher Education Program or permission of the department. A directed internship in a health program carried out in cooperation with the community agency or professional organization. An opportunity to observe and participate in planning and implementing community health education experiences as a part of an on-going agency program.

498 Independent Study in Health Education (1-3) Prerequisite: Senior standing and permission of the department. The study of a problem area in health education research, theory, or practice under the direction of a faculty member.

500 Workshop in Health Education (1, 2, 3) An analysis of selected health problems and issues presented in lecture, seminar, or other approved instructional methods. Research, readings, reports, and group attention. Application of information to education programs requires special attention. A maximum of six semester hours of 500 may be counted toward graduation.

540 Advanced Driver and Traffic Safety Education (3) Prerequisites: Three hour 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. Research and development of driver education and traffic safety programs.

History Courses (HIST) 100 The Uses of History (3) Primarily for non-majors; may be taken by majors only as elective credit. An introduction to the nature of history and the historical method. Intended for non-majors. The student for the continuing study of history as a supporting discipline and as an intellectual avocation. Special emphasis on distinguishing fact from interpretation, the synthesis of historical information, and the critical analysis of historical writings.

101 Foundations of Western Civilization (3) The development of Western civilization from the ancient Mediterranean world to the formation of modern Europe in the seventeenth century.

102 Development of Western Civilization (3) The history of Western institutions and ideas from the seventeenth century to the present.

121 Formation of the American Republic (3) The social, political, economic, and intellectual growth of American institutions from colonization through the American Revolution. Emphasis is placed on the formation of the Union and its subsequent industrial, social, and political growth to 1865.

122 Development of Modern America (3) The history of the United States from 1865 to the present. Territorial expansion; Reconstruction and reaction; imperialism: industrialism: individualism, and opportunism: the time of social protest; the era of world war and depression; the New Deal; the end of isolation; the era of isolation; the sources and problems of world leadership and power.

251, 252 (241, 242) A Survey of East Asian Civilization (3, 3) A survey of the history of China, Japan, Korea, and Vietnam from the prehistoric period to the present.

261, 262 Survey of African Civilization (3, 3) A survey of the history and cultural development of Africa and African peoples from earliest times to the emergence of new African states from colonial domination. Particular attention is paid to the unique and diverse cultural traditions, relations with and effects on the rest of the world, as well as the contribution of the African heritage to the United States.

271 Latin-American History: The Colonial Era (3) Latin-American history to 1825, with emphasis upon the Spanish and Portuguese contributions to transplantaion of Hispanic and African cultures to the New World and the political, economic, social, and cultural results; Spanish-Portuguese explorations and conquests; colonial development of Latin America; the wars for independence.

272 Latin-American History: The Modern Era (3) The development of an independent Latin America since 1825, with emphasis upon the interactions between the United States and Latin America.

281, 282 Survey of Middle Eastern Civilization (3, 3) A survey of the history of the major civilizations of the Middle East with particular attention to cultural, intellectual, social, and political developments.

300 Interpretations of History (3) Required of majors in history. To be taken in the junior year. A study of the development of historical writings in the West from ancient to modern times. Lectures and discussions of the works of outstanding historians with an introduction to historical methodology.

301 Classical Greece and Rome (3) Prerequisite: Six hours of history, or permission of the instructor. An introduction to the development of the city-state through the fall of the Roman Republic.

302 Imperial Rome and Byzantium (3) Prerequisite: Six hours of history, or permission of the instructor. The political, social, economic, and cultural history of classical Greece and Rome from the development of the city-state through the fall of the Roman Republic.

303 Western Europe in the Middle Ages (3) Prerequisite: Six hours of history, or permission of the instructor. A survey of the development of European society from the impact of the reforms of Diocletian and Constantine to the end of the fifteenth century. Emphasis is placed upon political, institutional, economic, and social developments, including the influence of the church.

305 The Renaissance (3) Prerequisite: Six hours of history, or permission of the instructor. A survey which considers the Renaissance as a phenomenon rather than as a chronological period. Emphasis is placed on the growth of individualism in the fourteenth and fifteenth centuries, the development of new political concepts, and the laicization of society. The transmission of these developments to transalpine Europe in the late fifteenth and sixteenth centuries is included.

306 The Reformation (3) Prerequisite: Six hours of history, or permission of the instructor. Late medieval and early modern political, social, and economic conditions and reform movements; late scholasticism; Protestant Reformation, Catholic Reformation, dynastic rivalries and religious wars. Concludes with the Peace of Westphalia (1648).

308 Nineteenth-Century Europe (3) Prerequisite: Six hours of history, or permission of the instructor. History of Europe from the Congress of Vienna to the outbreak of World War I; political and diplomatic developments; economic and social change; growth of liberalism, nationalism, and revolutionary ideologies; industrialization, technology, and materialism; cultural norms; unification movements and imperialism; the failure of diplomacy and the collapse of the European state system.

309 Contemporary Europe (3) Prerequisite: Six hours of history, or permission of the instructor. A survey of major political changes in Europe since 1914 with emphasis on broad patterns of ideological conflict.

314 History of Germany (3) Prerequisite: Six hours of history, or permission of the instructor. History of the political, diplomatic, economic, social, and cultural development of Germany from the dissolution of the Holy Roman Empire to the present.

320 Anglo-Saxon and Medieval England (3) Prerequisite: Six hours of history, or permission of the instructor. A study of Roman Britain, Anglo-Saxon institutions, Norman conquest, church-state relations, development of common law, rise of Parliament, War of Roses.

321 Tudor and Stuart England (3) Prerequisite: Six hours of history, or permission of the instructor. History of England between 1465 and 1714; religious, social, and constitutional change of the English reformation; the Stuarts and parliament; Civil War and Interregnum; Stuart Restoration; the Glorious Revolution and the Bill of Rights: the age of Anne.

322 Modern Britain from the Georgian Age to the Welfare State (3) Prerequisite: Six hours of history, or permission of the instructor. History of England from 1715 to the present. The first four Georges; growth of industrialization and its social and economic consequences; the reform of the franchise; foreign affairs and imperialism; the transition from empire to commonwealth; the twentieth-century welfare state.

328 Rise of Russia (3) Prerequisite: Six hours of history, or permission of the instructor. An examination of political, social, and cultural development of Russia from the appearance of the Kievan state to the age of Pushkin.

329 Modern Russia and the Soviet Union (3) Prerequisite: Six hours of history, or permission of the instructor. An analysis of Russian civilization in the nineteenth and twentieth centuries; focusing on the failure of Tsarism, the revolutionary response, and the development of the Soviet Union.

333 Westward Movement in the United States (3) Prerequisite: Six hours of history, or permission of the instructor. The history of the exploration, settlement, and expansion of the frontier, with emphasis on its influence on cultural and political institutions.

335 The Afro-American Experience in the United States: African Background to 1865 (3) Prerequisite: Six hours of history, or permission of the instructor. A course which begins with a brief discussion of the origin of man, the concept of race, and the impact of color on the black experience. It then moves the student from the African background to the Civil War. Special attention is directed to the exploration of the ways in which transplantation affected certain African cultural survivals in the New World. It then examines the genesis of American slavery and prejudice, the colonial heritage, the revolutionary legacy, the Reconstruction, the abolitionist movement, and institutionalized slavery.
336 The Afro-American Experience in the United States: Reconstruction to the Present (3)
Prerequisite: Six hours of history, or permission of the instructor.
The aim of this course is to give the student a general knowledge of the experience and development of America's black population from 1865 to the present. Special attention will be directed at the parallels between the nineteenth and twentieth centuries. The contradictions of emancipation, the failure of black reconstruction, black migration and exodus, the black renaissance, the civil rights movement, black power and black nationalism provide the organizer for this course's historically chronological examination and presentation.

341, 342 United States Constitutional History (3, 3)
Prerequisite: Six hours of history, or permission of the instructor.
Development of American constitutional theory and practice from its colonial origins to the present. The second semester begins at the Civil War.

345 From Colony to World Power: A History of American Foreign Relations (3)
Prerequisite: Six hours of history, or permission of the instructor.
A survey of American diplomacy from the Revolution to the present. Emphasis is placed on the domestic and external forces that have shaped American diplomacy and its conduct.

348 American Economic History (3)
Prerequisite: Six hours of history, or permission of the instructor.
A general survey of the history of American economic and development from colonial times to the present with stress on the growth of modern economic institutions and the role of economic factors in the evolution of contemporary industrial America.

351 History of the Old South (3)
Prerequisite: Six hours of history, or permission of the instructor.
The history of the South to the outbreak of the Civil War with particular emphasis on the rise of sectionalism. The development of a distinct southern culture is traced through the economic, political, social, cultural, and intellectual institutions.

352 The South Since 1865 (3)
Prerequisite: Six hours of history, or permission of the instructor.
The history of the South during Reconstruction, the Redeemer era, and the New South, with particular emphasis on race relations. The political, economic, cultural, and intellectual development is traced from the aftermath of war through the New South. Special attention is given to the struggle to rejoin the mainstream of American life.

353 History of Traditional China (3)
Prerequisite: HIST 251 (241) or 252 (242) or permission of the instructor.
A study of the traditions and culture of the period of modern western intrusion. Inception on the development of traditional Chinese culture, society, and government.

354 (471) Modern Japan (3)
Prerequisite: HIST 251 (241) or 252 (242) or permission of the instructor.
Modern Japan from 1644 to the Peoples Republic of China. Emphasis on the coming of the West and the various stages of Chinese reaction.

356 (473) Modern Japan (3)
Prerequisite: HIST 251 (241) or 252 (242) or permission of the instructor.
A study of the period from Restoration in 1868 to the second world war, with particular emphasis on Japan's successful modernization in the face of the challenge posed by the West following the opening of the country by Commodore Perry.

363 The History of Argentina, Brazil, and Chile (3)
Prerequisite: HIST 271 (361) or permission of the instructor.
A study of the history of Argentina, Brazil, and Chile from the Colonial period to the present with an emphasis on the changing social, political, and economic conditions.

379 History of Canada (3)
Prerequisite: Six hours of history, or permission of the instructor.
An introduction to the history of Canada throughout the latter part of the colonial period to the present. Special emphasis is placed on Canada's historic position in the British Empire and Commonwealth.

380 The Ancient Near and Middle East (3)
Prerequisite: Six hours of history, or permission of the instructor.
The political, social, economic, and cultural history of the ancient Near and Middle East. Special attention is placed on the interaction of domestic and international relations.

383 The History of Argentina, Brazil, and Chile (3)
Prerequisite: Six hours of history, or permission of the instructor.
The political, social, economic, and cultural history of Argentina, Brazil, and Chile from the Colonial period to the present with an emphasis on the ancient Near and Middle East. Special attention is placed on the interaction of domestic and international relations.

384 The History of Argentina, Brazil, and Chile (3)
Prerequisite: Six hours of history, or permission of the instructor.
The political, social, economic, and cultural history of Argentina, Brazil, and Chile from the Colonial period to the present with an emphasis on the ancient Near and Middle East. Special attention is placed on the interaction of domestic and international relations.

390 Topics in History (3)
Study of historical topics or periods of special interest. Selection of various subjects announced in advance.

391 History of Virginia to 1860 (3)
Prerequisite: Six hours of history, or permission of the instructor.
The discovery and settlement of Virginia. The colonial period with emphasis on the development of representative government and race relations. The Civil War and the social and political changes on Virginia's famous statesmen. The Virginia dynasty. The coming of the Civil War.

392 History of Virginia Since 1860 (3)
Prerequisite: Six hours of history, or permission of the instructor.

401 Colonial America (3)
Prerequisite: Six hours of history, or permission of the instructor.
An intensive study of colonial American history; its European origins through the Revolutionary War.

403 Early National Period in American History, 1783-1820 (3)
Prerequisite: Six hours of history, or permission of the instructor.
A study of the formative years of the new republic from the Treaty of Paris of 1783 to the election of 1820. Among the major topics considered are: the Constitutional Convention, the ratification struggle, the party battles of the Federalist era, Jeffersonianism and the failure of efforts to maintain American neutrality and gain advantage for the United States during the Anglo-French wars of the late eighteenth and early nineteenth centuries. The course concludes with an investigation of the Era of Good Feelings.

404 Jacksonian Democracy, 1820-1848 (3)
Prerequisite: Six hours of history, or permission of the instructor.
The study of the Age of Andrew Jackson with emphasis on those democratic institutions which emerged as dominant influences in American society.

406 Civil War and Reconstruction (3)
Prerequisite: Six hours of history, or permission of the instructor.
An inquiry into the course, conduct, and consequences of the Civil War and its aftermath. Emphasis is placed on the interconnectedness of political, military, and economic affairs.

409 Between the Wars: The United States, 1918-1941 (3)
Prerequisite: Six hours of history, or permission of the instructor.
An intensive study of political, social, economic, and diplomatic developments in two periods: the 1920's and the 1930's. The Jazz Age, long known for its fads, frivolity, and conservative political climate, is contrasted with the age of the Great Depression and the New Deal.

410 The United States Since World War II: Nation and Empire (3)
Prerequisite: Six hours of history, or permission of the instructor.
A study of the history of the United States and its major foreign policy factors which shaped the American experience from World War II to the present. Political, social, and economic forces are studied as they affected the national and international scene. Consideration of the Fair Deal, the New Frontier, and the Great Society. New roles for blacks, women, and students. In foreign affairs, the Cold War and Vietnam, Korea, China, Cuba, the Middle East, and the United Nations. The impact on the world of the interaction of domestic and international relations.

411 Cultural and Historical Intellectual of the United States: 1600-1865 (3)
Prerequisite: Six hours of history, or permission of the instructor.
An inquiry into the cultural and intellectual currents in America to 1865. The Puritan mind and its legacy; the Enlightenment in America; Social, economic, and political trends; Constitutional democracy; development of American liberalism and conservatism; revivalism and other religious developments; industrialism, liberal capitalism, and the ideology of the American middle class.

412 Cultural and Historical Intellectual of the United States Since 1865 (3)
Prerequisite: Six hours of history, or permission of the instructor.
A study of the impact of war on American Society and the influence of the shaping of national policy. Considerable attention is devoted to such subjects as the role of the military in the economy, minority in the armed forces, and the development of peace movements. The first semester covers the period from colonial times to about 1917, while the second semester covers the period from the American entry into World War I to the end of the Vietnam conflict.

414 Latin American History: Colonial Origins to Civil War (3)
Prerequisite: Six hours of history, or permission of the instructor.
A study of American urbanization focusing on the origin and growth of colonial towns; the urban role in fostering nationalism; and economic rivalries during the transportation and communications revolutions. Attention is also given to the regulations, private and public responses to the social, economic, and environmental problems stemming from rapid urbanization.

416 United States Urban History: Civil War to the Present (3)
Prerequisite: Six hours of history, or permission of the instructor.
An inquiry into the complex web of urban problems which ensued from the rapid growth of America after the Civil War with special emphasis on the following: industrialization and urbanization; the immigrant and the city; the growth of slums; urban reform in the Progressive Era; the New Deal and the City; urban renewal; the flight to the suburbs; and the towns to return.

420 Topics in Twentieth-Century U.S. Diplomacy (3)
Prerequisite: Six hours of history, or permission of the instructor.
Studies in selected topics in twentieth-century U.S. diplomacy. Topics vary each semester and may include themes such as internationalism, balance of power, and the Cold War, or may focus on the relationship between the United States and individual nations or regions of the world.

431 Medieval Intellectual Topics (3)
Prerequisite: Six hours of history, or permission of the instructor.
An examination of a selected topic in the intellectual history of the Middle Ages. The specific topic may vary from year to year. The primary emphasis is literary or historical, depending on the discipline of the instructor. Relevant material drawn from philosophy, theology, and art may also be considered. This course is identical to ENGL 431 or 432, and must be credited by English, History, History, or Area Studies majors.

435 Social Transformation and Culture in Seventeenth- and Eighteenth-Century Europe (3)
Prerequisite: Six hours of history, or permission of the instructor.
An examination of the cultural lives of Europeans. This course focuses on religious, artistic, literary, and recreational behavior. In addition, political activity—riots and royal receptions, work stoppages and chivalric disputes—are covered. The course includes formal thinkers and
436 European Society and Culture: Nineteenth and Twentieth Centuries (HISN 436 European Society and Culture: Nineteenth or permission of the instructor. An examination of the major philosophical, musical, artistic, literary, and social trends of Europe since the French Revolution. Among the major themes discussed are romanticism, socialism, Marxism, the social effects of modernization, science, and society.

442 Europe Since 1610-1789: Absolutism and Revolution (3) Prerequisite: Six hours of history, or permission of the instructor. A survey of French history from 1610 to 1789, following the rise of the Huguenot Henry IV through the establishment (Richelieu), perfection (Louis XIV), and decline (Louis XV) of monarchical absolutism, to the opening stages of the Revolution. Emphasis is placed on the institutional, social, intellectual, and economic transitions which occurred during this period we know as "the old regime."

441 France Since the Revolution (3) Prerequisite: Six hours of history, or permission of the instructor. A study of domestic, foreign, and cultural developments in France and their influence on Europe and the world from 1789 to the present.

443 History of Spain and Portugal (3) Prerequisite: Six hours of history, or permission of the instructor. Development of Spain and Portugal from prehistory to modern times, studying particularly factors related to their former empires in America.

463 Ancient India and Pakistan (3) Prerequisite: Six hours of history, or permission of the instructor. The history of the Indo-Pakistan subcontinent with special reference to Indus Valley people, Hindus, Jains, Buddhists, and Muslims from ancient to medieval times.

464 Modern India and Pakistan (3) Prerequisite: Six hours of history, or permission of the instructor. The political history of the Indo-Pakistan subcontinent from the mid-eighteenth century to the present. Background of the earlier cultures of the Hindus and the Muslims is presented as prelude to developments in the modern period.

470 Diplomacy and War in Latin America (3) Prerequisite: Six hours of history, or permission of the instructor. A careful study of the practice of balance of power diplomacy among the nation states of Latin America from independence to the present. Emphasis is placed upon a number of deeply rooted sources of conflict which have resulted in the evolution of a system of power politics and the outbreak of several major Latin American wars.

475 (453) History of Mexico (3) Prerequisite: Six hours of history, or permission of the instructor. A study of Mexican history from the pre-Columbian era to the present, with emphasis on the national period.

478 (438) Spanish Borderlands (3) Prerequisite: Six hours of history, or permission of the instructor. A study of Mexican history from the Carolinas to the Pacific considered as a part of the kingdom of New Spain and, later, the United Mexican States, 1500-1848; expeditions of discovery, exploration, and conquest; political and social developments; foreign encroachment; incorporation of the area into the United States; and the origins of the present Mexican-American mởболь.

480 Alexander the Great and the Hellenistic World (3) Prerequisite: Six hours of history, or permission of the instructor. The United States frontier from the Carolinas to the Pacific considered as a part of the kingdom of New Spain and, later, the United Mexican States, 1500-1848; expeditions of discovery, exploration, and conquest; political and social developments; foreign encroachment; incorporation of the area into the United States; and the origins of the present Mexican-American möbíl.

485 Internship (3, or 6) Open to authorized junior and senior history majors only. Internships are approved work-study programs established by the department in cooperation with specific organizations. Credit, to be determined by the department, is either three or six hours in accordance with the amount of work performed.

486 Directed Readings in History (3) Open only to senior majors in history with permission of the instructor. A student may not present more than three hours of seminar for graduation credit. A rigorous examination of the literature on a specialized topic in history, conducted on an individual basis in consultation with the instructor. The student must defend the major work in the seminar paper. A maximum of six hours may be earned.

499 Senior Seminar in History (3) Open only to senior majors in history with permission of the instructor. A student may not present more than three hours of seminar for graduation credit. Intensive research on a specialized historical topic culminating in the production of a seminar paper. Subject is determined by the instructor conducting the section and may be obtained in advance.

500 The Study and Writing of History (3) The methodology of the historian, including techniques of documentation and other sources, development of bibliography, synthesis of material.

501 The Colonial Origins of American Society (3) A study of the development of those elements in colonial society which continue to affect contemporary American institutions and patterns of behavior.

503 The Enlightenment in America (3) A study of the Enlightenment as it was reflected in various aspects of American life in the eighteenth and early nineteenth centuries: government, science, philosophy, religion, education, and the arts. The writings of leading figures of the period are examined and the impact of the Enlightenment on the development of the new American nation is assessed.

505 Attempts to Control the U.S. Westward Movement (3) A study of attempts by the East to control the West, how and by whom control was attempted, to what extent it was effective, to what extent the need for such control existed, and in what manner the West resisted Eastern domination.

507 Interpretations in the United States Diplomatic History (3) Diplomatic problems and interpretations of diplomatic changes in the course of the development of the United States as a world power. Analyses of the administration of American foreign policy and its relationship to national interests.

509 Seminar in State and Local History (3) Prerequisite: HIS 500 or permission of the department. An examination of selected aspects of state and local history, following an extensive investigation of selected aspects of the history of Fairfax County and Northern Virginia utilizing area museum collections.

510 Race in American Life and Thought (3) An historical examination of the nature of American attitudes toward nonwhites and of the impact of these attitudes on American life and thought. Emphasis is placed on the origins of American views of race and their effect on our national experience.

511, 512 Research Seminar in United States History (3, 3) Prerequisite: HIS 500 or permission of the department. Research in specialized topics using primary sources.

515 Problems in American History (3) Readings and discussion of bibliographies, interpretations, and research trends in topics selected by the instructor. A maximum of six hours may be earned.

517 Topics in Recent U.S. History, 1945 to Present (3) An examination of the political, social, economic, and cultural forces which shaped the post-World War II American experience. Consideration of the interaction between foreign affairs and domestic policies and institutions. Alternative interpretations are examined.

519 Seminar on Inter-American Diplomacy (3) Prerequisite: HIS 500 or permission of the department. A research seminar on geographic, political, economic, military, and diplomatic relations that have influenced inter-American relations. Study of the special relationship between the United States and Latin America. This course may be applied toward the major requirement in either U.S. or Latin American history.

520 Social Revolution in Latin America (3) An analysis of the revolutionary forces that are changing traditional institutions and transforming all aspects of society in contemporary Latin America. Selected countries are studied in depth either because of their importance in the hemisphere or because they represent the outstanding problems of the region.

521, 522 Research Seminar in Latin American History (3, 3) Prerequisite: HIS 500 or permission of the department. Research in specialized topics using primary sources.

525 Problems in Latin American History (3) An examination of selected problems in Latin American history. Emphasis is placed upon reading and discussion of historical interpretations and the development of bibliography. A maximum of six hours may be earned.

528 (518) Latin American Cultural and Intellectual History, Nineteenth Century (3) Iberian background and other foreign influences; identity of the independent leaders; mid-century Romanticism, Liberalism, and Traditionalism; secular and religious Positivism; and Marxian social philosophy. Intelectual developments traced in major Latin American thinkers, writers, and artists.

531, 532 Research Seminar in European History (3, 3) Prerequisite: HIS 500 or permission of the department. Research in specialized topics using primary sources.

533 Problems in European History (3) An examination of selected problems in the history of Europe. Readings, discussions, development of bibliographies. Where possible, primary sources are utilized. A maximum of six hours may be earned.

534 The British Empire: Empire to Commonwealth, 1870-1970 (3) An examination of the rise of the "new imperial" in Great Britain from 1870 to the end of the empire and the gradual formation of the Commonwealth of Nations.

539 Society and Politics in Western Europe, 1750-1914 (3) The course focuses on changes in social conditions and their ramifications in political life. Attention is given to urbanization of workers, changes in the political structure, decline of the nobility, as well as major political developments and the expansion of liberal reforms.

545 The Russian Revolution and the Origins of the Soviet State (3) A study of the period between 1890 and 1924 with concentration of the sources of Bolshevism, the problems of the old regime as they led up to the revolution of 1917. The Revolution and its survival in an environment of foreign and civil war.

555 Problems in Asian History (3) Problems to be investigated are announced by the instructor of the course. The class discusses readings and historical interpretations and compiles a comprehensive bibliography on the given theme. A maximum of six hours may be earned.

583 The Cultural History of the Islamic World (3) Government, science, philosophy, religion, literature, arts, and architecture of the Arabs of the Umayyad and Abbasid period, Persians of the
HIST

Safavid Period, GAZnavids of Afghanistan, grand Mughals of India and Pakistan, Timurids of Central Asia, Fatamids of Egypt, Moors of Spain, and the Turks. Some important political and cultural movements in different parts of the Islamic World are also discussed.

HIST 595 History Symposium (variable credit)
Admitted to study in history. Class meetings may be held at appropriate community locations. A maximum of six hours may be applied toward the MAT, and a maximum of three hours toward the MA degree.

HIST 599 Directed Readings (3-6)
Independent reading on a topic agreed to by a student and a faculty member.

HIST 599 Thesis (6)

800 Studies for the Doctor of Arts in Education (variable credit)
Prerequisite: Open only to DA Ed students admitted to study in history. A program of studies designed by the student’s discipline director and approved by the student’s doctoral committee which will include research required of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student’s program.

Information Systems Courses (INFS) School of Business Administration

In earlier catalogs these courses were identified as Decision Sciences (DESC) or as Business Administration (BUAD) courses; the course numbers have not changed.

INFS 211 Database Management (3)
A survey of the systems and hardware in general use for data processing by business organizations with emphasis on computer-based data processing and management systems. Topics covered include manual and punched card systems; computer systems-capabilities, hardware operating principles, performance characteristics; computer software; analysis, design and implementation of computer programs, with emphasis on time-shared BASIC; use of library programs; laboratory exercises.

INFS 211 Introduction to COBOL Programming (3)
Prerequisite: DESC 201 (DESC 201). Introduction to computer programming in COBOL and batch processing for managerial applications. Analyzing, coding, debugging, executing, and documenting programs. Laboratory exercises are emphasized.

INFS 201 (DESC 201) Computer Information Systems (3)
A survey of the systems and hardware in general use for data processing by business organizations with emphasis on computer-based data processing and management systems. Topics covered include manual and punched card systems; computer systems-capabilities, hardware operating principles, performance characteristics; computer software; analysis, design and implementation of computer programs, with emphasis on time-shared BASIC; use of library programs; laboratory exercises.

INFS 311 Computer Hardware and Operations (3)
Prerequisite: INFS 201 (DESC 201). A comprehensive course of computer system hardware components, treating both their characteristics and suppliers, and an examination of computer system operations, including operating systems and job control languages. Student teams will conduct feasibility studies which include system descriptions, hardware selection, and operation plans.

INFS 313 (DESC 313) Computer Languages and Data Structures (3)
Prerequisite: INFS 201 (DESC 201). The study of comparative computer languages, their structure and application, covering machine, assembler, and high-level programming languages. Higher level languages will include PL/1, COBOL, and FORTRAN.

411 (DESC 411) Management Information Systems (3)
Prerequisites: ACCT 202, INFS 201 (DESC 201), and DESC 202. An integration of the separate prior learning on computers and on information processing needs in different functional areas of administration such as operations, marketing, finance, personnel, accounting, and planning and control. The student-teams design and implement on the computer at least one aspect of a management information system for an organization. Lecture, laboratory, and project.

Japanese Courses (JAPA) Foreign Languages and Literatures

101, 102 Introduction to the Japanese Language (3, 3)
Introduction to Japanese, including basic grammar, oral expression, listening comprehension, and reading and writing. Language laboratory instruction is an integral part of the course. Three classroom hours and one laboratory hour per week. 101 and 102 must be taken in sequence.

301 Japanese Culture and Civilization (3)
Prerequisite: Junior standing or permission of the instructor. A study of Japan with a focus upon their behavior in the cultural context to gain a better understanding. Problems of cross-cultural understanding between the Japanese and others in a multicultural context are discussed. Films, slides and music are used as an integral part of the course. All coursework in English.

Korean Courses (KORE) Foreign Languages and Literatures

361, 362 Korean Literature (3, 3)
Prerequisite: Knowledge of the Korean language. A survey of Korean literature from the Three Kingdoms period to the twentieth century. A study of the vernacular genres of verse and prose in Korea. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

450, 451 Korean Culture and Civilization (3, 3)
Prerequisite: Junior standing or permission of the instructor. A survey of the Korean culture and civilization, including culture, philosophy, religion, education, and family life, and discussion of the problems of cross-cultural understanding. The coursework is in English. This course may be taken toward fulfillment of the non-Western Culture requirement for the BA degree.

Language Arts and Cultures Courses (LAC)

See “Regional Cultures.”

Latin Courses (LATN) Foreign Languages and Literatures

101, 102 Elementary Latin (3, 3)
Introduction to Latin, including basic grammar and the development of reading skills, introduction to Latin literature and Roman civilization. Three classroom hours and one laboratory hour per week. 101 and 102 must be taken in sequence.

201 Intermediate Latin: Prose and Poetry (3)
Prerequisite: LATN 102 or equivalent. Intensive review of elementary grammar; introduction to major advanced grammatical constructions and patterns of usage; continued development of reading proficiency in various genres selected from classical and post-classical Latin literature; study of the origin and development of Latin literature. Three classroom hours and one laboratory hour per week.

202 Intermediate Latin: The Golden and Silver Ages (3)
Prerequisite: LATN 201 or equivalent. Study of advanced grammatical constructions and patterns of usage; reading selections from various Latin authors who flourished during the late republic and early Empire of Rome; study of the cultural and political background of classical Latin authors. Three classroom hours and one laboratory hour per week.

Library Science Courses (LSCI) Education

401 Adolescent and Adult Literature (3)
The selection of classics and contemporary interdisciplinary reading materials in relation to the needs, abilities, and interest of adolescents, including adult titles for young people. Reading guidance for this age group. Attention to the gifted student, reluctant reader, and slow learner. Procedures for handling complaints relating to controversial materials. Suitable elective especially for secondary education majors.

402 Information Services (3)
Designated for the general university student as well as library science students. Use of basic library materials plus emphasis on elementary and secondary school library centers, and experience in the evaluation of reference books and in answering fact-finding and material-gathering questions.

403 Introduction to Technical Processing for Libraries (3)
The purpose of this course is to acquaint the library science student with general techniques and routines in the acquisition, preparation, and circulation of print and non-print materials. Includes simplified classification and cataloging.

404 Administration of School Library Media Centers (3)
Prerequisites: LSCI 401, 402, and 403. To develop the understanding, attitudes, skills, and information necessary for leadership in a school library media center that will contribute to the school’s educational objectives. Includes visits to neighboring school library media centers.

405 Practicum in the School Library Media Center (3)
Prerequisites: LSCI 404 at the University and admission to the Teacher Education Program or possession of a Collegiate Professional Certificate or equivalent and permission of the instructor. Involves 120 hours of observation and practice in the school library media center. Designed to give the school media specialist expertise in many aspects of media service.

Management Courses (MGMT) School of Business Administration

301 Principles of Management (3)
Prerequisite: Junior standing or permission of the instructor. An introduction to management. Historical evolution of management thought with particular emphasis on modern theories of management; managerial functions of planning, organizing, directing, and controlling, organizational activity. Practical application of theory to actual business situations.
311 Organizational Behavior and Administration (3)
Prerequisite: MGMT 301 or permission of the instructor.
Perspectives for understanding and predicting behavior in formal organizations as applied to management theory and practice. Basic concepts of organizational behavior such as power, authority, and the organizational environment. Case studies of the application of organizational dynamics are explored in relationship to organizational functions such as the design of organizations and the promotion of organizational effectiveness.

321 Personnel Administration (3)
An examination of the principles and procedures related to the recruitment and selection of a labor force, grievance and disciplinary procedures, problems in employee motivation, affirmative action, pay policies, merit rating, promotion, training, etc., with emphasis on their relationship to management.

331 Labor-Management Relations (3)
An examination of American trade unions and organizing unions. The 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 and duties of unions and management; the political-economic impact of unionism.

341 Business Communication (3)
An introduction to the theory and practice of effective business communication. Includes inquiry into the principles of communication, communicating through correspondence and reports, and business research.

351 Small Business Management (3)
Prerequisites: Completion of ACCT 201, 202, MGMT 301, 341, or permission of the instructor. A study of the entrepreneur and entrepreneurial organizations. Emphasis is on the entrepreneurial process and social, economic, and cultural factors affecting entrepreneurial behavior. Lecture, case studies, and research are used to illustrate and develop conceptual and operational understanding of small business problems facing the small businessman in a variety of high-technology and service-related businesses.

371 Government and Business (3)
Prerequisites: ECON 103 and 104 or permission of the instructor. An introduction to the causes and effects of business decisions and policies on local, state, national, and international levels.

381 Management Problem Solving and Decision-making (3)
Prerequisite: MGMT 301. Application of the principles and techniques of management to cases drawn from real world business practices. Cases involving hospitals, public agencies, voluntary associations, educational institutions, and general business enterprises are covered. Emphasis is placed on the internal organization and management of the enterprise. This course exposes the student to the purpose, methodology, and techniques used to analyze business problems effectively. The complete spectrum of analysis and design is presented from isolation and definition to evaluation of alternatives and selection. Applications of systems theory are also explored to enhance student perspective and creativity in problem solving.

411 Organization Theory and Development (3)
Prerequisite: MGMT 311. The study of complex organization from the perspective of developing theoretical models and applied research designs. Particular emphasis on the systems approach as an integrative framework. Analytical and experimental exercises and case assignments acquaint the student with organization development techniques for effective management of change.

421 Advanced Personnel Administration (3)
Prerequisites: DESC 301 and MGMT 321. An in-depth, experience-based examination of the more comprehensive areas of personnel administration: job and task analysis, performance appraisal, selection and placement, wage and salary field of personnel administration.

431 Labor Legislation and Collective Bargaining (3)
Prerequisite: MGMT 321. Stresses the institutional framework in which the structure of collective bargaining is cast, focusing primarily on the private sector. The first half of the course is devoted to a coverage of the major pieces of labor legislation, such as the Wagner Act, the Taft-Hartley Act, the Civil Rights Act, etc. The second half includes an analysis of the collective bargaining function, i.e., who participates, what is the legal environment, what techniques are used, what are the major issues, and how to evaluate the end result—the labor contract.

461 Operations Management (3)
Prerequisites: ACCT 202, DESC 301 and MGMT 301. An introduction to operations (production) management as practiced in both manufacturing and service industries. A contemporary approach to the study of the aspects of productivity, technology, new processes, materials, products, equipment, and facilities. Implications of new technology in managing the operation (production) function.

471 The Social Environment of American Business (3)
Prerequisite: Senior class standing or permission of the instructor. An introduction to operations (production) management as practiced in both manufacturing and service industries. A contemporary approach to the study of the aspects of productivity, technology, new processes, materials, products, equipment, and facilities. Implications of new technology in managing the operation (production) function.

471 Seminar in Management Theory (3)
Prerequisites: Completion of MGMT 301, six hours of management work beyond MGMT 301, and senior class standing, or permission of the instructor. Advanced study of management concepts and theories designed to deepen, expand, and integrate the student's knowledge of management theory and practice. Included is an intensive examination of major writers and practitioners' concepts, and the application of these concepts to contemporary research findings are explored. Also included are selected topics for research and study.

Marketing Courses (MKTG) School of Business Administration

301 Principles of Marketing (3)
An examination of the marketing structure and of business and economic activities involved in marketing goods. Attention is given to surveys, techniques and theories designed for expanding, and alternative policies, to social and economic consequences, and to governmental supervision and control of the marketing of consumer and industrial goods.

311 Sales Management (3)
Prerequisite: MKTG 301. An examination and evaluation of the sales effort as it relates to the consumer and participants within the marketing channel.

312 Consumer Behavior (3)
Prerequisite: MKTG 301. A study of the concepts, theories, and techniques underlying the market behavior of consumers. Applications to marketing problem solving and decisionmaking.

313 Advertising Management (3)
Prerequisite: MKTG 301. Advertising and its role as a function of marketing and merchandising; as a tool of management; evaluation, criticism and control of advertising. Measurement of results.

331 Distribution Systems (3)
Prerequisite: MKTG 301. The study, using case analyses, of the design, selection, evaluation, and management of the marketing channels of distribution; with particular emphasis on the physical distribution concept and the storage, handling, and transportation functions.

332 Retail Management (3)
Prerequisite: MKTG 301. A comprehensive view of retailing as it relates to the total marketing process. Emphasis on the retail decision alternatives used when formulating retail strategy.

333 Industrial and Governmental Marketing (3)
Prerequisite: MKTG 301. An in-depth description, analysis, and evaluation of the industrial and governmental marketplaces. Emphasis on the marketing procedures practiced and available to the decision makers within these markets.

351 Marketing Research Techniques and Applications (3)
Prerequisite: MKTG 301. A study of the concepts, theories, and principles underlying the marketing research process. Course focuses on the development and evaluation of research designs for gathering marketing information.

451 Marketing Information Systems (3)
Prerequisites: MKTG 301. The design and study of internal and external systems that provide information to the marketing decision maker. Information provided by the system is used to make critical marketing decisions regarding product, market, competition, salesmen, channel, and related decisions.

471 Marketing Management (3)
Prerequisite: Nine hours of marketing. In-depth treatment within a seminar format of topics with marketing. Emphasis on the ability to synthesize and communicate contemporary issues in marketing.

Mathematics Courses (MATH)

In exceptional cases the prerequisite for a course above the calculus sequence may be waived at the discretion of the instructor.

100 Algebra (no credit)
Meets three hours per week for two-thirds of the semester. No degree credit is given; however, tuition and fees are charged for two hours. Basic algebraic manipulations of linear equations and graphing. A study of the properties of polynomial, logarithmic, and exponential functions.

101 Algebra and Elementary Functions (no credit)
Meets three hours per week. No degree credit is given; however, tuition and fees are charged for three hours. Basic algebraic manipulations. Linear equations and graphing. A study of the properties of polynomial, logarithmic, exponential, trigonometric functions.

102 Trigonometry (no credit)
Meets three hours per week for one-third of the semester. No degree credit is given; however, tuition and fees are charged for one hour. Basic trigonometry. A study of the properties of trigonometric functions.

103 Finite Mathematics (3)
Elementary set theory, probability, and statistics.

104 Finite Mathematics (3)
Elementary set theory, probability, and statistics.

108 Introductory Calculus with Business Applications (3)
Prerequisite: MATH 103. Matrix algebra, linear programming, Markov chains and game theory. Applications.

108 Introductory Calculus with Business Applications (3)
Prerequisite: MATH 103. Matrix algebra, linear programming, Markov chains and game theory. Applications.

109 Introductory Statistics with Business Applications (3)
Prerequisite: MATH 108 is strongly recommended as a prerequisite. Frequency distributions, probability, probability distributions, sampling distributions, estimation, hypothesis testing.

113, 114, 213 Analytical Geometry and Calculus I, II, III (4, 4, 3)
Must be taken in sequence. Functions, limits, the derivative, optimization and minimum problems, the integral, transcendental functions, applications. Techniques of integration, vectors and analytic geometry, differentiation of functions of several
Corequisite: MATH 221 or CS 161. Must be taken in sequence. Analytic geometry, functions, differentiation and integration in several dimensions, infinite series. 200 Foundations of Mathematics (3)
Prerequisite: MATH 116. Real numbers, axiom systems, naive set theory, cardinal and ordinal numbers.
252 Introductory Statistics (2)
An introduction to the underlying principles and methods of elementary statistics. The course emphasizes an understanding of statistical techniques, how to apply them, and when to apply them.
254 Applications of Statistics in Health Care (1)
Prerequisite or corequisite: MATH 252. An introduction to the problems of data gathering and evaluation in the area of health care information. There is some use of calculators as special projects are assigned and existing reports in the area of health care are evaluated and criticized.
255 Applications of Statistics in Public Administration (1)
Prerequisite or corequisite: MATH 252. An introduction to the problems of data gathering and statistical evaluation in the area of public administration. There is some use of calculators as special projects are assigned and existing reports in the area of public sector are evaluated and criticized.
301 Number Theory (3)
Prerequisite: MATH 116. Prime numbers, factorization, congruences, Diophantine equations.
302 Geometry (3)
Prerequisite: Six semester hours of mathematical sciences. Fundamental concepts of incidence. Axioms of Euclidean geometry and the resulting theory, axioms and development of non-Euclidean and projective geometry.
304 Elementary Differential Equations (3)
Prerequisite: MATH 213. First order differential equations, second order linear differential equations, systems of linear differential equations.
306 Theory of Differential Equations (3)
Prerequisite: MATH 215. First and second order equations, existence-uniqueness of solutions, systems of linear differential equations, Laplace transforms, power series solutions.
313, 314 Introduction to Applied Mathematics (3, 3)
Prerequisite: MATH 304 or 306. Euclidean Spaces. Fourier and orthogonal series, special functions, boundary-value problems, partial differential equations, special functions.
315, 316 Advanced Calculus (3, 3)
Prerequisite: MATH 306. Elementary topology, limits, continuity, differentiation, integration, and series of functions, several variables.
321 Abstract Algebra (3)
Prerequisite: MATH 215. Theory of groups, rings, fields.
322 Linear Algebra (3)
Prerequisite: MATH 215. Vector spaces, linear independence, bases, linear transformations, matrix algebra, inner product, special topics.
351 Probability (3)
Prerequisite: MATH 213 or 215. Random variables, probability functions, special distributions, limit theorems.
352 Statistics (3)
Prerequisite: MATH 351. Estimation, decision theory, testing hypothesis, correlation, linear models and design.
371, 372, 373 Mathematics for the Elementary School Teacher I, II, III (3, 3, 3)
Concepts and theories underlying elementary school mathematics, including sets, logic, systems of numeration, whole numbers, and operations with whole numbers. Number sentences, number theory, intuitive geometry, rational numbers, integers, measurement and probability. Introduction to the use of computers and hand-held calculators, properties of graphs and descriptive statistics through consumer-related problems. These courses are intended for elementary education majors only. They do not count toward a major in mathematics. The third course partially satisfies Virginia state teacher certificate requirements in secondary school pre-algebra mathematics.
382 Introduction to Stochastic Processes (3)
Prerequisite: MATH 315 or MATH 313 and MATH 357. General notion of stochastic processes, finite and infinite Markov chains, discrete and continuous models, stationary processes, random walk problems, birth and death processes, waiting line and serving problems. Brownian motion.
411 Functions of a Complex Variable (3)
Prerequisite: MATH 304 or 306. Analytic functions, contour integration, residues, and applications to such topics as integral transforms, generalized functions, and boundary problems.
425 Discrete Mathematical Structures (3)
Prerequisite: MATH 200 or MATH 322. A survey of topics in discrete mathematics essential to the study of computer science. Topics covered include: lattices, Boolean algebras, graphs and digraphs, finite-state machines, and combinatorics.
431 Topology (3)
Prerequisites: MATH 306 and six hours of mathematical sciences above the 310-level. Metric spaces, topological spaces, compactness, connectedness.
443 Deterministic Models in Operations Research I (3)
Prerequisite: MATH 322 or equivalent. Theory and applications of linear programming. Detailed development of the simplex algorithm and its variants, duality theory, the dual and primal-dual algorithms, post-optimality analysis, parametric programming. Applications to economics, game theory, and management problems in industry, government, and the environment.
444 Deterministic Models in Operations Research II (3)
Prerequisite: MATH 443 or equivalent. The transshipment and assignment problems and variations. Two- and three-stage models including maximum flow, minimal cost flow, shortest path, critical path (PERT), supply-demand, minimal spanning tree, and transshipment problems. Introduction to dynamic programming.
446, 447 Numerical Analysis and Digital Computation (3, 3)
Prerequisites: MATH 306 and a knowledge of a scientific programming language. Knowledge of matrix algebra required for MATH 447. Numerical solutions of ordinary and partial differential equations, numerical differentiation and integration, significant figures, errors. Formulation of numerical problems for solution on digital computers. 491, 492 Reading and Problems (1-3, 1-3)
Enrollment restricted to mathematical sciences majors. Independent study in mathematics. Must be arranged with instructor prior to registration.
A double number separated by a comma (MATH 521, 522) indicates that both graduate courses normally constitute a sequence and that the first semester is a prerequisite to the second. The prerequisite may be waived by the department chairperson.
503 Intermediate Analysis (3)
Development of the number system, a review of the highlights of calculus, sequences and series of functions. Credit for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but can be counted toward the Master of Education degree.
504 Intermediate Algebra (3)
Linear algebra, vector spaces, linear independence, linear transformations, and matrix operations. Credits for this course are not applicable toward the 30 credit requirement for the MS in mathematics, but can be counted toward the Master of Education degree.
511, 512 Complex Analysis (3)
513, 514 Ordinary Differential Equations (3, 3)
Prerequisite: MATH 355 or permission of the instructor. General properties of differential equations. Linear Systems. Properties of Solutions.
515, 516 Analysis I, II (3, 3)
Real and complex number systems, topology of euclidean space, continuity and differentiability of functions, Riemann-Stieltjes integration, modes of convergence of series, power series, elementary functions, complex analytic functions, Cauchy’s theorem, contour integration, normed linear spaces, contraction mapping theorem, Baire category theorem, Azeela-Ascoli theorem, differentiable mappings in euclidean space, inverse and implicit function theorems, Lebesgue integration, dominated convergence theorem, measurable sets and functions.
521, 522 Algebra (3, 3)
Groups, rings, fields, category theory, Galois theory.
531, 532 Point Set Topology (3, 3)
Topological spaces, connectedness, compactness, compactifications, uniform spaces, function spaces.
534 Homotopy Theory (3)
Homotopy theory including the fundamental group, higher groups and exact sequences.
536 Homology Theory (3)
Homology theory and simplicial homology theory, exact sequences, fixed point theorems.
537, 538 Non-Euclidean Geometry (3, 3)
Prerequisite: Permission of the instructor. Affine, projective, hyperbolic, elliptical, and geometric geometry; transformations and elementary combinatorics.
543 Mathematical Programming I (3)
Prerequisite: MATH 445 or permission of the instructor. Integer Programming. Cutting plane and enumeration techniques for the solution of integer linear programs. Knapsack problem, set covering and partitioning problems, matching problem. Applications to problems in the management sciences, such as capital budgeting, location of facilities, political redistricting, and scheduling problems.
544 Mathematical Programming II (3)
Prerequisite: MATH 515 and knowledge of a scientific programming language, or permission of the instructor. Mathematical Programming. Optimization techniques applicable to the most frequently occurring mathematical models in the field of engineering, economics, operations research, and management science. Unconstrained optimization by search techniques, descent methods and conjugate directions. Constrained optimization by a transformation to unconstrained problems, and techniques which deal with the constraint region explicitly.
551 Probability Theory (3)
Axioms for a probability space, conditional probability, random variables, distribution functions, moments, characteristic functions, modes of convergence, limit theorems.
554 Applied Statistics (3)
Prerequisite: MATH 351 or equivalent, or MATH 557. Sampling theory, estimation, hypothesis testing, comparison of data, various classical tests, linear models and analysis of variance, decision theory.
555 Regression Analysis (3)
Prerequisite: MATH 554 or 352 and a working knowledge of matrix algebra. Simple and multiple linear regression and correlation, polynomial regression, general regression, search techniques for best regression equation, multicollinearity, autocorrelation, nonparametric correlation models.
556 Analysis of Variance (3)
Prerequisite: MATH 554 or 352 and a working knowledge of matrix algebra. Single and multivariate analysis of variance, planning sample sizes,
country's in a historical setting. Influences of other cultures on the musical life of representative countries are viewed.

107 The Development of Jazz (3)
F All students. An historical, analytical, and aural survey of jazz from its inception to the present day, designed to provide an understanding of the basic aesthetic and technical elements of jazz and its development, and an acquaintance with important artists in the field. Attention is also given to hybrid trends resulting from the synthesis of jazz with other musics.

113 Sight Singing and Ear Training I (2)
Prerequisite: Student must be able to read music and must have some proficiency on a musical instrument or in voice. The student is taught to sing a line of music without the accompaniment of an instrument. Matching tones, major and minor scales, key signatures, intervals, rhythm, Treble, bass, and figuring are covered. Harmonic, melodic, and lyric dictation. Three hours per week.

114 Sight Singing and Ear Training II (2)
Prerequisite: MUSI 113 or permission of the instructor. A continuation of Sight Singing and Ear Training I. Modulation, various modes. Melodic and harmonic dictation. Three hours per week.

115 Harmony I (3)
Prerequisite: Permission of the instructor. A survey of the principles and practices of music and their application to non-western music. 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, and figuring are covered. Harmonic, melodic, and lyric dictation. Three hours per week.

116 Harmony II (3)
Prerequisite: MUSI 115 or permission of the instructor. A continuation of Harmony I. Includes: inversion-chords, modulation, nonharmonic tones, figured bass, seventh chords. Analysis of Bach chorales; composition of four-part chorales in eighteenth-century style.

151 Class Strings: Violin and Viola (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the violin and viola. A survey of instrumental materials, and bow and instrument selection. Two hours per week.

152 Class Strings: Cello and String Bass (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the cello and string bass. A survey of instrumental materials, and bow and instrument selection. Two hours per week.

153 Class Woodwinds: Flute and Clarinet (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the clarinet. A survey of instrumental materials, and bow and instrument selection. Two hours per week.

154 Class Woodwinds: Oboe and Bassoon (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the oboe and bassoon. A survey of instrumental materials, instrument selection, and reed adjustment. Two hours per week.

155 Class Brass (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the brass instruments. A survey of instrumental materials, and mouthpiece and instrument selection. Two hours per week.

156 Class Percussion (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the percussion instruments. A survey of instrumental materials and instrument selection. Two hours per week.

157 Class Guitar (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the guitar. A survey of instrumental materials and instrument selection. Two hours per week.

158 Class Voice I (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of the human voice in artistic singing. Practical application of basic principles is emphasized. Two hours per week.

159 Class Voice II (1)
Prerequisite: MUSI 158 or permission of the instructor. A continuation of voice study begun in MUSI 158, with emphasis on artistic singing in selected styles. Two hours per week.

171 Class Piano I (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of the piano keyboard and its relation to various clefs in music. Emphasis is placed on the solution of basic problems of a stylistic and technical nature.

172 Class Piano II (1)
Prerequisite: MUSI 171 or permission of the instructor. The study of the piano keyboard as it is related to intermediate song and mixed in various music forms.

181-183 Sympathetic Winds (1, 1, 1, 1, 1, 1, 1)
Performance of works from the choral repertoire, to include one major composition each semester. Public concerts are given. Four credits are to be earned at the 181 level before proceeding to the 383 level. Three hours per week. May be taken for credit eight times. Four credits are to be earned at the 183 level before proceeding to the 383 level. Three hours per week.

187, 387 Chamber Orchestra (1, 1, 1, 1, 1, 1, 1)
Open to all students in the University who possess a reasonable amount of performing ability. Performance of works from the chamber orchestra repertoire. Public concerts are given. May be taken for credit eight times. Four credits are to be earned at the 187 level before proceeding to the 387 level. Three hours per week.

189, 389 Chamber Ensemble (1, 1, 1, 1, 1, 1, 1, 1)
Prerequisite: Audition. An ensemble intended to provide the student with practical experience in the various aspects of jazz performance-delivery work within a large ensemble, combo work, and improvisation. Public concerts are given. May be taken for credit eight times. Four credits are to be earned at the 189 level before proceeding to the 389 level. Three hours per week.

215 Harmonic I (3)
Prerequisite: MUSI 116 or permission of the instructor. A study of four-part chromatic harmony and analysis of eighteenth-century compositions.

216 Harmonic IV (2)
Prerequisite: MUSI 215 or permission of the instructor. A continuation of the study of chromatic harmony as it applies to the classical forms.

218 Keyboard Harmony (1)
Prerequisite: MUSI 172 and 215. For music majors only. A study of techniques of harmonization at the piano. Three hours per week.

231 Survey of World Music (3)
Prerequisite: MUSI 215 or permission of the instructor. A survey of music literature in the four major theoretical systems of the world with emphasis on the influences of non-Western systems on Western music.

251 Music for the Elementary School (4)
Prerequisites: MUSI 315 or MUSI 158. Study of fundamentals of music, harmony, and music and their notation. Development of basic vocal, instrumental, and classroom skills (sight-reading, rhythmic dictation, musical composition, and the use of music notation).

252 Survey of United States Music (3)
Prerequisite: MUSI 315 or MUSI 158. Survey of music of the United States from earliest times to the present. Emphasis is placed on the solution of basic problems of a stylistic and technical nature.

253 Survey of Latin American Music (3)
Prerequisite: MUSI 315 or MUSI 158. Survey of music of Latin American countries in a historical setting. Influences of other cultures on the musical life of representative countries are viewed.

267 The Development of Jazz (3)
Prerequisite: MUSI 216 or permission of the instructor. A survey of the development of jazz from its origin to the present day, designed to provide an understanding of the basic aesthetic and technical elements of jazz and its development, and an acquaintance with important artists in the field. Attention is also given to hybrid trends resulting from the synthesis of jazz with other musics.

268 Sight Singing and Ear Training I (2)
Prerequisite: Student must be able to read music and must have some proficiency on a musical instrument or in voice. The student is taught to sing a line of music without the accompaniment of an instrument. Matching tones, major and minor scales, key signatures, intervals, rhythm, Treble, bass, and figuring are covered. Harmonic, melodic, and lyric dictation. Three hours per week.

269 Sight Singing and Ear Training II (2)
Prerequisite: MUSI 268 or permission of the instructor. A continuation of Sight Singing and Ear Training I. Modulation, various modes. Melodic and harmonic dictation. Three hours per week.

270 Harmony I (3)
Prerequisite: Permission of the instructor. A survey of the principles and practices of music and their application to non-western music. 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, and figuring are covered. Harmonic, melodic, and lyric dictation. Three hours per week.

271 Harmony II (3)
Prerequisite: MUSI 270 or permission of the instructor. A continuation of Harmony I. Includes: inversion-chords, modulation, nonharmonic tones, figured bass, seventh chords. Analysis of Bach chorales; composition of four-part chorales in eighteenth-century style.

272 Class Strings: Violin and Viola (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the violin and viola. A survey of instrumental materials, and bow and instrument selection. Two hours per week.

273 Class Strings: Cello and String Bass (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the cello and string bass. A survey of instrumental materials, and bow and instrument selection. Two hours per week.

274 Class Woodwinds: Flute and Clarinet (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the clarinet. A survey of instrumental materials, and mouthpiece and instrument selection. Two hours per week.

275 Class Woodwinds: Oboe and Bassoon (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the oboe and bassoon. A survey of instrumental materials, instrument selection, and reed adjustment. Two hours per week.

276 Class Brass (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the brass instruments. A survey of instrumental materials, and mouthpiece and instrument selection. Two hours per week.

277 Class Percussion (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the percussion instruments. A survey of instrumental materials and instrument selection. Two hours per week.

278 Class Guitar (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of techniques of playing and teaching the guitar. A survey of instrumental materials and instrument selection. Two hours per week.

279 Class Voice I (1)
Prerequisite: Nonmusic majors must have permission of the instructor. A study of the human voice in artistic singing. Practical application of basic principles is emphasized. Two hours per week.

280 Class Voice II (1)
Prerequisite: MUSI 279 or permission of the instructor. A continuation of voice study begun in MUSI 279, with emphasis on artistic singing in selected styles. Two hours per week.

281-283 Sympathetic Winds (1, 1, 1, 1, 1, 1, 1)
Performance of works from the choral repertoire, to include one major composition each semester. Public concerts are given. Four credits are to be earned at the 281 level before proceeding to the 383 level. Three hours per week. May be taken for credit eight times. Four credits are to be earned at the 283 level before proceeding to the 383 level. Three hours per week.
319 Class Composition and Arranging (3)
Prerequisite: MUSI 114, 216 or permission of the instructor.
Students are encouraged to exercise their creative powers through the writing of original compositions. Involves instruments, voices, or combinations. They then apply compositional principles to the creative arrangement of existing music of various styles.

320 Clinical Pedagogy (3)
Prerequisite: MUSI 319 or permission of the instructor.
The compositional skills acquired in Class Composition and Arranging I are applied to larger ensembles, with emphasis on twentieth-century techniques.

327 Choral Arranging (3)
Prerequisite: MUSI 216 or permission of the instructor.
A comprehensive course in the practical application of the various techniques employed in the composition and arrangement of choral music.
The scope of the course includes notation, text setting, choral writing, choral text analysis, and temporary vocal writing, as well as the composition of original materials as they apply to arranging techniques.

335 Historical, Theoretical, and Analytical Study of Music I (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor.
A study of music in Western civilization from Greek antiquity through the Renaissance, with emphasis on historical, theoretical, and analytical aspects.

336 Historical, Theoretical, and Analytical Study of Music II (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor.
A study of music in Western civilization from Monteverdi through Haydn, Mozart, and their contemporaries, with emphasis on historical, theoretical, and analytical aspects.

351 Piano Pedagogy (3)
Prerequisite: MUSI 114, 216, 218 and eight credits in piano, or permission of the instructor.
An investigation of individualized approach to the teaching of the piano and its antecedents from the Renaissance to the present, with emphasis on historical, theoretical, and analytical aspects.

385 Collegium Musicum (1, 1, 1)
Prerequisite: Audition.
The discovery, interpretation, and performance of a wide variety of vocal, choral, and instrumental music from the Middle Ages through the present, with emphasis on historical development, artistic expression, and musical performance.

386 Laboratory Ensemble (1)
Prerequisite: One semester of class instrumental instruction on a band or orchestra instrument. For music majors only. A vocal and instrumental ensemble for music majors seeking state certification as music instructors. Designed to provide opportunities for performance on secondary instruments and voice and to serve as a laboratory for conducting, methods and materials, and composition and arrangement. This course may be taken for credit two times. Three hours per week.

391 General Conducting (2)
Prerequisite: MUSI 114, 172, 216, and 218, or permission of the instructor. A study of basic techniques of conducting a musical ensemble. Three hours per week.

406 Advanced Conducting (2)
Prerequisite: MUSI 216 or permission of the instructor.
An advanced conducting course emphasizing the techniques of bringing a musical ensemble (chorus, orchestra, wind ensemble) to a point of control. Consideration is given to the interpretation of repertoire from the applicable historical periods. Students demonstrate mastery of selected scores by conducting one of the University musical ensembles. Three hours per week.

400 The Fusion of the Arts (3)
Prerequisite: EUST 300 or permission of the instructors.
An examination of contemporary art in the light of the various elements of the arts. Chapters are determined by the arts which are analyzed and evaluated. Study of manifestations of aesthetics through form and structure in the music and art of the past, as well as in the present age of technology.

417 Techniques of Twentieth-Century Style Analysis (3)
Prerequisite: MUSI 216, 218, and 319, or permission of the instructor.
The various analytical methods by which the student will more fully understand the complex nature of twentieth-century music and the diverse styles of today's composers. Selected masterworks from the contemporary music literature are discussed and analyzed in class.

419 Orchestration (3)
Prerequisite: MUSI 319, 320, or permission of the instructor.
The principles of combining and balancing instrumental and vocal parts in various contexts. Attention is given to orchestral terminology and general notation as well as timbre, range, clef, transposition, special effects, and scoring procedures. Three hours per week.

435 Historical, Theoretical, and Analytical Study of Music III (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A study of the development of Western music from the Middle Ages through the post-Romantic era, with emphasis on historical, theoretical, and analytical aspects.

436 Historical, Theoretical, and Analytical Study of Music IV (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A study of the development of Western music from late nineteenth-century impressionism through the present, with emphasis on historical, theoretical, and analytical aspects.

437 Choral Literature (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A survey of sacred and secular choral literature from the Middle Ages to the present, with emphasis on historical development, analysis, and performance practices. Representative genres such as Mass, motet, madrigal, anthem, cantata, passion, oratorio, and part-song are studied.

438 Operatic Literature (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A study of the works and operas by selected composers in the fourteenth to the early twentieth century. Three hours per week.

439 Piano Literature (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A chronological survey of the literature of the piano and its antecedents from the sixteenth century to the present. Solo keyboard literature and the influence of various genres (sonata, theme and variations, and character piece) are analyzed and examined in an historical context.

440 Orchestral Literature (3)
Prerequisite: MUSI 216 and 231 or permission of the instructor. A chronological survey of the development of orchestral music from the sixteenth century to the present. Suites, symphonies, concertos, symphonic poems, and other orchestral works of important composers are analyzed and studied in a historical framework.

445 Bibliography and Research Techniques (3)
Prerequisite: Open only to music majors with junior standing and two of the following courses: MUSI 336, 435, 436. A study of basic reference materials in music, as well as the investigation and application of various research principles.

451 The Teaching of General Music in the Elementary School (3)
Prerequisites/Corequisites: MUSI 114, 216, 218, 236, and EDUC 301 and 313. For music majors only. A study of theory, methods, practice, and materials involved in the teaching of general music in the elementary school. Emphasis is on developing effective teaching-learning activities designed to build musical understanding through the student's recognition of known and unknown skills centering on the structure of music. Field experiences in the public schools are required.

452 The Teaching of General Music in the Secondary School (3)
Prerequisites/Corequisites: MUSI 114, 216, 218, 236, and EDUC 301 and 313. For music majors only. A study of theory, methods, practice, and materials involved in the teaching of general music in the secondary school. Emphasis is placed on philosophical foundations, the development of objectives, evaluation of student progress, and the assessment of general music procedures. Field experiences in the public schools are required.

453 The Teaching of Vocal Music in the Secondary School (3)
Prerequisites/Corequisites: MUSI 114, 216, 218, 236, and EDUC 301 and 313. For music majors only. A study of theory, methods, practice, and materials involved in the teaching of instrumental music at the elementary and secondary school levels. Emphasis is placed on philosophical foundations, the development of objectives, evaluation of student progress, recruiting techniques, and management of the various phases of the instrumental music program. Field experiences in the public schools are required.

454 Selected Topics in Music Education (1-3)
Prerequisites: Senior standing in a music degree program or permission of the instructor. Topics of practical interest to music educators including directing music educators covering pedagogy, performance, and logistics related to the teaching of music in the schools, the private studio, and the community. Field experience is required when appropriate. May not be taken for graduate credit. Five hours with the topic and number of credits to be earned.

480 Senior Recital (1)
Corequisite: MUSI 477 or 478. A public recital given by students during their senior year.

496 Seminar in Ethnomusicological Area Studies (3, 3, 3)
Prerequisite: Open only to music majors with or junior standing and permission of the instructor and the music faculty. Intensive research on a specialized ethnomusicological topic culminating in a seminar paper. The areas and subject under study are determined by the instructor conducting the section and may be obtained in advance. The courses may or may not require travel to an underdeveloped country. Required students will finance their own travel expenses. May be taken for credit four times provided a different area or subject is researched each time. Three lecture hours or the equivalent.

497, 498 Independent Study (3)
Prerequisite: Open only to music majors with junior standing and two of the following courses: MUSI 336, 435, 436; and permission of the instructor, the music faculty, and the department.
Nursing Courses (NURS)

Details of content and specific course requirements included in course syllabi:

211 Nursing: A Practice Discipline (2)
Introduction to nursing as an emerging discipline, profession, and occupation. Emphasis is placed on the development of a dynamic concept of nursing and essential behaviors of members of the profession. Two hours lecture.

250 Concepts of Health Throughout the Life Span (3)
Consideration of health maintenance and health promotion behaviors throughout the life cycle. Content includes an examination of normal growth, development, nutrition. Three hours lecture.

260 Design and Control of Nursing Systems (2)
Prerequisite: NURS 211 or permission of the department. Introduction to knowledge needed in designing, implementing, and evaluating nursing systems for individuals and small groups. Two hours lecture.

262 Technologies in Nursing (3)
Prerequisites: NURS 211 and 250. Prerequisite or corequisite: NURS 260 or 306. Skills required in the assessment, design, and control of nursing systems. Clinical practice arranged. Nine hours laboratory.

300 Orientation to Professional Nursing (2)
Prerequisite: Licensure as registered nurse or permission of the department. An examination of the relationship between baccalaureate education and nursing as an occupation, profession, and emerging discipline. Development of a dynamic concept of nursing and essential behaviors of members of the profession. Students who have taken NURS 211 cannot take this course. Two hours lecture.

301, 302 Elements of Pathology and Medical Therapeutics (4, 4)
Prerequisites: Anatomy and physiology, chemistry, microbiology, psychology (3 hrs). Sociology, NURS 211, 250, 260, 262: or permission of the department. Prerequisite or corequisite: NURS 260 cannot take this course. Two hours lecture.

306 Application of Principles of Nursing Systems (2)
Prerequisite: Licensure as registered nurse or permission of the department. Prerequisite or corequisite: NURS 211 or 300. Principles required in assessing, designing, and controlling nursing systems for individuals and small groups. Students who have taken NURS 260 cannot take this course. Two hours lecture.

311, 312 Nursing of Individuals (4, 4)
Prerequisites: NURS 211, 250, 260, 262. Co-requisites: One course from each of the following: NURS 277, 278, 279, 280 or permission of the department. Design and control of nursing systems; purposeful planning to bring together essential elements to form a coherent nursing system. Clinical application to individuals focusing on the variables of age, developmental stages, life cycle events, roles, health disorders, and the health situation. One hour lecture, nine hours laboratory.

321, 322 Nursing of Small Groups (4, 4)
Prerequisite: NURS 211, 250, 260, 262. Corequisite: NURS 302. Design and control of nursing systems; purposeful planning which brings together essential elements to form a coherent nursing system. Clinical application to small groups and families focusing on the variables of age, developmental stages, life cycle events, roles, health disorders, and the health situation. One hour lecture, nine hours laboratory.

397, 398 Fundamentals of Aging I, II, (3)
Prerequisites: Eight hours of biology, anatomy, or physiology; and three hours of psychology or sociology. Prerequisite: NURS 211. An introduction to the study of aging. The physical, psychological, and social aspects of normal aging are examined as well as issues in health care, mental health, social services, and policy. The case study approach is used to explore the field of gerontology. Three to six hours field experience are required.
of the political establishment (in both institutional and governmental administration) on nursing practice are discussed.

615 Survey of Research in Human Development: Implications for Nursing Intervention (3) Seminar presentation of selected research in human development across the life span. Discussion of research findings focuses on application to individuals and groups in long-term health-care settings and implications for management problems and implications for nursing intervention. Three hours lecture.

616 Cancer: Theoretical Foundations and Nursing Interventions (3) Focuses on the current knowledge available about the nature of cancer and present treatment modalities. Particular emphasis is given to the development of a concept of nursing clients with cancer, on understanding of cancer as a major chronic illness, and on the assistance available to clients with cancer and their families. Three hours lecture.

621 (521) Components of Middle Management I (3) Con the functional capacity of the elderly, includes principles, skills, and techniques in health appraisal of all ages. Methods of recording, interpreting, and auditing problem-oriented profiles provide a framework for the development of a health appraisal data base. Two hours lecture, three hours laboratory.

625 Independent Nursing Practice (3) An overview of independent practice and their conceptual frameworks. Problems inherent in pioneering a private nursing practice are delineated with opportunities to explore innovative approaches to independent nursing practice. Three hours lecture.

635 Gerontologic Nursing (3) Analysis of the multidimensional process of aging, its effects on the functional capacity of the elderly, and implications for nursing intervention. The focus is on nursing intervention as it strengthens available family/community and support system, which maintain the older person's capacity for self-care. Three hours lecture.

636 Gerontologic Nursing II: Health Deviations (3) Study of the health deviations common to aging, their effects on the functional capacity of the elderly, and implications for nursing intervention. Restorative and rehabilitative nursing interventions focusing on the client's capacity for self-care are emphasized. Three hours lecture.


698 International Nursing: Theoretical and Practical Dimensions (3) International nursing organizations, programs, and projects are discussed in relation to comparative health care systems. Theoretical conceptualizations, research approaches, and methodological issues in the development of international nursing are emphasized. Three hours lecture.

755 Theoretical Foundations of Nursing (3) An examination of concepts, propositions inherent in selected nursing and related discipline theories. Three hours lecture.

759 Approaches to Data Analysis in Nursing Research (3) An examination of univariate and multivariate procedure appropriate for analyzing nursing research data. Emphasis is placed on the application of statistical procedures in relation to level of data and type and size of sample in nursing research. Three hours lecture.

763 Seminar in Nursing Administration at the Middle Management Level (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759, 790. BAUD 540 and BAUD 591 or equivalent are co- or prerequisite. Utilization of principles and processes as related to the roles and functions of the nurse in middle management in health-related agencies. Three seminar hours.

765 Practicum in Nursing Administration at the Middle Management Level I (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759, 790. Application of administrative theory and management principles and processes in selected health-related agency. The roles and functions of the nurse in middle management are emphasized. Laboratory hours arranged.

767 Seminar in Nursing Administration at the Middle Management Level II (3) Prerequisites: NURS 755, 759, 763, 765, 790. Roles and functions of the nurse in middle management are emphasized. Three hours seminar.

773 Nursing in Long-Term Care and Gerontological Nursing I (3) Prerequisites: Admission to the graduate nursing program. NURS 755, 759, 790. Foundational theory relates the biological, psychological, and social needs and cultural self-care needs of individuals and families. Focus is on nursing care of those with existing or potential long-term health problems, including the elderly and chronically ill. Three seminar hours.

775 Practicum in Long-Term Care and Gerontological Nursing I (3) Prerequisites: Admission to the graduate nursing program, NURS 755, 759, 790. Opportunity to apply the nursing process as it relates to the care of individuals and families with existing or potential long-term health problems, including the elderly and chronically ill. Laboratory hours arranged.

776 Nursing in Long-Term Care and Gerontological Nursing II (3) Prerequisites: NURS 755, 773, 775. Expansion of selected content as it relates to advanced clinical nursing practice. Collaboration with other health care providers in groups and communities is examined. Emphasis is placed on evaluation of nursing care and advanced standards of practice. Three seminar hours.

778 Practicum in Long-Term Care and Gerontological Nursing II (3) Prerequisites: NURS 755, 773, 775. Opportunity to apply the roles of an advanced nursing clinician in selected clinical settings. Laboratory hours arranged.

790 (590) Principles and Methods of Nursing Research (3) Prerequisites: Admission to the graduate nursing program. NURS 755, 759, 773, 775. Opportunity to apply the roles of an advanced nursing clinician in selected clinical settings. Laboratory hours arranged.

797 Group Projects in Nursing Research (3) Prerequisites: NURS 755, 759, 790. Independent reading and a group research project under the direction of a faculty member.

799 Thesis (3-6) Prerequisites: Admission to the graduate nursing program. NURS 755, 759, 790. Co- or prerequisite: NURS 766, 768, 773, 775. Independent reading and a research project, under the direction of a faculty member.

111 Introduction to Social and Political Philosophy (3) An introduction to the major philosophical and political thought. Consideration of the role of the individual in society, the family, education, religion, economics, the state, human rights, freedom, morality, law, authority, and civil disobedience. An effort is made to show how these concepts and institutions reflect various philosophical assumptions concerning human nature and how they relate to contemporary social and ideological movements. This course may not be taken by students who have already taken PHIL 211.

151 Introduction to Ethics (3) A consideration of some of the ethical issues in current society with the purpose of comparing and contrasting the handling of these problems in classical, modern, and contemporary thought. This course may not be taken by students who have already taken PHIL 413.

173 Introduction to Logic (3) A study of basic concepts and techniques of deductive reasoning. Emphasis is placed on the nature of philosophical reasoning and the use of logic to arrive at a conclusion. Rule of inference, but with some study of the classical treatment as well. Also studied are basic principles of induction, the informal fallacies, and the use of logic in everyday life.

212 Alternative Futures for Science and Society (3) An inquiry into how the values of freedom and rationality are involved in the ways in which science and technology are being used to meet the urgent problems of our day. Readings are chiefly from contemporary thinkers. This course may not be taken by students who have already taken PHIL 413.

231 History of Western Philosophy: Ancient and Modern Philosophy (3, 3) A survey of the major figures, traditions, and problems of Western philosophy in the Greek, Roman, and modern periods. Examples are drawn from Greek and Roman origins of Western thought; pre-Socratics, Plato, Aristotle, Stoics, and Epicureans. Second semester. Figures and problems of modern philosophy: Descartes, Locke, Berkeley, Hume, Kant, and Hegel.

234 History of Medieval Philosophy (3) A survey of leading thinkers from the fifth to the fifteenth centuries. Figures covered are selected from the following: Platonius, Augustine, Boethius, John Scotus Erigena, Anselm, Benard of Clairvaux, Peter Abelard, Avicenna, Averroes, Moses Maimonides, Bonaventure, Hugh of St. Victor, Thomas Aquinas, Roger Bacon, John Duns Scotus, Meister Eckhart, William of Ockham.

254 Contemporary Ethical Problems (3) A study of contemporary ethical problems, e.g., homosexuality, abortion, drugs, capital punishment, the rights of the individual vs. the rights of society, from the perspective of the dominant ethical systems in use today, e.g., Utilitarianism, Deontology, Self-realization Ethics, Situationism.

273 Introduction to Symbolic Logic (3) A study of predicate calculus by means of a step-by-step construction of artificial languages. Topics covered include procedures for constructing a calculus, proof techniques, significant properties of formal systems (e.g., completeness and consistency), and procedures for recognizing phrases (parsing algorithms).

Foundations of European Civilization (3) (See EUST 300 under European Studies.) This course cannot be credited toward the major in philosophy.

310 Medicine and Human Values (3) An examination of some of the major moral issues involved in the practice of medicine and arising from research in the life sciences. Examples of topics covered in both lecture and discussion are medical experimentation, definitions of death, euthanasia, abortion, distribution of scarce resources (e.g., organs and kidney machines), transplants, organ donation, and psychiatric treatment.

311 Philosophy of Law (3) Three credits in philosophy. An investigation of the 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 good reason for a judicial decision?

313 Philosophy of Religion (3)
Prerequisite: Three credits in philosophy. A study of the philosophical investigation of the historical and contemporary thought of theists and deists. The purpose of this course is (1) to distinguish the historical from the unhistorical attitudes of human consciousness; and (2) to investigate the varied ways in which this consciousness is explored by studying the Greek, Biblical, and Secular interpretations of history. This course may not be taken by students who have already taken PHIL 213.

315 Philosophy of History (3)
Prerequisite: Three credits in philosophy. An investigation of the development of the historical consciousness of man. The purpose of this course is (1) to distinguish the historical from the unhistorical attitudes of human consciousness; and (2) to investigate the varied ways in which this consciousness is explored by studying the Greek, Biblical, and Secular interpretations of history. This course may not be taken by students who have already taken PHIL 215.

331 Philosophy in the United States (3)
Prerequisite: Three credits in philosophy. Selected studies of American philosophers of the nineteenth and early twentieth centuries, such as Emerson, Thoreau, James, Royce, Santayana, Dewey, and Whitehead. Emphasis is on their relation to American culture.

332 Twentieth-Century Analytic Philosophy (3)
Prerequisite: Three credits in philosophy. Recommended PHIL 173 or 232 or 273 or 372. An examination of the attempts of twentieth-century (and primarily Anglo-American) philosophers to solve philosophical problems by an analysis of language. Figures and movements covered include Russell, Moore, Wittgenstein, logical positivism, and ordinary language philosophy.

333 Atomic Theory (3)
Prerequisite: Three credits in philosophy. Historical sources and present range of Latin American thought. Metaphysical, ethical, and aesthetic theories of the existentialists' concern with the meaning of being human by exploring the themes of religious, social, and political topics.

337 Continental Thought: Phenomenology and Existentialism (3, 3)
Prerequisite: Three credits in philosophy. A study of the phenomena of existential and existentialist thought which is deeply rooted in the movement of phenomenology and existentialism and the continuation of the philosophical outlook developed in modern philosophy beginning with Descartes. PHIL 336 focuses on the existentialists' concern with the meaning of being human by exploring the themes of subjectivity, absurdity, and the meaning-giving functions of consciousness. PHIL 337 stresses the emergent unity of existential and existentialist as consequences of changing attitudes toward consciousness. Figures covered are selected from the following: Nietzsche, Kierkegaard, Husserl, Buber, Sartre, Marcel, Heidegger, Merleau-Ponty, and selected existential-phenomenological psychoanalysts. The courses need not be taken in sequence.

351, 352, 353, 354 Ethics and Contemporary Personal Thought I, II, III, IV (3, 3, 3, 3)
Prerequisite: Three credits in philosophy. One course in ethics is recommended. Intensive examination of contemporary political thought from the perspectives of the participants. The course is offered in alternate semesters in the following sequence: democracy, communism, Third World political thought, and radical political thought. Not to be taken by philosophy majors.

355 Contemporary Ethical Theory (3)
Prerequisite: Three credits in philosophy. PHIL 251 is recommended. An examination of major trends and issues in recent moral philosophy, especially those concerning the foundation of morals, the nature of ethical language, and the problems of moral authority. This course may not be taken by students who have already taken PHIL 252.

356 Philosophy of Art (3)
Prerequisite: Three credits in philosophy. A critical examination of the basic problems which arise from an inquiry into the meaning and value of art and our response to art. Some problems to be considered: What makes an object a work of art? What is the relationship between an artwork and its creator? What is the role of art in society? Can one justify critical evaluations of works of art?

371 Philosophy of the Social Sciences (3)
Prerequisite: Three credits in philosophy. An inquiry into the philosophical aspects of the scope, methods, and uses of the behavioral and social sciences, with special emphasis on the issues of factual and evaluative questions raised in the social sciences.

372 Philosophical Methods (3)
Prerequisite: Three credits in philosophy. A consideration of the question, "What is philosophy?" by examining various philosophical methods. The course has a two-fold emphasis: (1) to study the internal disciplines of philosophy and the methods, doctrines, and concept of philosophy, and (2) to examine the interrelationship between philosophers, i.e., to indicate how philosophers' critical skills and emphases have affected the philosophical enterprise as a whole. Philosophers studied include Plato, Aristotle, Hume, Kant, Ayer, and Heidegger.

373 Theory of Knowledge (3)
Prerequisite: Three credits in philosophy. Discussion of basic problems concerning the nature of knowledge, with special study of the relation of knowledge to experience, perception, and language. This course may not be taken by students who have already taken PHIL 171.

374 Philosophy of Mind (3)
Prerequisite: Three credits in philosophy. An investigation of such theories as dualism, behaviorism, materialism, and dual-aspect as they pertain to some of the central philosophical questions: What is the mind? What is the relation of mind to body? What is the justification, if any, of our belief in the existence of minds other than our own?

375 Metaphysics (3)
Prerequisite: Three credits in philosophy. A study of some basic problems concerning being in general and the foundations of individual being, traditional treatments of such problems and criticism of the possibility of such knowledge. Selected readings from three or four leading figures such as Plato, Aristotle, Aquinas, Spinoza, Leibniz, Kant, Bradley, Heidegger, and Husserl. The course may not be taken by students who have already taken PHIL 271.

391, 392 Special Topics in Philosophy (3, 3)
No prerequisites unless otherwise stated in specific topic announcement. An examination of some philosophical topics of current interest, such as death and dying, the rights of children, or philosophical and social theories of modern physics.

421, 422, 423, 424 Seminar (3, 3, 3, 3)
The seminar is ordinarily limited to philosophy majors who have completed nine semester hours of philosophy; but students from the other fields of study may be considered if the topic is sufficiently close to their fields of study. Topics vary from semester to semester.

425, 426 Independent Study (3, 3)
Prerequisite: Permission of the instructor. May be taken by philosophy majors with junior or senior standing and 15 hours of philosophy. Students wishing to undertake independent study must petition the department for permission. Individual Study of some philosophical writer, problem, or movement. Student must produce at least one major piece of written work during the semester.

Contemporary European Problems and Values (3)
(See EUST 450 under European Studies.) This course cannot be credited toward the major in philosophy.

351 Freud and Philosophy (3)
May be taken by undergraduate students (see prerequisites.) Prerequisites: Six credits in philosophy, or course in personality theory, or permission of the instructor. An exploration of the philosophical aspects of Freud's thought, focusing on Freud's philosophy of human nature and culture and its influence on contemporary thought.

Physical Education (PHED) Health and Physical Education
Activity Courses
All activity courses will meet for three contact hours each week with an additional one hour per week (or the equivalent of 14 hours of outside class work) to be arranged during the semester.

107 Folk, Square, and Social Dance (2)
This course is equally divided between folk, square, and social dance with an emphasis on basic steps, sequences, and style for each.

125 Beginning Modern Dance (2)
This course develops in the inexperienced student knowledge, skills, and an appreciation of modern dance through the presentation of fundamental techniques and creative movement experience. This course is identical to DAN 125.

126 Intermediate Modern Dance (2)
Prerequisite: PHED 125 or permission of the instructor. The course further develops the knowledge, skills, and appreciation of modern dance through the continual exploration of techniques, aesthetics, and creativity. This course is identical to DANC 126.

207 Intermediate Folk, Square, and Social Dance (2)
Prerequisite: PHED 107 or permission of the instructor. This course further develops skills in the dance forms of folk, square, and social dance and the movement qualities adherent to each of these three forms. This course includes more advanced skill in square and social and introduces new steps and styles to folk and social dance.

Individual Sports
103 Beginning Fencing (2)
This course provides the student with the opportunity to learn the basic skills, techniques, and rules of fencing and provides the student to be an intermediate-level foil fencer.

105 Aerobics, Basic Conditioning (2)
This course provides the student with the opportunity to learn the benefits of a sound fitness program and to follow such a program so that many of these benefits may be adopted in later life.

108 Beginning Gymnastics (2)
This course provides the student with the opportunity to learn the basic skills and techniques associated with gymnastics.

109 Weight Training and Body Conditioning (2)
This course presents the principles and techniques of progressive resistance exercise and cardio-vascular fitness routines.

110 Beginning Intermediate Modern Dance (2)
This course presents the principles and techniques of progressive resistance exercise and cardio-vascular fitness routines.

111 Beginning Swimming (2)
An introductory swimming course open only to those who cannot swim at all or cannot swim safely in deep water. Emphasis is placed on enabling students to become safe swimmers. ($2.00 per meeting pool fee)
116 Combative Sports, Games, Unarmed Combat, and Wrestling (2)
This course gives students a background in combative sports which may be taught in a limited area with little equipment.

133 Tennis for All (2)*
For individuals with no or some experience in tennis; introduction and/or review of basic ground strokes, volley, serve and smash, rules, strategy, and terminology.

140 Golf (2)
The fundamentals of golf—grip, stance, swing, rules, and etiquette—are presented. Students attend classes at selected golf courses for practical experience. ($20 fee)

148 Badminton and Bowling (2)
The introduction and practice of basic skills, rules, terminology, and strategy so the individual may enjoy the sport. ($20 fee)

150 Intermediate Swimming (2)
For students who can swim safely in deep water and wish to increase their proficiency, endurance, and versatility in aquatics. ($2 per meeting pool fee)

151 Beginning Tennis (2)
The introduction and practice of basic skills, rules, terminology, and strategy so the individual may enjoy the sport.

152 Tennis for the Advanced Beginner (2)*
Prerequisite: PHED 151 or equivalent experience. Concentration on offensive and defensive strokes, serve, volley, and smash; selection of rules, strategy, and terminology in tennis.

153 Intermediate Tennis (2)*
Prerequisite: PHED 152 or equivalent experience. Analysis of strokes and correcting techniques for common faults in ground strokes, serve, volley, smash, and the introduction of the chop, slice, half volley, and lob; rules, terminology, singles and doubles tactics and strategy.

154 Advanced Tennis (2)*
Prerequisite: PHED 153 or equivalent skill level. Concentration on net play and court positioning in singles and doubles, return of service, service variations, dropshot, stop- volley, overhead smash, and offensive lob; rules, terminology, advanced tactics, and strategy.

161 Archery and Golf (2)
Consideration is given to the basic skills, techniques, and rules of target archery and golf. Special attention is given to the beginning student.

170, 171, 172, 173 Individual Physical Education (2, 2, 2, 2)
Prerequisites: Permission of the instructor and classification of "C" or "D" on the Department of Health Classification Form. Students who by reason of illness, disability, or physical defect are unable to participate in the regular program of physical education may be registered for this course. The activities for each individual in the course are based on the recommendations of the physician.
This course is offered on a pass-fail basis.

190 Downhill/Cross-Country Skiing (2)
A concentrated course in basic skills and related knowledge, including safety and equipment for downhill and cross-country skiing conducted in the natural environment. Offered on a pass-fail basis. (Required fee—consult department.)

200 Swimmers (2)
This course is for students who can swim 50 meters of a good crawl or breast stroke. Speed, endurance, and perfection of strokes and diving are stressed. ($2 per meeting pool fee)

210 Advanced Life Saving (2)
This course is designed to meet certification requirements for Advanced Life Saving for American National Red Cross. ($2 per meeting pool fee)

250 Water Safety Instructor (2)
This course is designed to meet the requirements for the Water Safety Instructor as determined by the American Red Cross. ($2 per meeting pool fee)

* Students taking tennis classes are required to purchase a can of new balls and a United States Tennis Association Book.

Team Sports
101 Soccer and Volleyball (2)
This course for the beginning student provides an orientation to the competitive skills, rules, and strategies with the application of these to a game situation in both of the two sport areas.

104 Non-Contact Lacrosse (2)
This introductory course provides the student with an opportunity to learn fundamental skills and strategies of lacrosse.

111 Basketball and Soccer (2)
The student is given the opportunity to learn the basic skills, techniques, rules, and strategies of basketball and soccer.

114 Speedball and Softball (2)
An introduction to the rules of the game, strategy, and tactics, and improvement of offensive and defensive skills.

121 Flag Football and Basketball (2)
An introduction to and practice of fundamental skills, terminology, game rules, and strategy for each sport.

124 Basketball and Softball (2)
An introduction to and practice of skills, terminology, rules, game strategy, and basic conditioning for each sport.

131 Volleyball and Field Hockey (2)
This course provides the beginning student with the opportunity to learn the basic skills, techniques, strategies, and rules of volleyball and field hockey.

Recreational Activities
115 Recreation—Fishing and Camping (2)
The study of various fishing techniques include learning to use fly rods, spinning rods, bait casting rods, and spin casting equipment, along with basic camping techniques.

117 Rock Climbing (2)
An introduction to rock climbing with emphasis on basic climbing skills, safety procedures, and proper use of tools and equipment. This course is offered on a pass-fail basis and can be taken with an option of the NFSA climbing certificate. ($20 fee)

120 Recreation—Orientation, Backpacking, and Cookery (2)
Introduces the student to the basic skills and knowledge required for leisure time activity. Orienting, hiking, backpacking and outdoor cookery are emphasized.

180 Whitewater Canoeing (2)
Prerequisites: Must be able to swim fully clothed for five minutes and to put on the PFD in water.
An introductory level course that provides instruction in basic canoeing skills and techniques. Once basic knowledge has been mastered on flat water, the student participates in two whitewater canoe trips. ($25 fee)

Professional Courses
201 Professional Dimensions of Physical Education (3)
An overview of the field of physical education and its relationships to health, recreation, and other academic disciplines provides the major with an introduction to the field.

206 Gymnastics for Children and Youth (2)
Prerequisite: Permission of the instructor.
An introductory course in gymnastics, focusing on the child's development and functional gymnastic skills. ($25 fee)

211 Spots O' Illinois and Intramural Administration (3)
The practical application of officiating techniques and the organization of a sound intramural program. Two lecture and class hours. Spring only.

213 Tennis, Flag Football, Volleyball, Folk, Square, and Social Dance (4)
For physical education majors only. To improve basic skills and knowledge in tennis, flag football, volleyball, folk, square and social dance. Includes skill progression, drills for teaching, skill analysis, and peer group teaching. Three laboratory hours. Classes meet for six contact hours each week and outside class work is required.

214 Basketball, Weight Training, Conditioning, Track and Field, and Soccer (4)
For physical education majors only. To improve basic skills and knowledge in basketball, weight training, body conditioning, track and field. Includes skill progressions, drills for teaching, skill analysis, and peer group teaching. Three laboratory hours. Classes meet for six contact hours each week and outside class work is required.

215 Archery, Badminton, and Fencing (2)
For physical education majors only. To improve basic skills and knowledge in archery, badminton, and fencing. Includes skill progressions, drills for teaching skill analysis, and peer group teaching. Three laboratory hours. Classes meet for three contact hours each week and outside class work is required.

216 Golf and Field Hockey (2)
For physical education majors only. To improve basic skills and knowledge in golf and field hockey. Includes skill progressions, drills for teaching, skill analysis, and peer group teaching. Three laboratory hours. Classes meet for three contact hours each week and outside class work is required.

300 Kinesiology (3)
Prerequisite: BIOL 124, 125, or permission of the instructor.
A study of the human body and its movement. Fundamental joint movement, movement control, mechanics, kinesthetic awareness, kinematics, kinetics, and cinematic analysis of human movement. Field experience may be required. Three lecture hours and one laboratory hour.

301 Physical Education in Elementary School (3)
Provides the prospective classroom teacher with information and knowledge concerning current trends, methods, and curriculum in physical education in the elementary school. Ten hours of field experiences in public schools are required. Not open to physical education majors.

304 Sport, Culture, and Society (3)
Prerequisite: PHED 201 or permission of the instructor.
This course is a synthesis of the developmental processes of the human body as it relates to movements and exercise. An in-depth study of various chronic and functional inadequacies which may affect a person's successful participation in physical education is included. Saturday morning laboratory sessions with children. One lecture, three activity hours.

316 Recreation and Outdoor Education (2)
Techniques of recreation leadership; community resources, supervision and evaluation methods of converting leisure into useful and cultural achievements. Participation in such outdoor recreational skills as camping, hiking, skiing, firearms safety, handloading, trap and skeet shooting, angling techniques, fishing, and archery and archery. Two lectures, three laboratory hours. ($20 fee)

342 Creative Dance for Children (3)
Study of dance as an expressive medium for children; emphasis on concepts and principles, methods and materials and how they can be adapted to the classroom situation. Consideration given to dance for children with special education problems.

http://catalog.gmu.edu
350 Physiology of Exercise (3)
Prerequisites: BIOL 124-125, PHED 222. A study of the physiological changes and responses of the human body to acute and chronic exercise stress. Fall only.

365 Measurement and Evaluation in Physical Education (3)
Prerequisites: PHED 201, 222. The selection, administration, and use of measurement devices and evaluative techniques in physical education. Criteria for test construction and selection, survey of test validation, and emphasis on statistical analysis of data. Spring only.

371 Curricular Experiences in Secondary School Physical Education (3)
Prerequisites: PHED 202, 214, 213, and 214. This course consists of professionally oriented study in the analysis and practice of the skills of activities included in the secondary school physical education program and related classroom science. Emphasis is on techniques, understanding of game strategy, and knowledge of rules are stressed. The course includes peer group teaching and 15 hours field experience in public schools. Fall only.

397, 398 Fundamentals of Aging, I, II (3, 3)
Prerequisites: Eight hours of biology, anatomy, or physiology; and three hours of psychology or sociology. An interdisciplinary approach to the study of all aspects of aging. Psychological, social, and physical aspects of normal aging are examined as well as issues in health care, mental health, social services, education, and public policy in the field of gerontology. Three to six hours field experience are required.

403 Curricular Experience in Elementary School Physical Education (3)
Prerequisites: PHED 313, PHED 213, 214, and 222; and admission to teacher education program. An orientation in curricular experiences and methods appropriate for elementary school physical education. A study of the elements of movement, activities for today; management, and refinements of basic skills as well as specialized skills, games, sports, stunts, self-testing activities, and folk, square and creative dance. Includes peer group teaching and 12-15 hours field experience in public schools. Fall only.

410 Psychology of Sport and Coaching (3)
Prerequisites: BIOL 124-125. A study of preventive measurement and medical management of athletic injuries. Experiences are provided in application of various methods of treatment of athletic injuries, preventive taping, exercise techniques, and physical modalities are presented.

420, 421 Coaching of Sports (2, 2)
Prerequisites: Permission of the department chairperson. Consideration of several sports usually coached at the secondary level. Each activity is scheduled to be a two-semester course and counted separately for credit. Each activity is considered a separate course. Special attention to principles and fundamentals of individual offense, defense, specialties, daily, individual strategy, team and staff organization, and materials for coaching the particular sport.

430 Prevention and Care of Athletic Injuries (3)
Prerequisites: PHED 240, 410. In-depth study of the evaluation and treatment of athletic injuries. Includes clinical, surgical, and medical aspects of acute, chronic tendon, ligament, and muscle injuries. Fall only.

440 Practicum in Athletic Coaching (2)
Prerequisites: Junior or senior standing. Supervised involvement in athletic coaching in a specific secondary school. Work with individual athletes and with teams under faculty coach supervision. Involves at least 70 hours of participation in many aspects of athletic coaching.

441 Practicum in Athletic Training (2)
Prerequisites: PHED 430 and junior or senior standing. Application of the techniques and procedures in the prevention and treatment of athletic injuries in a secondary school setting. Work with physical education and athletic training under faculty-certified trainer supervision. Involves at least 70 hours of participation in many aspects of athletic training.

450 Management and Organization in Physical Education (3)
Prerequisites: PHED 201, 304, 306, 308 and admission to teacher education program. The course deals with management and evaluation of the total physical education program in elementary and secondary schools. Administrative principles and their implementation and evaluation are emphasized. Fall only.

470 Leisure and Programming Recreation for Older Adults (3)
A general survey of recreation services and opportunities for the older population including those who are institutionalized and isolated. An in-depth study of the relationship between attitudes and behavior of older people and delivery of recreation services; trends in planning; diversity in program evaluation; and evaluation of current programs. Observation and participation in local existing programs are required.

472 The Physical Education Program, Grades K Through 12 (3)
Prerequisite: PHED 403. The selection, design, and application of learning experiences appropriate for elementary, middle, and secondary school young people based on developmental needs. Includes philosophy, objectives, class control, methods, curriculum planning, facilities, and equipment. Fifteen hours field experience is required in public schools. Taught as a block during the professional semester. Coursework during the semester includes the professional experiences. 10 hours field experience is required. Spring only.

499 Independent Study in Physical Education (1-3)
Prerequisites: Senior standing and permission of the department. A study of a problem area in physical education, history, theory, or practice under the direction of faculty.

500 (600) Workshop in Physical Education (1, 2, 3)
Concentrated full-time workshops, weekend seminars, or full-semester seminars which deal with selected topics in physical education and ancillary fields. Coursework may include educational tours, seminars, etc. This course may be repeated. No more than one semester of 500 (600) may be applied to degree credit.

508 Seminar in Special Physical Education (3)
An analysis and discussion of current problems, issues, and research in special physical education relative to special, minority, and medical populations. Analysis and descriptions of specific disabilities with concentration on programming and exercise modifications. Practica may be included.

530 Exercise Physiology and Fitness Programs for Older Adults (3)
Prerequisites: PHED 397 or permission of the department. Principles of exercise physiology related to older adults population with emphasis on preventive, therapeutic, and rehabilitation applications. Three to six hours field experience required.

604 (504) History of Sport and Physical Education Through the Middle Ages (3)
An historical approach to the role of sport and physical education in the culture of ancient civilizations through the Middle Ages.

605 (550) History of Sport and Physical Education From Renaissance to Present (3)
An historical approach to the role of sport and physical education in Europe and its impact on development in America.

610 (510) Advanced Exercise Physiology (3)
Prerequisite: PHED 350 or equivalent, or permission of the instructor. Lecture, laboratory, research, and seminar experiences providing current information and examining contemporary issues relative to exercise physiology.

616 (516) Motor Behavior and Evaluation (3)
This course considers human motor behavior research and measures of motor performance and evaluation of skill acquisition. Attention is given to major trends in the field.

671 (571) Teaching Physical Education in the Secondary School (3)
An advanced study of the methods, materials, content, and organization of physical education programs. Emphasis on curriculum planning, current methodologies, and trends.

706 (506) Comparative Physical Education and Sport (3)
A study of present-day physical education and sport and their impact on society in selected countries of the world.

707 (507) Comparative Physical Education and Sport (3)
A study of present-day physical education and sport and their impact on society in selected countries of the world.

101-102 Replaced by 341-342.

Comparative Principles and Development of Modern Physical Education (4, 4)
Prerequisite: PHYS 103 is prerequisite to PHYS 104. A course in physics for nonscience majors. Topics include mechanics, electricity and magnetism, nuclear physics, and atomic physics and elementary particles. The course places some emphasis on the historical, philosophical, and sociologic aspects of the discipline. Three lecture hours, three hours laboratory or supervised work.

106 Physics for the Life and Health Sciences (3)
A one-semester course in physics for all students. Topics include mechanics, the properties of fluids and gases, heat, electricity, sound, light, the atom and the nucleus, and radiation. The course covers the basic principles of each topic, emphasizing applications to the health sciences.

111 General Physics I (2) (Being replaced by 250.)
Corequisites: MATH 113. Mechanics. Two hours lecture, one hour recitation. Students with Math SAT scores below 600 who do not pass their GMU math proficiency exam are urged to take MATH 101 prior to taking PHYS 111.

114 General Physics II (2) (Being replaced by 250.)
Prerequisites: PHYS 113 and MATH 113. Corequisites: MATH 114. Mechanics, heat, properties of matter. Two hours lecture, two hour recitation.

151 Physics for Elementary School Teachers (4)
A study of the basic concepts of physics with emphasis on those subjects which are of particular importance to an elementary school teacher. Topics include motion, astronomy, electricity and magnetism, energy, heat, meteorology, light, the atom, and the nucleus. Open only to elementary education majors. Three hours lecture, two hours laboratory.

201 Energy and Environment (3)
A study of the basic ideas of science and technology with emphasis on their interaction with contemporary culture. The course is designed for the science and nonscience major who has an interest in our current concerns of energy and environment. It offers an introduction to the energy issues, uses, and distribution of energy and resulting environmental effects. Students who have taken PHYS 201 under the old title may not enroll for this course. The course may not be included for credit by physics majors within the 44 hours of physics courses required for the BS degree or within the 31 hours of physics courses required for the BA degree. Three lecture hours.

203 Introduction to Electronics (3)
This course is an introduction to the characteristics and uses of various modern electronic devices, circuits, and instruments. Some applications to the humanities and social science are demonstrated. This course is not open to physics and engineering majors. Two hours lecture, three hours laboratory.

213 General Physics III (3) (Being replaced by 350.)
Prerequisites: PHYS 114 and MATH 114. Corequisites: PHYS 215 and MATH 213. Electricity and magnetism. Three lecture hours, one hour recitation.

215 General Physics III (Laboratory) (2) (Being replaced by 351.)
Prerequisite: PHYS 114 or PHYS 102. Corequisites: PHYS 215 and permission of the instructor. Experiments on mechanics and electricity. Emphasis is given on the use of the oscilloscope. Three laboratory hours.
(PHYS)

214 General Physics IV (3) (Being replaced by 352.)
Prerequisites: PHYS 213, 215, and MATH 213.
Corequisite: PHYS 216 and MATH 214. Physical optics, atomic and nuclear physics. Three hours lecture, one hour recitation, and two hours laboratory.

216 General Physics IV (Laboratory) (2) (Being replaced by 353.)
Prerequisite: PHYS 114 or PHYS 102. Corequisite: PHYS 213. Eight hours of laboratory instruction. Emphasis on optics and modern physics. Three laboratory hours.

225 Problems in Physics I (1)
Prerequisite: Sophomore status and 3.000 average in physics and mathematics. Individual study of physics problems of current interest. This course may be taken a maximum of three times.

301 Digital Electronics (3) (Same as ENGR 301.)
Prerequisites: PHYS 213, 215 or permission of the instructor. Introduction to digital systems, circuits, and computers. Topics include: binary systems and codes, digital logic gates and circuits, microelectronics and integrated circuits, coding and multiplexing, multivibrators, shift registers, counters, A/D converters, microprocessors, memory, and census techniques. Two hours lecture, two hours laboratory.

302 Electronics (4) (Same as ENGR 302.)
Prerequisite: PHYS 213, 215, or permission of the instructor. Introduction to electronics and the laboratory course in electronics, design, and operational characteristics of power supplies, amplifiers, oscillators, and digital logic circuits. Two hours lecture, six hours laboratory.

303 Classical Mechanics (3)
Prerequisites: PHYS 214, 216, and MATH 214. Motion of a particle in one, two, and three dimensions; systems of particles; non-inertial coordinate systems; equations of Lagrange and Hamilton. Three hours lecture.

305 Electromagnetic Theory (3)
Prerequisites: PHYS 214, 216, and MATH 214. Interaction of static charges, interaction of stationary currents, electromagnetic induction, Maxwell's equations. Three hours lecture.

306 Wave Motion and Electromagnetic Radiation (3)
Prerequisite: PHYS 305. Vibrating string, plane waves, interference diffraction, polarization, electromagnetic waves, waves, dispersion, relativity. Three hours lecture.

307 Thermodynamics (3)
Prerequisites: PHYS 311 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, thermodynamic analysis of ther­modynamic processes. Three hours lecture.

311, 312 Mathematical Methods in Physics and Engineering (3, 3)
Prerequisites: PHYS 214 and MATH 214 or 216; PHYS 311 or MATH 313 is prerequisite for PHYS 312. A 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. Three hours lecture.

315 Principles of Musical Sounds (3)
Prerequisite: MUSI 116 or permission of the instructor. A course in the physics of music. Topics include simple harmonic motion, vibration, temperature, sound waves, dispersion and reflection, sound recording and reproduction. This course may not be included for credit by physics majors within the 44 hours of physics courses required for the BS degree with 30 semester hours of physics courses required for the BA degree. Three hours lecture.

326 Problems in Physics II (1)
Prerequisites: Junior status and 2.500 average in physics and mathematics. Individual study of physics problems of current interest. This course may be taken a maximum of three times.

341-342 College Physics (4-4) (Replaces 101-102.)
Prerequisites: Junior status, or one year of college-level science and one semester of college-level mathematics, or permission of the instructor. A two-semester basic physics course with emphasis on topics of classical and modern physics of particular importance to science majors. The principles of mechanics, electricity and magnetism, optics, atomic and nuclear physics. Three hours lecture, one hour recitation, and two hours lab. 350 University Physics II (3) (Replaces 213.)
Corequisites: PHYS 250 and MATH 311. Prerequisites: PHYS 250. Electricity and magnetism, optics, waves. Three hours lecture, one hour recitation. 351 University Physics II Laboratory (1) (Replaces 213.)

352 University Physics III (3) (Same as PHYS 214, 216. and MATH 214.)
Corequisite: MATH 214. Prerequisite: PHYS 350. Twentieth-century physics. Three hours lecture, one hour recitation. 353 University Physics III Laboratory (1-2) (Replaces 216.)
Corequisites: MATH 214, PHYS 352. Experiments in optics and modern physics. Physics majors should enroll for two credits. Two other students should consult their major adviser. Two hours laboratory for each credit taken.

402, 403 Introduction to Quantum Mechanics and Atomic Physics (3)
Prerequisite: PHYS 303. An introduction to the special theory of relativity and quantum mechanics. Emphasis on the mathematical formulation of quantum mechanics, the interpretation of quantum mechanics, and applications. Three hours lecture.

407 Senior Laboratory in Modern Physics (3)
Prerequisite: Sophomore status. Experiments in modern physics involving advanced techniques in electronics, optics, nuclear physics, and solid-state physics. Typical experiments: the Franck-Hertz experiment, the Hall effect, electron paramagnetic resonance, Mossbauer effect. Nine laboratory hours.

408 Senior Research (2 or 3)
Prerequisite: Senior status. The student works under the guidance of a faculty member on a research project in experimental or theoretical physics. The hours of credit (2 or 3) are agreed upon in advance by the student and professor.

410 Solid State Physics (3)
Prerequisite: PHYS 402. Crystal structures, bonding, lattice vibrations, introduction to band theory, and the electronic structure of metals, semiconductors, and superconductors. Three hours lecture.

412 Computational Physics (3)
Prerequisites: PHYS 311 or equivalent and MATH 266 or permission of the instructor. Solutions to current problems in physics using digital computers. Three hours lecture.

414 Nuclear and Particle Physics (3)
Prerequisite: PHYS 402. Accelerators, detectors, and related electronics; nuclear and elementary particle structure and interactions; nuclear reactions; quark model; nuclear science and technology. Three hours lecture.

416 Special Topics in Modern Physics (1)
Prerequisite: Senior status. A study of topics of major current interest in modern physics with emphasis on the breadth of physical understanding needed to approach today's problems. Two hours lecture/seminar every other week.

480-481 Special Project (4-4)
This is an intensive two-semester course in basic physics designed to enable the student to develop applied skills necessary to succeed in graduate study. The first semester comprises three hours lecture/seminar every other week, the second semester comprises six hours lecture/seminar every other week.

Psychology Courses (PSYC)

100 Basic Concepts in Psychology (3)
Prerequisite: to all other courses in psychology. An introduction to psychology as a scientific disci-
pline including an examination of the concepts and methods in learning, motivation, development, perception, consciousness, and intelligence.

200 Analysis and Interpretation of Psychological Data (4)
Prerequisite: PSYC 100 or permission of the instructor. A survey of descriptive and inferential statistics in design, analysis, and interpretation of psychological research with practical application using calculators. Three classroom and two laboratory hours.

207 General Experimental Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. A survey of animal and human learning, perception, and motivation.

210 Child Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. A study of the process of human psychological development from conception to adolescence including such topics as genetic factors, emotional and intellectual growth, and environmental influences.

215 Adolescent Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. A study of the biological and cultural changes accompanying adolescence including the effect of these changes on emotional, intellectual, and social development.

220 Personality Theory (3)
Prerequisite: PSYC 100 or permission of the instructor. A survey of major personality theories and a comparative evaluation of major theories in terms of relevant research studies.

230 Industrial Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. An examination of the application of psychological principles and methods to problems commonly encountered in business and industry.

231 Social Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. A study of the social context of perceptual psychology including such topics as psychophysics, perceptual organization, and theories of man including perspectives of species-specific behavior, early experience and development within the context of the concepts and principles which determine human and animal motivation including such topics as instincts and drives. Three classroom and two laboratory hours.

304 Principles of Learning (4)
Prerequisite: PSYC 200 or permission of the instructor. Experimental methodology within the context of the basic principles of learning including such topics as classical and instrumental conditioning and discrimination learning. Three classroom hours and two laboratory hours.

305 Human Learning and Memory (4)
Prerequisite: PSYC 200 or permission of the instructor. Experimental methodology within the context of discrimination, concept formation, verbal learning, psycholinguistics, and memory. Three classroom hours and two laboratory hours.

309 Perception (4)
Prerequisite: PSYC 200 or permission of the instructor. Experimental methodology within the context of perceptual psychology including such topics as psychophysics, perceptual organization, and constancies. Three classroom and two laboratory hours.

310 Developmental Psychology (3)
Prerequisite: PSYC 100 or permission of the instructor. A review of the major developmental theories of man including perspectives of childhood, adolescence, adulthood, and old age. This course cannot be used in credit hours in the psychology major if students use 210 for major credit.

311 Comparative Psychology (4)
Prerequisite: PSYC 200 or permission of the instructor. Experimental methodology within the context of a study of behavior through the phylogenetic continuum including such topics as species-specific, early experience and learning. Three classroom and two laboratory hours.

316 Motivation (4)
Prerequisite: PSYC 200 or permission of the instructor. Experimental methodology within the context of the concepts and principles which determine human and animal motivation including such topics as instincts and drives. Three classroom and two laboratory hours.

320 Psychological Tests and Measurements (4)
Prerequisite: PSYC 200 or permission of the instructor. A study of the processes underlying the theory, interpretation, and administration of psychological tests including a study of tests of intelligence, achievement, and aptitude. Three classroom and two laboratory hours.

321 Counseling Psychology (3)
Prerequisite: PSYC 325 or permission of the instructor. Application of theories and methods in psychological counseling.

322 Behavior Modification (3)
Prerequisite: PSYC 207 or PSYC 220 or permission of the instructor. A study of the development of abnormal behavior patterns including such topics as methods of prevention and treatment of mental disorders such as psychosomatic disorders, psychoses, character disorders, and mental retardation.

326 Therapeutic Communication Skills (3)
Prerequisite: PSYC 325 or permission of the instructor. An introduction to the understanding and use of basic therapeutic communication skills employed in the treatment of psychological disorders.

360 Theories and Systems of Psychology (3)
Prerequisite: Nine hours of psychology or permission of the instructor. A review of various systems and theories that have played a role in contemporary psychology including association theory, structuralism, behaviorism, and theories of personality.

367 Thinking and Problem Solving (3)
Prerequisite: PSYC 100 or permission of the instructor. A study of the major psychological theories of thinking and problem solving including a critical evaluation of psychological and empirical evidence relating to them.

368 Psychology of Women (3)
Prerequisite: PSYC 100, BIOL 103, 104, or equivalent. An examination of the behavior and attitudes of women; the influence of sex chromosomes and sex hormones on behavior; the influence of culture on sex role differentiation; theories of sex role development.

369 History of Psychology (3)
Prerequisite: Nine hours of psychology or permission of the instructor. A survey of man's attempts to understand himself systematically from the classical age to the present century including various models of man. Students who have taken PSYC 260 may not take this course.

371 Physiological Psychology: Sensory Psychology (3)
Prerequisites: PSYC 100, BIOL 103, 104, or permission of the instructor. A review of the sensory systems in animals and man including sensory physiology, psychophysics, information processing in the central nervous system, and experimental psychology. Students who have taken PSYC 337 may not take this course.

372 Physiological Psychology: Neuropsychology (3)
Prerequisites: PSYC 207 or corequisite: PSYC 373 or equivalent. An review of the role of the central nervous system in behavior including neuroanatomy, elementary biophysics, synaptic behavior and brain mechanisms in motivation, learning, and memory. Students who have taken PSYC 206 cannot take this course.

373 Physiological Psychology Laboratory (1)
Prerequisites: BIOL 103, 104 or BIOL 113, 114, or equivalent. Laboratory course in experimental psychology and physiology of the brain, including dissection of brain and eye, demonstration and practice in techniques of studying brain mechanisms and behavior. It is advisable that biology majors take PSYC 372 concurrently with PSYC 373.

379, 386 Fundamentals of Aging I, II (3, 3)
Prerequisites: Eight hours of biology, anatomy, or physiology and three hours of psychology or sociology, or permission of the instructor. An interdisciplinary approach to the study of aging. The physical, psychological, and social aspects of normal aging are examined as well as issues in health care, mental health, social services, education, and public policy in the field of gerontology. A field experience is required. Students who have taken PSYC 216 may not receive credit for Fundamentals of Aging I, and students who have taken UNIV 402 may not receive credit for Fundamentals of Aging II.

400 Laboratory Methods and Instrumentation in Experimental Psychology (1)
Prerequisite: A laboratory course in experimental psychology. Supplemental laboratory experience in working with the methods, instrumentation, and techniques encountered in the modern psychological laboratory. Topics covered include electroencephalography, psycho-physiological measurement techniques, and electronic circuits.

412 Perceptual and Cognitive Development (3)
Prerequisite: PSYC 210 or permission of the instructor. An examination of selected theories of cognitive development and research about how children's perception and knowledge of the world change with age in different cultural and educational settings.

414 Behavior Disorders of Childhood (3)
Prerequisites: PSYC 210, 220, or permission of the instructor. A review of the theories, methods, and research dealing with emotional and behavioral disorders of children.

420 Clinical Methods in Psychology (3)
Prerequisite: PSYC 325 or permission of the instructor. The historical and empirical foundations of clinical psychology including a review of current clinical practice.

421, 422 Practicum in Clinical Psychology (3, 3)
Prerequisites: PSYC 210, 220, and permission of the instructor. A supervised experience in the application of psychological principles requiring work in a nonclinical situation.

423 Group Psychotherapy Techniques (3)
Prerequisite: PSYC 220 or permission of the instructor. Review of theory and methods of group therapy with emphasis on humanistic and interpersonal approaches, including applications to family therapy, alcoholism, and drug abuse.

435 Personnel Training and Development: A Psychological Perspective (3)
Prerequisites: PSYC 230, pre- or corequisite: PSYC 320, or permission of the instructor. An overview and critical examination of current usage and potential of psychological theory and methodology in the personnel training and development industry from the viewpoint of psychological theory, including simulations, on-the-job training, supervisory/leadership skills training, computer-assisted instruction, and stress management. Principles of needs analysis, program development, and program evaluation are discussed within the framework of industrial psychology.

460 Independent Study in Psychology (1-3)
Prerequisites: A required experimental course and with permission of the department chairperson and the department chairperson. An investigation of a psychological problem according to the independent study approval and interest. Students who have taken PSYC 210 and 325 or permission of the instructor. By permission of the department chairperson, a student may take a second semester for a maximum of six hours of credit. The additional three hours may not be applied toward the basic 30 hours for a psychology major or the 18 hours required in upper division courses.
461, 462 Special Topics (3, 3)  
Prerequisite: Permission of the instructor. Selected topics reflecting interest in specialized areas. Arranged in accord with the interest of the student.  
499 Senior Thesis (3)  
Prerequisites: Senior standing, psychology major, 3,000 level psychology courses, PSYC 460, permission of the instructor, and prior approval of thesis proposal. Directed research in psychology on a topic agreed upon by the student and the advisor. The student should take PSYC 460 with the same adviser in order to develop a thesis proposal prior to registering for PSYC 499. The student must complete a thesis and defend it orally before the advisory council and other faculty members. No more than six hours of PSYC 460 and PSYC 499 combined may be applied toward graduation.  
506 Theories of Personality (3)  
Prerequisite: PSYC 210 or 310. A survey of the major theories of infant and child development including the works of Piaget, Freud, Erikson and Spitz.  
513 (411) Infant Development (3)  
Prerequisite: PSYC 210 or permission of the instructor. An examination of current issues, research methodology, and evaluation techniques in the field of infant development.  
514 (415) Psychological Factors in Aging (3)  
Prerequisites: PSYC 216, or PSYC 397, 398, or UNIV 402. An examination of the sensory, perceptual, intellectual, and personal characteristics that occur in older age. Common adjustment problems as well as more serious adjustment difficulties are discussed. General and specific personality theories of aging are considered.  
524 (424) Alcoholism: A Determined and Overdetermined Problem (3)  
Prerequisites: PSYC 100 and an introductory course in either biology or sociology, or permission of the instructor, 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 (430) Human Factors Engineering (3)  
Prerequisite: PSYC 230 or an experimental laboratory course or permission of the instructor. An investigation of the complex man-machine interactions found in industry today. Extensive empirical research findings are examined.  
533 (432) Seminar in Organizational Psychology (3)  
Prerequisite: PSYC 230 or permission of the instructor. A review of the theories and research relating to such topics as job satisfaction and motivation.  
559 (470) Drugs, Hormones, and Behavior (3)  
Prerequisite: PSYC 372 or equivalent, or permission of the instructor. An overview of the chemistry of behavior, including neurotransmitters, major hormones and other therapeutic drugs such as antidepressants, actions of hallucinogens and other psychoactive drugs, chemical theories of memory, and the interactions of hormones on behavior.  
560 Advanced Experimental Social Psychology (3)  
Prerequisite: PSYC 231. Study of the major trends in social psychological research with particular emphasis on child development and socialization problems posed by human experimentation. Topics include attitude measurement, attitude change, conformity, social perception, and small group interaction.  
563 Application of Learning Principles (3)  
Prerequisite: PSYC 305 or 641 (501). Detailed S-R analyses of specific study methods, intracranial stimulation in humans, selected behavior modification techniques, programmed learning, concept induction in children, and industrial applications of shaping and discrimination techniques.  
564 Sensory Processes (3)  
Prerequisite: PSYC 309 or 371. An intensive exploration of the neural foundations of sensory experience, with special emphasis on the processing mechanisms at different levels of the various senses.  
565 Seminar in Experimental Child Psychology (3)  
Prerequisite: Six hours of child psychology and a course in experimental psychology. The experimental studies in the field of child psychology are surveyed. Topics include biogenetic factors in development, sensory processes, learning, perception, motivation, language, and cognitive development.  
568 (482) ENGL 581 (482) Survey of Psycholinguistics (3)  
Prerequisite: ENGL 391 or PSYC 305, or permission of the instructor. A study of the psychological basis of language acquisition and competence, including research on aphasia, association, autism, second language learning, grammatical transformations, and the psychological reality of transformational rules.  
616 (516) General Psychopathology (3) F, Sp  
Prerequisite: PSYC 325. An intensive survey of the major types of psychopathological disturbances; the major symptoms, and dynamics of neuroses, psychoses, character disorders, and psychosomatic disorders.  
617 (517) Child Psychopathology (3) F  
Prerequisite: PSYC 325. An intensive survey of the major types of psychopathological disturbances of infancy and childhood.  
631 (531) Industrial and Personnel Testing and Evaluation (F, Sp)  
Prerequisite: PSYC 200 and 320. A study of the administration, scoring, and interpretation of the standard tests used by industry for the selection and assessment of personnel.  
632 (532) The Social Psychology of Industry (3) Sp  
Prerequisite: PSYC 230 or 321. The problems associated with motivation, job satisfaction, and performance are emphasized on the effects of organizational practices.  
633 (433) Evaluative Research in Psychology (3)  
Prerequisite: PSYC 200 or permission of the instructor. An examination of the research techniques which are specifically designed for the evaluation of the human effectiveness of organizations and mental health programs.  
634 (534) Special Problems in Human Factors Engineering (3) Sp  
Prerequisite: A graduate experimental course in psychology or PSYC 541 (501). A seminar course reviewing the limitations of human error in applying psychological knowledge and techniques to the development of man-man and man-machine systems.  
635 (535) Topics in Organizational Psychology (3) F  
Prerequisite: PSYC 230 or 632 (532), or BUAD 591 (651). Selected topics reflecting interest in a specialized area of organizational psychology, announced in advance. Special emphasis on the recent experimental research literature related to the selected topic.  
641 (501) Advanced General Psychology I: Learning and Perception (3) F, Sp, Su  
Prerequisite: PSYC 200 and either 304, 305, 309, 311, or 316. A critical review of the major topics of experimental psychology, including perception, motivation, cognition, perception (the senses), thinking, and problem solving.  
642 (502) Advanced General Psychology II: Personality, Developmental, and Social Psychology (3) F, Sp, Su  
Prerequisite: PSYC 371 or 372. A critical review of the major topics in personality theory, child development, and social behavior. The effects of physiological changes on behavior, such as pathological and drug-induced changes and those caused by fatigue or malnutrition. Physiological changes concomitant with psychopathology.  
649 (509) Problems in Psychology (3)  
Prerequisite: PSYC 642 before Fall 1977 may not receive credit for this course. A new way to think about the psychological sciences. The lack of tangible empirical achievement may be attributed to the inadequacy of the underlying fundamental concepts of current psychology. The course highlights critical and other concepts in psychology and cognate disciplines are considered in their place.  
651 (551) Methodology and Research (3) F  
Prerequisite: PSYC 200 and either 304, 305, 311, or 316. A survey of statistical techniques and experiments in various fields of psychology culminates in individual experiments exemplifying practical applications of research methods. Advanced experimental design is reviewed.  
652 (552) Analysis of Variance (3) Sp  
Prerequisite: PSYC 200 and either 304, 305, 311, or 316. The theory and techniques involved in studying people in their natural environments are emphasized. Primary emphasis is on experimental design and methods of systematic observation.  
653 (503) Experimental and Research Design (3) F, Sp, Su  
Prerequisite: PSYC 200 and either 304, 305, 309, 311, or 302. A study of the statistical techniques and experimental design and the relevant statistical analytic techniques are reviewed. Examples of experiments in various fields of psychology are studied.  
654 (553) Personality and Individual Differences in Psychology (3) F  
Prerequisite: PSYC 200 and either 304, 305, 309, 311 or 316. The theory and techniques involved in studying people in their natural environments are emphasized. Primary emphasis is on experimental design and methods of systematic observation.  
656 (556) Perception (3)  
Prerequisite: PSYC 309. Important issues related to neurophysiological, sensory, and cognitive aspects of perception. Topics to be included are the general theories of Gibson, Brunswik, and the Gestaltists, and some specialized models developed in recent years, especially information-processing models.  
657 (557) Experimental Study of Small Group Behavior (3)  
Prerequisite: PSYC 231 and PSYC 653 (503). Not open to students who have completed PSYC 792 (592). A survey of the theories, methods, and topics related to individual behavior in a small group setting. Effects of the individual on the group, effects of the group on the individual, and interaction effects among individuals are focal points of the survey.  
658 (558) Seminar in Cognition (3)  
Prerequisite: Permission for course, perception, learning, or the psychology of thinking. A discussion of current theories and research on (1) the content of cognition, such as symbols, abstractions, and cultural tools; and (2) the nature of human mental processes that enable the acquisition, organization, and use of knowledge, such as attending, remembering, and problem solving.  
659 (559) Social and Personality Development (3)  
Prerequisite: An introductory graduate survey course—PSYC 642 (502)—or permission of the instructor. Survey of socialization theory and research relevant to infant social relationships; development of aggressive and altruistic behaviors; sex-role development; moral development; parent and adult influences; social class and cultural influences.
671 (571) Role and Function of the School Psychologist (3) F
A survey of the roles and functions of the school psychologist within the educational environment. Certification and ethical standards of the school psychologist are also considered along with current trends in the field.

678 (578) Topics in School Psychology (1-6) F
Prerequisite: Permission of the instructor.
Selected topics reflecting interest in a specialized area of school psychology. Specific content varies and is announced before registration. Open to practicing school psychologists and advanced students in school psychology. May be repeated.

680 (580) Ego Psychology and Related Personality Theories (3) F
Prerequisite: PSYC 220 or 325. A review of psychoanalytic ego psychology and its extensions to other personality theories. Applications of ego psychology to the problems of the normal individual. Implications of ego psychology theory for community psychology and the positive mental health movement.

682 (582) The Theoretical Basis of Vocational & Occupational Psychology (3) Sp
A review of theories and basic underlying vocational development and occupational choice. Consideration of guidance practices.

687 (587) Intervention Strategies in Health Psychology (3) F
Prerequisites: PSYC 524 (424) or equivalent and PSYC 511 (511) or equivalent, or permission of the instructor. A review of multidisciplinary theory and practice in treatment of the alcohol or polydrug dependent client. Emphasis is placed on the collaborative relationship counselor and patient. Psychotherapy with interventions derived from corrective education and vocational rehabilitation. Problems of transition from institutional to open community settings are also considered.

711 (511) Psychological Assessment (4) Sp
Open only to degree students in psychology. Prerequisites or Corequisites: PSYC 616 (516) or 617 (517). Limited enrollment; permission of the department required. A study of the major instruments used in clinical assessment: their nature, purpose, and predictive value; administration and scoring of the major instruments for evaluation of personality and organized; principles of interpretation of these procedures. Three lecture hours, three laboratory sessions.

715 (515) The Measurement of Intelligence (4) F
Open only to degree students in psychology.
Prerequisites: PSYC 711 (511) and 715 (515) and test experience in the Psychological Clinic. Limited enrollment; permission of the department required. An advanced course dealing with problems of differential diagnosis of psychoses, child psychology, neuropsychological assessment problems with adolescents and suicide indicators are also considered.

725 (525) Advanced Adolescent and Adult Assessment (3) F
Open only to degree students in psychology.
Prerequisites: PSYC 711 (511) and 715 (515) and test experience in the Psychological Clinic. Limited enrollment; permission of the department required. An advanced course dealing with problems of differential diagnosis of psychoses, child psychology, neuropsychological assessment problems with adolescents and suicide indicators are also considered.

722 (522) Advanced Child Assessment (3) F
Open only to degree students in psychology.
Prerequisites: PSYC 711 (511) and 715 (515) and test experience in the Psychological Clinic. Limited enrollment; permission of the department required. An advanced course dealing with problems of differential diagnosis of psychoses, child psychology, neuropsychological assessment problems with adolescents and suicide indicators are also considered.

728 (528) Psychotherapy Techniques (3) F
Prerequisites: PSYC 616 (516), 617 (517), or 680 (580). A survey of the major individual and group psychotherapeutic techniques currently utilized by clinical psychologists. Emphasis is on the application of the techniques in clinical practice.

729 (529) Behavior Therapy (3) Sp
Open only to degree students in psychology. An investigation of specific procedures for altering emotional distress and behavioral dysfunction as they are implemented within the conceptual framework of clinical psychology.

750 (550) Special Topics in Psychological Practice (1-6) F, Sp, Su
Prerequisite: PSYC 728 (528); two assessment courses: 711 (511), 715 (515), or 786 (586); and test experience in the Psychological Clinic. Enrollment limited. Students are advised to enroll in the course by the third week of the semester preceding the semester in which they intend to enroll. Practical experience in a clinical setting as assigned.

755 Advanced Analysis of Psychological Data (3) F
Prerequisite: PSYC 651 (551), 652 (552), or 653 (503), or equivalent. Introduction to manipulation of multivariate data analysis as appropriate for applied problems in psychology. The basic 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 three widely used statistical packages—BMD, SPSS, and SOUPAC.

756 (556) Multivariate Techniques in Psychology (3) Sp
Prerequisite: PSYC 200 or equivalent required. PSYC 755 strongly recommended. A survey of multivariate statistical techniques as applied to psychological research. The course emphasizes the analysis of complex designs and the interpretation of multivariate data analyses resulting from complex designs. Course topics include analysis of variance, principal components analysis, multidimensional scaling, cluster analysis, factor analysis, discriminant analysis, and canonical correlation analysis.

765 (585) School Psychology Internship (3, 3) F, Sp
Prerequisite: Completion of required courses in school psychology and/or permission of the program coordinator. A one-year internship in the school psychology program and/or permission of the department by the third week of the semester to which the student is assigned. Prerequisite: PSYC 711 (511) and 715 (515) or test experience in the Psychological Clinic. Limited enrollment; permission of the instructor.

772 (572) Seminar in Behavioral Assessment of Toxic Effects (3) Sp
Prerequisite: A graduate course in physiological psychology, animal behavior, and a course in drugs and behavior or environmental hazards, or permission of the instructor. An intensive introduction to the methodology of behavioral assessment of toxic effects. Emphasis is placed on the assessment of behavioral toxicology, such as the effects on behavior of heavy metals, inhalants and gases, and abused drugs.

784 (584) Psychological Counseling Techniques I (3) Sp
Open only to degree students. Prerequisite: PSYC 728 (528). Limited enrollment; permission of the Department required. Application of various counseling techniques generated by current theoretical and interpersonal approaches to counseling. The counseling process is emphasized. Tapes of counseling sessions are required for course credit.

785 (585) Psychological Counseling Techniques II (3) F
Open only to degree students. Prerequisite: PSYC 728 (528). Limited enrollment; permission of the Department required. Application of various counseling techniques generated by current theoretical and interpersonal approaches to counseling. The counseling process is emphasized. Tapes of counseling sessions are required for course credit.

786 (586) Functional Assessment and Treatment in Gerontology (3) Sp
Prerequisite: A course in the psychology of aging. PSYC 322 and PSYC 423, or equivalent courses. The functional assessment of older adults is considered, including the conceptual and methodological problems involved in assessing the functioning of elderly persons. Intervention strategies with older adults is also considered, including interviewing, group work with older persons, miller therapy, reality therapy, and the design of supportive environments.

792 (592) Special Topics in Psychology (3)
Prerequisite: Admission to graduate program or permission of the instructor. Selected topics reflecting specialized areas in psychology. Specific topics may be announced once, except it may not be repeated for degree credit by students who also register for PSYC 799 (599).

793 (593) Thesis (1-6)

800 Studies for the Doctor of Arts in Education (variable)
Prerequisite: Open only to DA Ed students admitted to study in psychology. A program of studies designed by the student's discipline director and approved by the program committee. The program tracks 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 research. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student's program.

Public Administration Courses (PUAD) Public Affairs

502 Theory and Practice of Public Administration (3)
Prerequisite: Graduate standing or permission of the department. Survey and review of the field of public administration to include the development of governmental administration in the United States, 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)
Prerequisite: Graduate standing or permission of the department. An examination of the skills involved in the public manager's interaction with private groups, legislative bodies, advisory committees, the press, other administrative agencies, political executives, and other levels of government. Case study approach to the participation in the political process of public policy making.

596 Directed Readings and Research (3)
Prerequisites: Permission of the program director and the instructor. Study on a specific topic under the direction of a faculty member. A written report is required; an oral examination over the research and report may be required. Course credit is available.

611 (511) Methods of Analysis for Public Managers I (3)
Techniques and skills available to, and used by, public managers in solving problems or to analyze policy-related data. Focuses on problem definition, research design, and problem solving under conditions of uncertainty in the public sector. PUAD 611 (511) is a prerequisite to PUAD 612 (512).

612 (512) Methods of Analysis for Public Managers II (3)

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related data. Course focuses on data gathering and analysis, the use of computers, systems theory and analysis, and operations research.

615 Administrative Law (3)
Examination of principles guiding and controlling force in public sector operations. Emphasis on the application of legal processes to administrative practices and situations. Discussion of administrative determination of private rights and obligations.

620 Organization Theory and Management Behavior (3)
Consideration of behavior within the context of public organization and the consequent changes required in management. Focuses on such issues as perception, need satisfaction, attitude formation, motivation, group interaction, communication and information flow, conflict theory, group theory, innovation, interpersonal negotiation, and decision theory.

621 (521) Principles and Practices in Government Organization and Management (3)
Prerequisite: PUAD 620. Review of major management theories applicable to the American federal system, with emphasis on organization, structure, and operations. Relationship of theories to management practices in contemporary American administration.

622 (522) Program Planning and Implementation (3)
Prerequisite: PUAD 621 (521). Practical exploration 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 required for effective program implementation.

640 (541) Public Policy Process (3)
An overview of the processes of making public policy, including the detection of public issues, the consideration of alternatives to solution, and the adoption and implementation of solutions to public problems. Focuses on the major actors in the policy process, as well as the environment within which they work.

641 (520) Policy Analysis (3)
Prerequisite: PUAD 611 (511). Study of substantive issues in the clarification of public policy goals, and estimating risks in public programs. Emphasis on 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 (543) Program Evaluation (3)
Prerequisite: PUAD 611 (511). Practical exploration of evaluating of public programs in the American federal system. Assessment techniques utilized by central management and program evaluation, including program impact and program strategy evaluation, cost analysis, field experiments, productivity studies, and evaluation research. Emphasis on application of relevant methodologies to the government setting.

650 (550) Intergovernmental Relations in the United States (3)
An in-depth study of intergovernmental relations, with emphasis on contemporary patterns of fiscal relations and operational grant programs.

651 (552) Administration in the Commonwealth of Virginia (3)
An analysis of the cultural, demographic, constitutional, and socioeconomic environment of public administration in Virginia. Governmental agencies, legislative functions, executive leadership, staff agencies, leadership relationships, interstate regionalism, and administrative customs peculiar to Virginia.

660 (565) Public Financial Management (3)
Analysis of revenue forecasting, revenue strategy, impact of inflation, interest rates, taxation, accounting, budgeting, "back door" spending, pension funding, user charges, and other aspects of governmental finance.

661 (561) Public Budgeting Systems (3)
Prerequisite: PUAD 660 (565) or permission of the department. Development, theories, and structure of budgeting as found in American government. Political, economic and managerial aspects of public budgeting are examined. Public policy implications are explored. Particular attention is paid to budgeting practices and movements and their successes and failures.

662 (562) State and Local Financial Management (3)
Prerequisite: PUAD 660 (565) or permission of the department. Systems of public finance at the state level. The impact of budgetary systems and taxation on state government, the impact of federal grants, the relationship of national, state and local jurisdictions as partners in a federal system. Program auditing and new budgetary techniques are examined for their applications.

670 Personnel Administration in the Public Sector (3)
Discussion of the difference between public and private personnel management, the historical development of the civil service. Major emphasis on the processes involved in the selection and management of personnel in public organizations. Selected problems and their impact on public personnel systems are also considered.

671 Public Employee Labor Relations (3)
Prerequisite: Graduate standing and GOVT 355 or PUAD 670 or permission of the department. An examination of public employee labor relations, including unionization, representational elections, bilateral policy negotiations, administration of agreements, management rights, union membership security, the strike issue and grievance procedures, impact on public administration, and assessment of future developments.

700 Ethical Dimensions of Public Administration (3)
Prerequisite: To be taken during final semester of a student's MPA program. An examination of the ethical aspects of public administration, the nature of ethical decisions, ethical dimensions of public officials; efficiency, effectiveness, and social equity of public programs. Case studies are used.

729 Issues in Public Management (3)
Prerequisite: PUAD 621 (521). Examination of significant current issues in the management of public organizations in contemporary American government. Emphasis on practical applications of theories and analysis to managerial problems. Competence in improving management in selected government settings.

758 (558) Dynamics of the Federal Bureaucracy (3)
Analysis of the structure and functions of federal agencies; the agency-policy-policymaker nexus; administrative roles of Congress; administrative functions of the presidency and of overheard agencies; interagency relations; relationships of major departments, independent agencies, and with task forces, advisory committees, regional offices and interest groups.

759 (554) Issues in Local Government Administration (3)
An in-depth study of selected contemporary problems—such as land use, transportation, economic development, and environmental impact—in the management of counties, cities, towns, and special districts, with emphasis on local government in Virginia.

769 (563) Issues in Public Financial Management (3)
Prerequisites: PUAD 661 (561) and 662 (562). Issues of special importance or of current concern in public financial management, including the Congressional Budget Office, zero-base budgeting and human resource budgeting.

772 (573) Executive Personnel Management in the Public Service
Prerequisite: Graduate standing and GOVT 355 or PUAD 670, or permission of the department. Identifying potential executives in the public service; involving executive personnel resources; tools used in executive selection, executive career patterns, leadership development techniques, executive compensation and benefits, executive mobility, the senior civil service proposal; development of leadership and managerial skills; evaluation of executive selection and development programs.

779 Issues in Public Personnel Administration (3)
Prerequisite: Graduate standing and GOVT 355 or PUAD 670 or permission of the department. Examination of major current issues in public personnel administration, and of optional ways of dealing with them, with special attention to their relationship to and interaction with principles and values relevant to public personnel management.

794 (580) Internship (1-25)
Prerequisite: Open to authorized graduate majors only. Contact the department one semester prior to enrollment. Internships are work-study programs established by the department with specific employers. Credit is based on more than 27 hours of approved graduate credits required in this MPA program, and demonstration of proficiency in the following tools: statistics, accounting and finance, computer techniques. To include a review of project-related background material. The research design must include a statement of purpose, identification of data sources, data collection, analysis, and interpretation of results.

798 (591) Research Project (3)
Prerequisite: Completion of at least PUAD 795 (590) and permission of the department. Student completion of an original research project related to public sector administration. On the basis of the approval of the design and execution of such a project, and defends a final report that is the result of the research project. The final report must be approved by the Department of Public Affairs.

800 Introductory Doctoral Program (1)
Prerequisite: Departmental approval (accepted in DPA Program). 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)
Prerequisite: PUAD 800. An examination of the theoretical foundations of public administration, and their impact in public administration, as an intellectual discipline and as a field of practice, to society, organizations, and the individual. Emphasis includes conceptual and analytical approaches, ethical dimensions, comparative perspectives, and future prospects of public administrative actions. These courses are required of DPA students during their first year of study.

803 Doctoral Seminar in Issues in Public Administration (1-2)
Prerequisites: PUAD 800, currently enrolled in PUAD 801-802. Intensive learning experiences focusing on major conceptual, functional, or operational aspects of public administration, and the principal historical, current, and prospective issues of concern to the field. Learning design entails formation of small teams for factfinding, analysis, and presentation on important issue areas, as well as full-group sessions. The intensive format schedule is followed.

810 Doctoral Seminar in Change, Innovation, and Public Administration (3)
Prerequisites: DPA participants may enroll in this course only with the permission of the seminar professor and the participant's advisory committee. Students from other doctoral programs may enroll only by permission of the seminar professor. This course emphasizes the recognition, anticipation, and analysis of economic, political, social, and technological change as it influences and is influenced by public administration. It investigates the nature of change, innovation, and creativity in society with the implication of enhancing student sensitivity to and knowledge about the future. Ways are examined for designing the structures and procedures of public organizations so that they can adapt to internal and external change.
course are repeated according to each student's program.

**Real Estate and Urban Development Courses (REUD) School of Business Administration**

301 Introduction to Real Estate and Urban Development (3)
A survey of the many dimensions and specialties involved in the public control and private development of land, including real estate, real estate finance and public administration. Individualized, intensive study of particular features of change, innovation, and public administration. Study is arranged and supervised with the appropriate tutorial professor.

829 Doctoral Tutorial in Leadership (1-3)
Prerequisites: DPA participants may enroll in this course only with the permission of the seminar professor and the participant's advisory committee. Students from other doctoral programs who can demonstrate sufficient background and interest in the tutorial may enroll only with the permission of the tutorial professor and the director of the public administration program. Individualized, intensive study of particular features of leadership. Study is arranged and supervised with the appropriate tutorial professor.

Religion Courses (REL) Philosophy and Religion

The courses of study are designed to serve a variety of needs and interests. With careful planning, students may acquire the necessary intellectual tools and scholarly background for further academic or professional study. The Bachelor of Individualized Studies offers students an excellent vehicle for this endeavor for qualified applicants. But whatever objectives students may have, to gain an adequate background in Religious Studies, courses should be selected from each of the listed areas in consultation with the department faculty.

132 Religion and Modern Man (3)
An introduction to several views of the nature of religion, with particular emphasis given to the religious understanding of man and reality. Its relationship with the modern understanding of man and reality is explored as expressed in contemporary anthropology, sociology, psychology, philosophy, and literature.

211 Religions of the Near East (3)

212 Religions of the Orient (3)

213 Hindu Religion and Philosophy (3)
A study of Hindu religions and philosophical developments from their origins through their formative periods. Emphasis is on tracing the evolution of the six major schools of philosophy, and the worship of Shiva, Vishnu, and the Female Power.

231 Religion in America (3)
A survey of the religious heritage in American culture, the growth of denominations and sects; the development of theology and ethics, the interdisciplinary relationship of religion and the socio-political life, and contemporary religious scene.

237 Religious Dimensions of Contemporary Dramatic Literature (3)
An examination of contemporary religious thinkers who have left their mark on modern plays of the Western stage, focusing on such themes as the self, human finitude, loneliness and alienation, love and redemption, personal guilt and social responsibility, suffering and death.
251 Biblical Studies: The Old Testament (3) A survey of the development of the Old Testament and intertestamental literature, with attention to the literary, historical, and theological aspects.


271 Contemporary Religious Ethics (3) Prerequisite: Sophomore standing or higher, or permission of the instructor. A philosophical examination of some of the major theoretical and practical issues in contemporary Judeo-Christian morality. Among the topics considered are the following: the relationship between religious and non-religious ethics; deontological and teleological ethical reasoning; situation ethics; and religious ethical judgments in such areas as politics, economics, medicine, and sex. Students who have taken PHIL 253 may not take this course.

330 Bible Belt Religion in America (3) Prerequisite: RELI 231 or permission of the instructor. A study of the development of religious life and thought in the popular and provincial fold-religion; emphasis on revivalism; pentism, perfectionism, and fundamentalism; the framework of cultural isolation, theological individualism, and ecclesiastical independence; interrelation with national and world scene.

331 Civil Religion in America: The Americanization of God (3) Prerequisite: RELI 231 or permission of the instructor. A consideration of the development of American political, civil, republican, democratic religion, or religious nationalism/Americanism; the concept of America as a New Israel; the idea of Manifest Destiny; the myths, rituals, symbols, and liturgical calendar of the nation; the relation of civil and ecclesiastical religion; the question of church-state separation; dangers and values in political religion.

332 American Religion in Social Thought and Action (3) Prerequisite: RELI 231 or permission of the instructor. An in-depth study of the churches' involvement in social thought and action. Areas of analysis include: interaction of church and culture; the churches and the nation's wars; slavery, segregation, and racial problems; nineteenth-century moral crusades; social views of churches, sects, and cults; the economic order and the "sacred"; social issues in modern America.

333 Contemporary Religion in America: Diversity and Dissent (3) Prerequisite: RELI 231 or permission of the instructor. The nature of consensus and dissent; analysis of the functional characteristics of religious experience and religious behavior classified in the categories of denomination (schismatic), intellectual (heretical), and religious-cultural (sects, cults, minority, non-normative groups and movements); the question of dissent being part of American diversity or separate from the mainstream, relationship to religious freedom and pluralism.

334 Religion in the Theatre of Asia (3) Prerequisite: RELI 212 or permission of the instructor. A study of certain Indian and Japanese theatre genres and their dramatic literature in their relation to the theatre of India and Japan.

336 Religion and Art of Asia (3) Prerequisite: Three credits in religion or art (recommended RELI 212, 213, or ART 101), or permission of the instructor. A study of Hindu and Buddhist beliefs expressed in Asian art and architecture. Emphasis is on tracing the development of a set of religious themes from Indian art through Sino-Japanese, and East Asian art.

337 Mysticism: East and West (3) Prerequisite: Three credits in religion, or permission of the instructor. A survey treatment of the major essential elements of the principal Western religious traditions. Analysis of the mystical experience in Hinduism, Buddhism, and Islam are considered, as well as aspects of Christian and Judaic mysticism. An attempt is also made to speculate on the nature of that particular human experience called the mystical experience.

338 Mythologies of the Orient (3) Prerequisite: Three credits in religion, or permission of the instructor. The course is structured around several great mythic themes: myths of creation and origins; myths of the nature and posture of the gods; myths of the nature and structure 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 Shinto and Native American. The presentation of oriental myths by major themes permits in-depth understanding of the myths within a specific cultural context as well as within a comparative religious framework.

376, 377 Special Topics in Religious Thought (3, 3) Prerequisite: Three credits in philosophy or religion, or permission of the instructor. An intensive study of a selected topic in philosophy or a religious perspective. Topics vary depending on interest and currency, and include, but are not limited to, the following: Black Religion, Death of God Theology, Process Theology, Paul Tillich, Agapism, Ethical Justification and Religion, Martin Buber, Religion and Science Fiction, Methodology of Religious Studies, New Hermeneutics, Form Criticism, Critical Theology, Postmodernism, Contemporary Judaism, and Existential Theology.

Russian Courses (RUSS) Foreign Languages and Literatures Placement: See Academic Policies and Procedures. 151, 152 Elementary Russian (4, 4) Intensive introduction to Russian, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of Russia through selected readings and through programs in the language laboratory. Four hours lecture and four hours laboratory per week. 151 and 152 must be taken in sequence.

251 Intermediate Russian (4) Prerequisite: RUSS 152 or equivalent. Intensive review of grammar; practice in writing; development of reading proficiency and of aural and oral skills; continued study of the life and culture of Russia. Language laboratory instruction is an integral part of the course. Four classroom hours, two laboratory hours per week.

252 Russian Conversation and Composition (3) Prerequisite: Permission of the instructor. Development of the student's ability to express himself orally on topics of current interest and everyday situations; composition practices provided. Laboratory hours are for a maximum of two hours per week.

254 Readings in Russian Literature (3) Prerequisite: RUSS 251 or permission of the instructor. Readings of Russian literary works in the original language with all lectures, discussions, and examination in English.

300 Field Study in Russian Culture (1, 2, or 3) Prerequisite: One of the following courses: HIST 326 or 357, PSY 245, or permission of the instructor. A directed study tour to the Soviet Union of between two and three weeks. Students must attend a series of lectures before the trip and participate in research projects while the faculty member on a research project on a topic in Russian culture resulting in a term paper or report.

303 Russian Advanced Conversation (3) Prerequisite: RUSS 251 or equivalent. Development of oral proficiency in Russian with special emphasis on the vocabulary of everyday situations including current Soviet expressions.

311 Contemporary Russian Fiction (3) Prerequisite: RUSS 251 or equivalent. Reading and discussion of recent short stories by the best-known Soviet writers of today. Readings in the original English, translated partly in English, partly in Russian. This course may be taken toward fulfillment of the non-Western Culture requirement and the general requirement in literature for baccalaureate degrees.

353 Russian Civilization (3) Prerequisite: Junior standing or permission of the instructor. A survey of the civilization and culture of Russia and the USSR and its influence on Russian readers and lectures, the course includes films, slides, and music. All coursework in English. This course may be taken toward fulfillment of the non-Western Culture requirement and the Russian BA degree.

354 Contemporary Soviet Life (3) Prerequisite: Junior standing or permission of the instructor. The social life, art, economics, education, view of life, and personal aspirations of the Soviet citizen today. All classroom discussions and reading assignments are in English. A number of Soviet films are shown. This course may be taken toward fulfillment of the non-Western Culture requirement for the BA degree.

Social Work Courses (SOCW) Sociology

100 Introduction to Social Work (1) This course permits the student to test out at an early level an interest in social work through introductory classroom discussion and field observation. The student has the opportunity to discuss with social work faculty, social agency personnel, and other social work students the functions, values, methods, effectiveness, opportunities, and limitations of social work in helping people. Field visits and optional readings supplement discussions. 100 is for a maximum of 60 hours per term.

301 Laboratory in Interpersonal Communication (3) Prerequisites: SOCI 101, PSYC 100, or permission of the instructor. An exploration of the dynamics of process in social work and of the student's suitability for a helping role. Emphasis is on experiential learning of the biological, psychological, social, and cultural influences on the behavior of those who need and those who give help. Individual and group exercises and simulations are supplemented by service experiences in the field to the extent that the student's skills enable him to help examine their own behavioral and learning patterns, values, and attitudes, in order to increase their ability to understand and help social work clients. Field service of at least 60 hours is required in this course.

323, 324 Human Behavior in the Social Environment I, II (3, 3) Prerequisites: SOCI 101, BIOL 104, or permission of the instructor. A social systems approach unifying and integrating concepts and knowledge from biology, anthropology, sociology, and psychology about human behavior and social systems. Applications of this understanding of human behavior in professional practice are examined in the social work literature and in the student's field experience. (323, 324, must be taken in sequence.) 323 may be taken for credit as a service course. Prerequisites: SOCI 101, PSYC 100, or permission of the instructor. Introduction to social welfare, its historical development, central concepts, institutional nature, and the functions of social work as a profession. Exploration of underlying human needs and services organized to meet them. Field investigation and analyses of human service delivery systems, settings, and roles of social work.

352 Social Welfare Policy and Services II (3) Prerequisites: Junior or senior standing or permission of the instructor. Survey of the development of various social welfare policies, components of policy in our society. Examines the political, economic, and cultural influences on the policy-making process and the role of professions and citizen groups within it.

357 Methods of Social Work Intervention I (3) Prerequisite or corequisite: SOCW 301 or permission of the instructor. A general orientation of social work practice from a systems perspective. Particular emphasis is given to problem-solving activities with microsystems. The common core of knowledge, values, and skills essential to social work practice is analyzed to gain insight into social work functions and the role of the social worker as a change agent. From this generic base the following problem-solving ac...
tivities are examined: data gathering, problem assessment, use of community resources, and development of feasible plans of action. Emphasis is placed on making the experience meaningful and methods and techniques of achieving them. Dynamics of interviewing and use of relationships are explored.

369 Methods of Social Work Intervention II (4)
Prerequisite: SOCW 301, SOCW 357, or permission of the instructor. Methods II continues a generic problem-solving model, focusing on group and macro-level interaction. Social work settings, systems, settings, and skills. Emphasis is placed on working with groups from treatment to task purposes. Group processes as goal formulation, contract setting, composition, organizational structure, and techniques necessary for effective worker intervention are partial knowledge base of the course. Macro content focuses upon roles and spheres of activity most commonly encountered by social work in macro systems such as organizations and communities. Field service of 40-60 hours is required for this course.

424 Social Work Practice: Family and Group (3)
Prerequisite: SOCW 358 or permission of the instructor. This course should be undertaken simultaneously with SOCW 453 or 454 (Senior Practicum). Designed to probe in-depth the theoretical and applied concepts of social work practice with the family and group. Students should have the opportunity to contact client contact in the practicum to develop skills and techniques in social group work and family practice.

425 Planning and Organizing for Community Change (3)
Prerequisite: Senior standing or permission of the instructor. An overview of community organization and planning; with specifics in the practice of "grass-roots" community organizations. Following areas included: the community development approach, neighborhood study and analysis, direct services in the neighborhood, relevant roles for neighborhood residents in service delivery, independent role of the neighborhood in planned change. Problems and issues of community change in democratic society are examined using both research and social work values.

453 Senior Practicum I (5)
Prerequisite: SOCW 357, 358, 323, and 324, with a grade of at least C and recommendation of faculty. Open only to majors in social work. An intensive field-related course designed to offer a educationally related social work experience. Under supervisory instruction provided by field agencies, students are involved in full days, four days a week learning through participation in the provision of service to individual clients, families, groups, and communities and in activities sponsored by or involving professional social workers. Weekly seminar and periodic faculty-agency consultation are employed to give further focus to learning.

454 Senior Practicum II (5)
Prerequisite: SOCW 453, with a grade of at least C and recommendation of faculty. A continuation of the field experience and weekly seminar begun in SOCW 453.

455 Senior Practicum/Block Placement (10)
Prerequisites: SOCW 357, 358, 323, 324, 471, completion of all required social work courses except electives. Open only to majors in social work with senior standing (84 credit hours). G.P.A. of 3.00 (in social work) and recommendation of the faculty. An intensive field-related course designed to offer educational social work experience. Under supervisory instruction provided by field agencies, students are involved in full days per week in learning through participation in the provision of individual services to families, groups, and, or communities, and in activities sponsored by or involving professional social workers. Attendance at a weekly seminar, the completion of a special project, and periodic faculty-agency visits facilitate the students' integration of theoretical knowledge and practice experiences.

471 Research in Social Work (3)
Prerequisite: SOCW 221, SOCW 453, or permission of the instructor. This course examines the principles and the theory underlying scientific inquiry. Emphasis is on research in social work practice, steps in conducting research, and utility of research efforts in developing and evaluating social work knowledge and skills. Principles of problem formulation, research design, sampling procedures, principles of measurement, data gathering, and analysis and presentation of research findings are critically examined. Writing research papers, research, research reports, and articles facilitate research skills.

475 Selected Topics in Social Work Policy (3)
Prerequisite: Junior or senior standing and permission of the instructor. This course provides an opportunity to study in depth special areas of social work which are of interest to students, faculty, and the social work community. The topics covered are selected from the following:

1. Selected Approaches to Social Work Intervention (3)
Prerequisite: Junior or senior standing or permission of the instructor. This course is taken simultaneously with SOCW 453 or 454 (Senior Practicum). It provides senior social work students with an opportunity to examine critically their own use of research in approaching social work intervention currently employed in practice settings. Students thus have an opportunity to use with clients the technical skills these approaches require.

499 Independent Study in Social Work (1-3)
Prerequisite: Senior standing and a research proposal approved by the instructor in advance of enrollment. Invitation to a research problem in the field of social work.

Sociology Courses (SOCI)

101 Introductory Sociology (3)
An introduction to basic sociological concepts. Analyzes the role of group interaction; social mobility and stratification; status and class; race relations; urbanism; crime and criminality; social change and reform.

152 Modern Social Problems (3)
Prerequisite: SOCI 101 or permission of the instructor. A sociological analysis of the problems of modern society, including those related to stratification, social change, family and kinship, cultural change, and deviant behavior.

201 Marriage and the Family (3)
Prerequisite: SOCI 101 or permission of the instructor. An in-depth analysis of the family in contemporary America. Human sexuality, premarital behavior, marital adjustment, socialization of children. family economics, divorce, and variations in family life cycle are examined.

203 The Sociology of Small Groups (3)
Prerequisite: SOCI 101 or permission of the instructor. The study of the characteristics, structure, and process of small group dynamics, theories and models of group analysis, techniques of observation and research in small groups.

205 Sociology of Deviance (3)
Prerequisite: SOCI 101 or permission of the instructor. The major theoretical approaches to deviant behavior are explored: functional theory, conflict theory, and symbolic interaction theory. Both the positive and negative aspects of deviant behavior are examined in relation to their effects upon society.

206 Personal Worth and Collective Identity: The Socialization Process (3)
Prerequisite: Three hours of sociology, or permission of the instructor. Institutional and personal dimensions of the socialization process analyzed in terms of norms, roles, group processes, and stratification. An examination of the concept throughout the life cycle is examined in terms of major agents of socialization, e.g., family, schools, peers, mass media. Focus is on influence of certain limited status prescriptions in contemporary society—such as race, age, sex, and the handicapped.

221 Statistics for the Behavioral Sciences (4)
Prerequisite: SOCI 101 or permission of the instructor. An introduction to the interpretation of applied statistics as used in the behavioral sciences to include descriptive statistics, inferential statistics, correlation-regression, analysis of variance, factor analysis, nonparametric statistics, and practical experience with calculators in applying statistical analysis to actual problems of the behavioral sciences. Three class hours and two laboratory hours.

240 Social Services in Society (3)
Prerequisite: SOCI 101 or permission of the instructor. A survey course covering the institutions of health and welfare in society. Places special emphasis on various ameliorative efforts made by organizations to combat the effects of social problems, and discusses the variety of skills and resources involved.

291 Independent Study (1-3)
Prerequisite: SOCI 101 and a written proposal approved in advance of enrollment by the instructor. Individual study of a sociological topic of interest to the student. Open to sociology majors only.

391 Criminal Sociology (3)
Prerequisite: SOCI 101 or permission of the instructor. An 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.

396 Sociology of Delinquency (3)
Prerequisite: SOCI 101 or permission of the instructor. An inquiry into the types, causes, treatment, and prevention of delinquent behavior.

393 Sociological Research Methodology (4)
Prerequisite: SOCI 221 or permission of the instructor. An introduction to empirical design in sociological research. Historical development, research design, sampling, methods of gathering data, sociometric scales, analysis and interpretation of results. Credit and reporting are examined. Three class hours and two laboratory hours.

394 Sociology of Work (3)
Prerequisite: Three hours of sociology or permission of the instructor. The course examines the meaning and structure of the world of work and its relationship to other spheres of life. Issues covered include career patterns and social mobility by occupational status and prestige, the importance of the work setting, work satisfaction and alienation.

395 Demographic Analysis (Population Problems) (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. (It is recommended that students first take SOCI 332.) The influence of population distribution and changes on social, economic, and political problems of human society.

396 Sociology of Collective Behavior (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. An analysis of crowds, mobs, and publics. The structure and function of social movements distinguished from other forms of collective behavior are examined.
308 Sociology of Race Relations and Minorities (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. The examination of race as a social institution and its impact on society. The historical and contemporary development of national, racial, and ethnic minority relations in modern society with particular emphasis on blacks in American society.

311 Classical Sociological Theory (3)
Prerequisite: Nine hours in sociology including SOCI 101 or permission of the instructor. The sociological tradition is explored through readings and discussions of seminal aspects drawn from the writings of selected sociological thinkers such as Comte, Marx, Weber, Durkheim, and others.

315 Sociology of Sex Roles (3)
Prerequisite: Junior or senior standing or permission of the instructor. This course deals with the changing conceptions of sex roles, both female and male, in contemporary society. Using historical and comparative data, the differential socialization of males and females is seen in relation to the changing social structure in which this socialization takes place.

325 Sociology, Demography, and Ecology of Metropolitan Areas, Urbanism as a Way of Life, and the Socialization of the Urban Population (3)
Prerequisite: Six hours of sociology or permission of the instructor. An emphasis on the role of society in the urban environment.

332 Sociology of Urban Communities (3)
Prerequisite: Six hours of sociology including SOCI 101, or permission of the instructor. An analysis of the urban community: historical development and sociocultural and political perspectives utilized for analyzing urban sociological variables. History, current assessment, and future trends of organized cities and the forces driving change are examined.

340 Power in Society: Introduction to Political Sociology (3)
Prerequisite: Six hours of any social science including SOCI 101, or permission of the instructor. An analysis of how political power is related to other aspects of social life, in terms of such sociological concepts as class, power, political economy, social organization, elite analysis, and bureaucratic power. Discussion of local and national power structure, research, power, decentralization, professionals and social change, and the growth of multicultural corporations.

351 The Sociology of the Life Cycle (3)
Prerequisite: Three hours of sociology, or permission of the instructor. Consideration of social influences on the timing of the life course. Topics include cultural variations in defining age roles, the historical social development of generational subcultures, youth and age as new minorities, community structure and the aging process, the mass media and the American culture of youth, and explorations of alternative patterns of generational interaction.

373 The Community (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of instructor. An examination of small to moderately-sized communities ranging through the village, rural community, small town, and city community. The latter category includes city localities, ethnic villages, and suburban communities. Includes study of case communities. Includes participant observation and field trips.

382 Education in Contemporary Society (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of instructor. The study of education as a social institution. Its function as a socializer and its role in the socialization process of the individual. The study of the influences of social class elements on the educational process and the social organization of the U.S. public school system are emphasized.

385 Sociology of Religion (3)
Prerequisite: Three hours of sociology, or permission of the instructor. A sociological analysis of religious phenomena. The personal and institutional dimensions of religious life are studied within major sociological concepts such as role, status, norms, social aggregates, and function. This student selects an aspect of religion to study in depth.

390 Medical Sociology (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. An examination of the social context of disease and medical care, the position of the professions in the medical care structure, the delivery of medical care and the patient-physician relationship under different systems of practice. The etiology, incidence and prognosis of disease, and the restora tion of patients to their normal social functions is studied in a sociocultural environment.

392 Formal Organization (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. An analysis of the how social organizations are structured and the consequences of this internal structure. Social control, power structure, and system of rules and norms are examined. The study of formal organizations and the administration are features of the course.

397, 398 Fundamentals of Aging I, II (3, 3)
Prerequisite: Eight hours of biology, anatomy, or psychology, or permission of the instructor. An introduction to the sociology of aging. An interdisciplinary approach to the study of aging. The physical, psychological, and social aspects of normal aging are analyzed. Social security medical care, mental health, social services, education, and public policy in the field of gerontology. A field experience is required. Students who have taken PSYC 216 may not receive credit for Fundamentals of Aging I, and students who have taken UNIV 402 may not receive credit for Fundamentals of Aging II. SOCI 397 may not be taken for social science requirements credit.

401 Social Stratification: The Study of Inequality (3)
Prerequisite: Twelve hours of sociology including SOCI 101 or permission of the instructor. An examination of the structure of social inequality from a stratification framework. Topics include the nature of hierarchical and vertical differentiation and inequality in society. How social classes are analyzed through economic, political, and prestige structures and include the study of social mobility and differential life stages and opportunities.

402 Sociology of Punishment and Corrections (3)
Prerequisite: Six hours of sociology including SOCI 101 or permission of the instructor. Histori­cal and contemporary treatment of the adult and juvenile offender. Includes discussion of the origin and development of punishment, correction, rehabilitation, and the research on the effectiveness of correctional institutions. An exploration of the legal and social agencies in the treatment process are compared and contrasted.

410 Social Surveys and Opinion Attitude and Opinion Measurement (3)
Prerequisite: Twelve hours of sociology including SOCI 221 and 303, or permission of the instructor. Survey research methods and techniques used in collecting and analyzing sociological data. Emphasis is placed on techniques and methods for measuring social attitudes and opinions are studied.

412 Contemporary Sociological Theory (3)
Prerequisite: Twelve hours of sociology including SOCI 101 and 311, or permission of the instructor. Contemporary sociological theorists such as Parsons, Merton, Mills, Berger, and Gouldner will be analyzed in terms of their relationship to the major schools of contemporary sociological theory.

413 Seminar in Social Issues (3)
Prerequisite: Senior standing and 12 hours of sociology or permission of the instructor. This course examines the interaction of language and social structure. Attention is focused on language as revealing culturally specific rules of interpretation. On the sex, class, race, age, and the specific use of language in the production of talk; and on language as itself constraining on individuals.

420 Regional and Societal Development (3)
Prerequisite: Junior or senior standing, and permission of the instructor. An in-depth consideration of the social dimensions of economic growth and development with particular emphasis on Third World countries. Alternative definitions of development, problems related to the implementation of change strategies, the contexts of national, regional, and institutional change are examined. Contemporary issues are used to develop the theoretical and practical content for sociological thought.

441 The Sociology of Aging (3)
Prerequisite: Six hours of sociology, or permission of the instructor. This course examines aging from a sociological perspective. Topics covered include demographic trends and the aging population in America, the social construction of life stages and the creation of "old age," cultural labeling, and human resistance. Examines the health system and aging, the economics of aging, the politics of aging, and the social development of families.

471 Prevention and Deterrence of Crime (3)
Prerequisite: Junior standing, or permission of the instructor. The study of the social construction of life stages and the creation of "old age," cultural labeling, and human resistance. Examines the health system and aging, the economics of aging, the politics of aging, and the social development of families.

490 Seminar in Sociology (3)
Prerequisite: Enrollment restricted to senior majors in sociology. This course may be taken for credit only once by a student. Topics of contemporary interest in sociology are offered through individual seminar. Topics studied vary from semester to semester.

495 Sociocultural Change (3)
Prerequisite: Junior or senior standing or permission of the instructor. An examination of the sources, processes, and consequences of social and cultural alteration. Anthropological and sociological models are used for case analysis of social movement, culture contact and borrowing, innovation adoption, and planned change.

499 Independent Research in Sociology (1-3)
Prerequisite: 18 hours of sociology which include SCI 411, 412, and 414, or permission of the instructor. A research project approved in advance of enrollment by the instructor and the department chairperson. Investigation of a sociological problem according to individual interest with stress on research.
551 Medical Sociology (3)
Prerequisite: Graduate standing or permission of the instructor. An examination of the social context of disease and medical care, the position of the professions in the medical care structure, the delivery of medical care, and the physician-patient relationship under different systems of practice. The etiology, incidence, and prognosis of disease, and the restoration of patients to their normal social functions are studied in relation to the social environment.

580 Clinical Sociology (3)
Prerequisite: Graduate standing. This course introduces students to the theoretical principles, methods, and practice of clinical sociology as an independent consultant or within private or public organizations. Such specialized applications as family counseling, organizational and educational sociology, and educational sociology are covered.

585 Sociology of the Handicapped
Prerequisite: Graduate standing or permission of the instructor. An overview of social movements relating to the handicapped including questions on how persons with handicaps manage living in their homes, in their schools, and in their workplace. A major portion of the course addresses itself to an analysis of legislation and public programs as they relate to various handicapping conditions.

800 Studies for the Doctor of Arts in Education (variable credit)
Prerequisite: Open only to DA Ed students admitted to study in sociology. A program of studies designed by the student and approved by the student's doctoral committee which brings the student to participate in the current research of the discipline director and results in a paper reporting the original contributions of the student. The paper is presented in a subsequent DA Ed summer seminar. Enrollments in this course are repeated according to each student's program.

Spanish Courses (SPAN) Foreign Languages and Literatures

151, 152 Elementary Spanish (4, 4)
Intensive introduction to Spanish, including basic grammar, aural training, the development of oral skills, and reading. Introduction to the life and culture of Spanish-speaking countries through selected readings and through programs in the language laboratory. Four classroom hours and two laboratory hours per week. 151 and 152 must be taken in sequence.

153 Review of Elementary Spanish (4)
An intensive review of elementary Spanish designed for advanced students who need a rapid introduction to the life and culture of Spanish-speaking countries through selected readings and through programs in the language laboratory. SPAN 153 may not be taken for credit in combination with 151 or 152. Four classroom hours, two laboratory hours per week. 151 and 251 must be taken in sequence.

251 Intermediate Spanish (4)
Prerequisite: SPAN 152 or 153, or equivalent. Intensive review of grammar; practice in writing; development of reading proficiency; test of basic reading ability; study of the life and culture of Spanish-speaking countries. Language laboratory instruction is an integral part of the course. Four classroom hours and two laboratory hours per week. 141 and 142 Applied Spanish for the Social Services (4, 4)
A practical Spanish course designed specifically to meet the needs of majors in the social services: Nursing, Law Enforcement, Public Administration, Social Welfare. Four classroom hours and two laboratory hours per week. 141 and 142 must be taken in sequence, and may be taken in lieu of SPAN 251 to fulfill the first two semesters of the language requirement.

241 Applied Spanish for the Social Services (4)
Prerequisite: SPAN 142 or its equivalent. Continuation of SPAN 142. Two hours and two laboratory hours per week. 241 may be taken in lieu of SPAN 251 to fulfill the final semester of the language requirement.

252 Spanish Civilization and Composition (3)
Prerequisite: SPAN 251 or equivalent. Development of students' ability to express themselves orally on topics of current interest and everyday situations, and to provide practice in more difficult forms of expression.

301 Advanced Grammar and Syntax (3)
Prerequisite: 15 semester hours of Spanish or permission of the instructor. An in-depth review of Spanish grammar and syntax. The course provides extensive practice in controlled and free writing, with emphasis on the fundamental difficulties and points of interface which exist between English and Spanish.

303 Advanced Conversation (3)
Prerequisite: SPAN 252 or permission of the instructor. Emphasis is placed on developing vocabulary and strengthening conversational skills through class discussions and oral reports based on contemporary themes. This course is required in the Spanish major program. It may be taken concurrently with Hispanic civilization and survey courses, but must precede all other courses in the major.

304 Advanced Composition (3)
Prerequisite: SPAN 252 or permission of the instructor. This course is structured to emphasize development of the skills required in writing Spanish. The composition and the translation exercises are required. Grammatical structures reviewed and supplemented with individual corrections. This course is required in the Spanish major program. It 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)
Prerequisite: 15 semester hours of Spanish language or permission of the instructor. An examination of the main periods, trends, genres, and most representative works of Spanish peninsular literature from the earliest to the present. Required for the Spanish major.

318 The Literature of Spanish America (3)
Prerequisite: 15 semester hours of Spanish literature or permission of the instructor. An examination of the development of Spanish American literature; the main authors, periods, and literary trends. Required for the Spanish major.

325 Spanish Hispanic American Literature (3)
Prerequisite: ENGL 102 or equivalent, or permission of the instructor. Designed for the non-major student, the course provides study of the works of many important writers (e.g., Cervantes, Tirso de Molina, Unamuno, Borges) in translation. The writers studied vary and are announced in each semester's Schedule of Classes. May be taken for elective credit or with prior approval of the department.

331, 332 Literature of the Golden Age (3, 3)
Prerequisite: SPAN 317 or permission of the instructor. Advanced study of literary works of the Spanish Golden Age (1517-1680), with emphasis on the works of Cervantes. Lope de Vega, Tirso de Molina, Ruiz de Alarcon, Quevedo, and Calderon. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees. May be repeated for credit with prior approval of the department.

333, 334 Spanish Literature of the Nineteenth Century (3, 3)
Prerequisite: SPAN 317 or permission of the instructor. Study of the major works of nineteenth-century Spanish literature. SPAN 333 makes an in-depth investigation of the major authors of the Romantic and Post Romantic period such as Rivas, Zorrilla, Alarcon, and Becquer. SPAN 334 concentrates on the rise of Realism and Naturalism as found in the works of Galdos, Clarin, Blasco, Ibanez, and other authors of the second half of the century. May be taken toward fulfillment-
ment of the general requirement in literature for baccalaureate degrees.

341 Spanish American Short Story (3)
Prerequisite: 15 semester hours of Spanish or permission of the instructor. The development of the short story in Spanish American literature from the early nineteenth century to the present. Reading and discussion of selected short stories by writers representative of major literary movements or trends. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

343, 344 Contemporary Spanish Literature (3, 3)
Prerequisite: SPAN 317 or permission of the instructor. The first semester examines in depth the major works of the "generation of '36" including: Unamuno, Vicente Blasco Ibañez, Azorin, and Antonio Machado. The second semester includes an analysis of contemporary post-Civil War authors: Cela, Laforet, Delibes, and Buero Vallejo in Spanish literature of the twentieth century. Instructor: Azorin, and Goytisolo. The various genres are studied in the works of these leading writers. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

341 Spanish American Poetry (SPAN)
Prerequisite: SPAN 318 or permission of the instructor. Study of the more representative poets of Latin America as related to the present. Special attention is given to the poetry of Marti, Dario, Lugones, Valdés, Huidobro, Neruda, Mistray, Villarurritu, and Paz. May be taken toward fulfillment of the general requirement in literature for baccalaureate degrees.

443, 444 Spanish American Novel (3, 3)
Prerequisite: SPAN 318 or permission of the instructor. The evolution and development of the novel in Spanish America from colonial times to the present. A study of the most representative works will be completed. Collateral readings are required including selected fulfillment of the general requirement in literature for baccalaureate degrees.

497, 498 Senior Honors Study (3, 3)
Prerequisite: Senior standing as a major in Spanish, with an overall grade point average of 3.00 and 3.000 in the major field. Students who meet these requirements are admitted to candidacy upon authorization by the department Honors Committee in the second half of the junior year, supported by a faculty recommendation and an interview by and with the appropriate faculty member. In the first semester, weekly meetings with a faculty member to discuss readings from a comprehensive list prepared by the Spanish faculty. In the second semester, independent research and compilation of an honors essay under the supervision of a member of the Spanish faculty.

500 History of the Spanish Language (3)
The scientific study of the evolution of the Spanish language from its origin in vulgar Latin to its present forms.

501 Applied Grammar for Teachers (3)
Prerequisite: SPAN 420 for Spanish majors or permission of the instructor. Study of major theories and methods of foreign language teaching. Practice in the application of these theories to the specific activities of the classroom. This course is identical to EDUC 450.

530 Seminar in the Literature of the Golden Age (3)
Study of a literary genre or a major author of Spanish literature of the Golden Age.

535 Seminar in Don Quijote (3)
Intensive study of Don Quijote and the major works of Cervantes.

540 Seminar in Nineteenth Century Literature (3)
Intensive study of a writer, genre, theme, or movement of this period.

545 Seminar in Twentieth-Century Poetry (3)
Study in depth of a major poet or poets in a particular generation or movement.

550 Seminar in Twentieth-Century Drama (3)
Study of major dramatists such as Benavente in the Generation of 1896 and Buero Vallejo in the contemporary theater.

555 Seminar in Twentieth-Century Prose (3)
Intensive study of a major writer, theme, or movement in the novel or the essay.

560 Seminar in Spanish American Poetry (3)
Study of three or more major poets of a given period. The literary and social atmosphere of the period is emphasized.

565 Seminar in Spanish American Drama (3)
Study of three or more playwrights who have made a major contribution to the development of the theater. Special attention is given to social and philosophical themes.

570 Seminar in Spanish American Prose (3)
Study of three or more major authors of a given period, or author in the novel, short story, or essay.

575 Seminar in Literature and Art (3)
A comparative analysis of a literary theme or style in relation to other media (e.g., painting, architecture, film) for an integral understanding of the arts.

580 Seminar in Literature and Society (3)
Intensive study of a literary topic, a genre, or selected authors in relation to a given economic, social, or political system in Spain or Latin America.

585 Seminar in Literature and Ideas (3)
A study of major ideological-philosophical themes and their artistic expression in literature.

599 Thesis (3, 3)
Individual research and writing of a thesis under the guidance and supervision of a faculty member.

Theatre Courses (THR)

160 Introduction to the Theatre Experience (3)
An overview of the theatre as the composite art of performer, director, actor, designer, and technician; and an examination of the interrelationship of play, physical theatre, and audience through the study of representative plays of various periods of theatre history.

207, 208 Color (3, 3) (Same as ART 207, 208)
The first semester covers studies in color as pigment—examination of various color theories and their application, using aqueous paints and color paper. The second semester covers theories of color in light and their application using a variety of light sources and color media. Six hours per week.

220 Acting I (3)
A laboratory-performance course. Basic training in acting, emphasizing the actor's use of voice and body in theatre games, role assumption, improvisation, and short scenes.

211 Body Movement (1)
A lecture-laboratory course. A development of the body movement emphasis in theatrical movement: theatrical dance, and mime. Three hours per week.

230 Stagecraft I (3)
A lecture-laboratory course in the fundamentals of stagecraft. Provides a knowledge of the tools and materials used in stage carpentry and scene painting and the application of proper techniques for the construction of stage scenery.

231 Stagecraft II (3)
Prerequisite: THR 230 or permission of the instructor. A lecture-laboratory course in the fundamentals of stage lighting. Provides a working knowledge of the tools, materials, and techniques
of stage lighting and the uses appropriate to each.

245 Stage Costume and Makeup (3)
A lecture-laboratory course in the fundamentals of costume design and the techniques of stage makeup. Two-thirds of the course is given to costume, one-third to makeup. Stage costume is studied in relation to historical periods, with experience in design, pattern cutting, and construction techniques.

251 Theatre of India and Southeast Asia (3)
A study of the literature, theory, and practice of the theatre in India and Southeast Asia.

252 Theatre of East Asia (3)
a study of the literature, theory, and practice of the theatrical genres of China and Japan.

270 Asian Methods of Acting (3)
The objectives of the course are to further the students’ basic understanding of the way in which the elements of theatre work together, to increase their ability to make critical appraisals of theatre productions, and to enhance their enjoyment of the theatre experience. The course is organized around attendance at productions, discussion and evaluations of productions and professional reviews of the writing of reviews.

302 Scripts in Performance (3)
The objective of this course is to focus on the process by which written scripts (drama) become live performances. The course is designed for non-majors and stresses awareness and understanding of the process described rather than the writing of dramatic criticism. Attendance at productions, rehearsals, interviews with directors, actors, designers, and—when possible—playwrights form the structure of the course. The course is especially appropriate for students in literature who need additional work in how that literature becomes performance but who are not and do not wish to become theatre majors.

303, 304 Special Topics in Theatre (3, 3)
Prerequisite: THR 160 or permission of the instructor.
A study by topics such as theatre as a political weapon, street theatre, avant-garde theatre, the use of masks. The topics change each time the course is offered.

325 Acting II (3)
Prerequisite: THR 220 or permission of the instructor.
An intermediate laboratory-performance course in the repertoire of the most popular genres and styles. Extension work in subtext, characterization, ensemble playing; designed to extend the principles acquired in Acting I.

326 Acting III (3)
Prerequisite: THR 325 or permission of the instructor.
An advanced laboratory-performance course given to acting theory and styles. Readings in Delsarte, Dolman, Stanislavski, Brecht, Artaud, Spolin, Chaimkin, and Grotowski. The application of their theories to the playing of selected scenes. The development of a personal approach to acting through exploration and experimentation.

327 Asian Theatre Techniques (3)
Prerequisite: THR 220 or permission of the instructor.
A laboratory-performance course. Study and adaptation of techniques used in several Asian theatre genres. Experimentation in the application of Asian methods—such as body movement, voice production, using masks and makeup, handling of costumes and scenic elements—to scenes from Asian and Western plays.

330 Stagecraft III (3)
Prerequisites: THR 230 or permission of the instructor.
A lecture-laboratory course in basic scenic design techniques. Includes basic drawing and an introduction to the use of a script for visual interpretation; the devising of a stage setting that will accommodate movement, dramatic action, character, and mood. The drafting of construction plans and scenic elements. Experience with perspective drawing, color renderings, and scale models.

340 Play Production Laboratory (1-3, maximum credit 3)
Prerequisite: Permission of the instructor. Practicum. Supervised production work on the level of crew head, assistant director, stage manager, designer, director, set designer. 85 hours of production work per credit hour.

350 Playwriting Workshop (3)
Prerequisite: 12 hours of English credit or permission of the instructor. A practical workshop in the writing plays, with emphasis on the one-act form. May be repeated once, but only three hours are accepted in the theatre major.

351, 352 Asian History (3, 3)
Prerequisite: THR 160. A lecture course in the development of the theatre from its beginnings to the present, with reference to theatrical movement, playwrights, producers, costume and scenic elements of the theatre. Emphasis on the social, cultural, and philosophical factors shaping the theatre in successive historical periods. Major emphasis on Western theatre, but non-Western theatres also studied.

354 (formerly LAC 361) Creative Dramatics and Oral Interpretation in the Elementary School (3)
Investigation and application of the basic concepts and techniques of directing in creative dramatics and oral interpretation of children’s literature. Emphasis on didactic development in these areas. Students who have taken LAC 355 are given credit for this course.

355 Puppets, Plays, and Poems: Theatre Techniques for Children and Young People (3)
Prerequisite: Permission of the instructor. Experiences in a variety of theatre techniques and activities to explore the concept that literature becomes performance but who are not and do not wish to become theatre majors.

360 Directing I: Basic Concepts (3)
Prerequisites: THR 160, 220, and 230, or permission of the instructor. A lecture-laboratory course in the basic concepts and techniques of directing for the stage. Emphasis on close textual analysis of script for use of space, characterization, tempo, and mood. Attention to reading group plans, rehearsal procedures, and the historical evolution of the director. Practise in blocking, line reading, and stage craft.

361 Directing II: Practicum (3)
Prerequisites: THR 360 or permission of the instructor. A laboratory course intended to complement Directing I. It provides students with an opportunity to apply classroom training, knowledge, skills, and theory to an actual situation.

401 Theories of the Theatre (3)
Prerequisites: THR 351, 352, or permission of the instructor. Theories of production from Aristotle to Brecht in the West, and Indian and Japanese theories from Asia.

403, 405, 406 Seminar in Shapers of the Modern Theatre (3)
Prerequisite: THR 351 and 352 or permission of the instructor. A seminar course providing an opportunity for intensive study of the ideas and practices of three or four directors, designers, playwrights, stage managers working from a significant and influential Western theatre, such as Brecht, Artaud, and Grotowski. The multiple numbers allow seminars to be designed around outstanding theatre and to focus on the following areas of the director: program and acting, designing, directing, and playwriting.

410, 411 Independent Study (3)
Prerequisite: Open only to theatre majors with senior standing and by special permission of the department chairperson. Individual research or a creative project in close consultation with an instructor.

University Courses (UNIV) Academic Affairs

401 Visions of the End in America (3)
An interdisciplinary study of the radical shift from visions of America as the land of endless promise to foreboding suspicions of catastrophic endings. Examination of the theologies that project a vision of how the future may progress toward its end—art, literature, and popular culture. Mixed-media presentations and guest lectures contribute to an understanding of “the American apocalyptic mentality.” Offered Spring 1978. Professor L. P. Zamora.

402 Cases of the Twilight Years (3)
Prerequisite: Six hours of psychology, or sociology, or nursing, or equivalent and permission of the instructor. At least three of the six hours must be in a 300-level course. An interdisciplinary course. In this course, students are exposed to advanced theoretical and applied issues in gerontology. The course uses a variety of media methods to deliver the content. Guest speakers from gerontology, psychology, or sociology are invited for University presentations, as well as GMU faculty from selected departments. Offered Spring 1978, Spring 1979. Professor F. W. McGuire.

403 Alcoholism: A Determined and Over-Determined Problem (3)
Prerequisite: Introductory courses in biology, psychology, sociology, or permission of the instructor. The study of alcohol problems. Sociocultural, psychological contributions to the field of alcoholism are studied along with general principles of prevention, treatment, and rehabilitation. Offered Spring 1978, Spring 1979. Professor G. D. Cooper.

404 Brothers and Strangers: Jews and Judaism in Western Culture (3)
Introduces students to Jewish religion, philosophy, literature, and history from Biblical times to present-day America. Myths and realities about Jewish culture and about its impact on Western civilization are explored through scholarly and popular writings. The course requires a midterm examination, a final examination, and a paper. Offered Fall 1978, Spring 1979, Professor J. G. Barker.

405 Anthropology of Health (3)
Provides a cross-cultural perspective of health and illness issues. Health and disease are examined from the standpoint of both a biological and sociocultural theory. Cultural dimensions of health care delivery systems are explored. Guest medical anthropologists supplement GMU faculty presentations. Offered Fall 1978. Professor R. L. Ailinger.

406 The Opportunities and Dangers of the Peaceful Use of Nuclear Energy (3)
A comprehensive study of the physical, economic, and social factors related to the opportunities for the growth of nuclear energy. Biological and other aspects of environmental impact are investigated, including particular attention to the problems of radioactive waste disposal. The prospects for new technology concepts such as the breeder reactor and nuclear fusion are included in the study. Offered Spring 1979, Spring 1980. Professor W. A. Wright.

407 An Introduction to Irish Studies (3)
Introduces participants to the literature, folklore, music, and art of Ireland, and to the history of the Irish and the Irish arts within today's diaspora. The course is coordinated with the series of presentations by the visiting lecturers and performers during the Irish Fortnight in April. Each participant has an expanding involvement as a producer and write a research paper. Offered Spring 1979. Professor C. D. Owens.
408 The Nature of Time (3)
This course delves into the nature of time from a variety of viewpoints. While the primary emphasis is on physical time and the role of time in physical laws, the course also explores the subject from the perspective of the natural sciences, the social sciences, and the humanities. Students are expected to deal with some elementary mathematical formulas. Offered Fall 1979. Professor R. Ehrlich.

409 Japan: The Living Tradition (3)
A survey of the early history and traditional culture of Japan. The course uses various materials, including films, to introduce students to an overview of the Japanese people; history leading to and including the Tokugawa period; and such aspects of culture as the visual arts, literature, the performing arts, and religious experience. Guest speakers and lecturers both from George Mason University and from outside the University are invited. Offered Fall 1979. Professor N. T. Keith.

410 Assassination and Terrorism as Political Weapons (3)
Concentration on assassination and terrorism in the United States but includes discussion of events in other parts of the world in the twentieth century. Included is a discussion of the development and mission of the Secret Service. History, psychology, and sociology, as related to assassination and terrorism, are discussed. Offered Fall 1980. Professor R. W. Lykes.

411 Electronic Communication (Television) and the Representation of Reality (3)
Examination of the ways in which television interacts with and constantly modifies our view of reality. Topics include the image of the political process as it is projected by news and public affairs programming, the ideal of the family as it appears in prime time drama, and the prevailing assumptions about male/female roles as embodied in dramatic characterizations. Offered Fall 1980. Professor J. E. Foreman.

412 Family Law (3)
Prerequisite: Junior standing or above. Examination of the salient aspects of the law as it affects the family in our changing society. Topics include the history of marriage and divorce, sources of family law, the constitutional aspects of family law, the nature and formalities of the marital relationship, modifications of the marital contract, the support obligation, intra-family torts and crimes, annulment, divorce, alimony, child custody and support, adoption, separation agreements, and tax aspects of separation and divorce. Offered Fall 1980. Professor R. L. Coffinberger.

413 Life in the Universe (3)
Prerequisite: Sophomore standing or permission of the instructor. An introduction to the topic of extraterrestrial life beginning with an overview of the structure of the universe, the origin of matter and chemical evolution, and the formation of stars and planetary systems. It considers the physical and chemical basis of life and the origin of life in the solar system and examines the prospects of life in other planetary systems, the possibility of interstellar communication and interstellar travel as well as UFO’s and the question of whether the earth has been visited by alien beings. Emphasis is on physical, chemical, and biological aspects; but the topic is also explored from the perspective of the social sciences and humanities. Students are expected to deal with some elementary mathematics. Offered Fall 1980. Professor M. Kafatos.

Vietnamese Courses
(VIET) Foreign Languages and Literatures
301, 302 Vietnamese Culture and Civilization (3, 3)
Prerequisite: Junior standing or permission of the instructor. A survey of the Vietnamese culture and civilization, including language, philosophy, religion, and family life, and discussion of the problems of cross-cultural understanding. The coursework is in English. This course may be taken toward completion of the non-Western culture requirement for the BA degree.

361, 362 Vietnamese Language (3, 3)
Prerequisite: Knowledge of the Vietnamese language. A survey of Vietnamese literature from the Early Period to the twentieth century. A study of the vernacular genres of verse and prose in Vietnam. This course may be taken toward completion of the Humanities requirement in "Literature".
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College of Arts and Sciences
Dorothy L. MacConkey, PhD, Acting Dean
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Lloyd M. DeBoer, PhD, Dean
Edward M. Pierce, DBA, Assistant Dean, Graduate Program
Ben F. Sands, Jr., PhD, Assistant Dean, Undergraduate Program
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Thomas R. Williams, PhD, Dean
John C. Evans, PhD, Associate Dean
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Robert T. Hawkes, Jr., PhD, Dean
Sally Reithlingshofer, MA, Assistant Director
Julie G. Mackall, MA, Community Services Coordinator
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Ralph Norvell, LLB, Dear
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William C. Johnston, PhD, Dean
Academic Assistance Programs
Lewis C. Jones, Jr., EdS, Director
Admissions (Undergraduate)
Clenton A. Blount, Jr., MA, Director
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Michael T. Fish, MA, Coordinator
Louise F. Lowe, MA, Special Assistant
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John G. Veenstra, DLS, Director
Media Services
Victor Bloecher, Jr., MA, Director
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James G. Gallemore, MS, Associate Registrar
University Computing Services
Donald P. Ghoslon, MBA, Director
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Office of the Vice President for University Development
Joan M. Briskin, MPA, Vice President
Alumni Relations and Development
Frederick B. Williams, EdD, Director
Design and Publications
Stephen W. Hogan, BA, Coordinator
Department of Student Services
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Lorin Andrew Thompson, BA, MS, PhD, President Emeritus
Robert Charles Krug, BS, MS, PhD, Emeritus Professor of Chemistry.

Retired Faculty

Henry P. Adams, BS, Professor
Louis John Aebsicher, BS, MS, EdS, Associate Professor of Health and Physical Education.
Virginia Larose Austin, BSM, MED, Assistant Professor of Education.
Marion Bartlett, BS, PhD, Associate Professor of Psychology.
Hubert Merrill Cole, BS, MS, Associate Professor of Mathematics.
Hyman I. Feinstein, AB, MA, Associate Professor of Chemistry.
John Walter Godbold, BA, MPA, Assistant Professor of Government.
Robert W. Montgomery, BA, MA, DSW, Associate Professor of Social Work.
Helen Ludwig Sehrt, AB, AM, Assistant Professor of German.
Robert A. Turner, BS, MAT, Associate Professor of Mathematics.
Ludolph Frisch Weianetz, ME, MME, PhD, Assistant Professor of Engineering.

Faculty 1979-80

Abrams, Jay Harrison, Assistant Professor of Government and Politics. BA, Syracuse University 1970; MPA, State University of New York at Albany 1971; DPA, State University of New York at Albany 1975.
Acharya, Gayatri Dasgupta, Assistant Professor of English (on leave, second semester). BA, Oxford University 1970; MA, Boston College 1972; PhD, Tufts University 1976.
Adamek, Susan, Assistant Professor of Biology. AB, Stanford University 1962; PhD, University of Wisconsin 1969.
Adams, Hugh Douglas, Acting Assistant Professor of English. AB, University of California at Berkeley 1967; TESL, University of California at Los Angeles 1970; MA, San Jose State College 1972.
Adolfson, William Fred, Lecturer in Mathematics. AB, Harvard University 1969; MS, University of Virginia 1975.
Agura, Victorio Garcia, Professor of Spanish. BST, College Mayor Teologico Hispano-Americano 1969; MS, The Catholic University of America 1970; PhD, The Catholic University of America 1971.
Allinger, Rita Louise, Associate Professor of Nursing. BS, Boston College 1961; MS, Boston University 1963; MA, The Catholic University of America 1972; PhD, The Catholic University of America 1974.
Albert, Kitty Whitmer, Lecturer in Nursing. BS, University of Virginia 1971; MSN, University of Virginia 1971.
Allford, Robert Francis, Associate Professor of Economics. BA, The City College of New York 1970; PhD, University of Pennsylvania 1976.
Allen, John Ashley, Assistant Professor of Psychology. AB, Duke University 1963; MS, North Carolina State University 1969; PhD, North Carolina State University 1971.
Alman, Charlotte Hall, Associate Professor of Psychology. BA, University of Minnesota 1929; MA, Clark University 1933; PhD, University of Chicago 1934.
Anders, Gary Carson, Assistant Professor of Economics. BS, West Texas State University 1972; MA, University of Notre Dame 1974; PhD, University of Notre Dame 1979.
Andersen, Gerald Ralph, Lecturer in Mathematics. BA, The Catholic University of America 1959; MA, The Catholic University of America 1960; PhD, The Catholic University of America 1965.
Anderson, Donald G., Jr., Lecturer in Astronomy. BS, Merrimack College 1966; MS, University of Colorado 1971; PhD, University of Colorado 1973.
Anderson, Wallace Thad, Jr., Lecturer in Physics. BA, University of California at Berkeley 1958; MA, University of California at Riverside 1966; PhD, University of California at Riverside 1967.
Anderson-Sherman, Arnold Kraft, Assistant Professor of Sociology. BA, New York University 1962; MA, New York University 1968; PhD, State University of New York 1976.
Andrews, Alice Chandler, Associate Professor of Geography. AB, University of Georgia 1949; MA, Northwestern University 1950; EdD, The George Washington University 1975.
Anderson, George Eugene, Associate Professor of Biology. BS, University of Pittsburgh 1962; MS, University of Pittsburgh 1965; PhD, University of Maryland 1968.
Anthony-Weich, Lilian Dolores, Associate Professor of Inorganic Studies, Director of Minority Affairs Program. BS, Lincoln Memorial University 1951; MRE, Pittsburgh Seminary 1953; EdD, University of Massachusetts 1961.
Arafat, Fadel Hasan, Lecturer in Economics. LL, University of Damascus 1959; MA, University of Maryland 1972.
Argoff, Norma Jeanne, Lecturer in English. AB, University of California at Berkeley 1967; MA, University of California at Berkeley 1972.
Arrillaga, Dagoberto, Lecturer in Mathematics. BSEE, The Catholic University of America 1967; MSCE, West Virginia University 1969; MSCE, Georgia Institute of Technology 1972.
Attanasio, Emil Donald, Lecturer in Economics. BA, Evangel College 1969; MA, University of Missouri 1971; PhD, University of Missouri 1972.
Auclair, Allan Nelson Douglas, Associate Professor of Biology. BS, McGill University 1964; PhD, University of Wisconsin 1969.
Audiet, Devereux Oldfield, Lecturer in Biology. BS, Mary Washington College 1965; PhD, George Washington University 1975.
Avarozov, Maryj Frans Brooks, Professor of Education. BA, University of British Columbia 1950; BEd, University of Alberta 1953; ARCT, University of Alberta 1958; BA, University of Alberta 1964; MA, University of Washington 1962; PhD, University of Washington 1962.
Bachorik, Lawrence, Lecturer in English. AB, Cornell University 1971; PhD, McGill University 1977.
Back, William Buri, Lecturer in Economics. BS, Berea College 1941; MS, University of Kentucky 1946; PhD, Iowa State University 1952.
Barrett, Judith Chase, Lecturer in Nursing. BS, University of Connecticut 1965; MS, University of Maryland 1970.
Batzas, Nick Charles, Assistant Professor of Philosophy. BS, William Paterson College 1960; MS, Ohio University 1972; PhD, Ohio University 1974.
Baum, Richard Frederick, Assistant Professor of Business Administration. BA, Oberlin College 1960; MBA, University of Michigan 1964; PhD, University of Michigan 1969.
Baxter, Ralph Clayton, Professor of English. Associate Vice President for Academic Affairs. AB, University of Detroit 1958; MA, Wayne State University 1959; PhD, Wayne State University 1964.
Beatty, Yvonne Jean, Lecturer in Music. BM, Michigan State University 1953; MM, University of Michigan 1956.
Becker, Joanne Rossi, Assistant Professor of Nursing. BS, Texas Woman’s University 1965; MS, The Catholic University of America 1977.
Behnke, Michael A., Assistant Professor of Education. BS, University of Cincinnati 1971; MEd, University of Cincinnati 1974; EdD, Teachers College, Columbia University 1978.
Bender, Mark G., Lecturer in Economics. BS, University of Connecticut 1963; MA, University of Connecticut 1964; PhD, University of Connecticut 1969.
Bennett, James Thomas, Professor of Economics. BS, Case Institute of Technology 1964; MS, Case Institute of Technology 1966; PhD, Case Western Reserve University 1970.
Bennett, Judy G., Assistant Professor of Nursing. BSN, Northwestern State University 1963; MS, University of Maryland 1970.
Benzinger, Raymond B., Professor of Law. BS, Carnegie-Mellon University 1962; JD, Georgetown University 1971; LLM, Georgetown University 1973.
Berezdivin, Roberto, Lecturer in Physics. BS, University of Florida 1965; MS, University of Florida 1966; PhD, University of California at Berkeley 1972.
Bergmann, Johannes Dietrich, Associate Professor of English. AB, Amherst College 1963; MA, Teachers College, Columbia University 1964; PhD, University of Connecticut 1969.
Bergolfen, Debra Beth, Associate Professor of Philosophy. BA, Syracuse University 1962; MA, Georgetown University 1966; PhD, Georgetown University 1974.
Berliner, Tatiana Grivsky, Lecturer in Russian. BS, Georgetown University 1967; MS, Georgetown University 1969.
Beutel, Allen E., Lecturer in Business Administration. BS, State University of New York at Buffalo 1958; MPA, San Diego State College 1972; PhD, University of Southern California 1976.
Bever, David L., Assistant Professor of Health Education. BS, University of Dayton 1970; MA, Ball State University 1973; EdS, Ball State University 1974; PhD, Purdue University 1976.
Bhanos, Alexander P., Assistant Professor of Business Administration. BC, McGill University 1957; MS, University of Illinois 1969; PhD, University of Illinois 1972.
Bhanos, Mary Susanne, Lecturer in Health and Physical Education. BS, Butler University 1964; MS, University of Illinois 1970.
Birdwell, Joseph, Professor of Education. BS, Eastern Kentucky University 1950; MA, Eastern Kentucky University 1951; EdD, University of Maryland 1971.

Barilla, Anthony F., Lecturer in Spanish. BA, University of Maryland 1968; MA, University of Maryland 1971.

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Chung, Tae Won, Associate Professor of Economics, BC, Seoul National University 1962; MC, Seoul National University 1965; MA, State University of New York at Buffalo 1969; PhD, New York University 1972.

Cianci, Frederick H., Lecturer in Nursing, BSN, University of Maryland 1965; MS, University of Maryland 1966.

Clark, Margaret Pruitt, Assistant Professor of Sociology, BA, Beloit College 1966; MA, University of Illinois 1970; PhD, University of Texas at Austin 1976.

Clark, Robert Purdue, Professor of Government and Politics, Chairman, Department of Public Affairs, BA, Tulane University 1962; MA, Johns Hopkins University 1964; PhD, Johns Hopkins University 1970.

Clark, Rolf H., Lecturer in Government and Politics, BS, Yale University 1959; MS, Naval Postgraduate School 1966; PhD, University of Massachusetts 1970.

Clements, Frances Marion, Assistant Professor of English, BA, Randolph-Macon Woman's College 1950; MA, Ohio State University 1962; PhD, Ohio State University 1967.

Colfinberger, Richard Lee, Assistant Professor of Business Administration, BA, University of Florida 1970; JD, Wake Forest University 1974.

Cohehan, Evelyn, Assistant Professor of Nursing, Chairperson, Department of Nursing, BS, University of California at Berkeley 1951; MS, University of California at Berkeley 1953; EdD, University of California at Berkeley 1971; PhD, University of California at Berkeley 1972.

Cohn, Martin Bernard, Assistant Professor of History, AB, State University of New York at Albany 1959; MA, State University of New York at Albany 1960; PhD, The George Washington University 1975.

Cohn, Jan Kadetsky, Professor of English, Chairperson, Department of English, BA, Wellesley College 1955; MA, University of Toledo 1961; PhD, The University of Michigan 1964.

Cohn, William Henry, Lecturer in History, BA, Ohio State University 1953; MA, Ohio State University 1956; PhD, University of Wisconsin at Madison 1972.

Cole, John D. R., Visiting Professor of Government and Politics, BA, University of Redlands 1949; MA, University of Redlands 1951.

Combs, Maxine Solow, Assistant Professor of English, BA, Mills College 1958; MA, Wayne State University 1961; PhD, University of Oregon 1968.

Comiskey, Nancy E., Lecturer in Nursing, BA, College of St. Catherine 1967; MED, Teachers College, Columbia University 1974.

Condron, David F., Professor of Law, AB, Brandeis University 1937; LLB, University of London, School of Law 1940; LLM, The George Washington University, National Law School 1948; DL, Fordham University, School of Law 1968.

Connelly, Catherine Ann, Assistant Professor of Nursing, BSN, The Catholic University of America 1964; MSN, University of Pennsylvania 1965; DNS, The Catholic University of America 1979.

Connor, Ulla M., Lecturer in Education, BA, University of Helsinki 1970; MA, University of Florida 1971; MA, University of Wisconsin at Madison 1973; MA, University of Helsinki 1974; PhD, University of Wisconsin 1977.


Conway, Frederick James, Lecturer in Anthropology, BA, Yale University 1970.

Cooper, George David, Associate Professor of Psychology (on leave 1972), BA, Shepherd College 1957; PhD, Duke University 1962.

Cooper, John Henry, Professor of Health and Physical Education, Chairman, Department of Health and Physical Education, BA, Simpson College 1948; MA, Drake University 1952; DPE, Indiana University 1955.

Cordero, Anne Deing, Associate Professor of French, Dipl. Ed. in French, University of Main 1955; MA, University of Florida 1957; PhD, The George Washington University 1968.

Correll, Laraine, Associate Professor, Librarian, BA, Florida State University 1967; MS, Florida State University 1970.
Grossberg, Frederick Alan, Assistant Professor of English (on leave, 1979-80); BA, University of Toronto 1968; PhD, Harvard University 1975.

Grosso, Camille M., Lecturer in Nursing, BS, George Mason University 1976; MSN, The Catholic University of America 1977.

Grotzinger, Stephen Jerome, Assistant Professor of Mathematics (on leave, 1979-80); BS, University of Delaware 1970; MS, Rensselaer Polytechnic Institute 1973; Ph.D, Rensselaer Polytechnic Institute 1975.

Gurfein, Joseph Ingram, Associate Professor, Director of Facilities Planning, BS, United States Military Academy 1941; MS, Harvard University 1947; PhD, Pacific Western University 1979.


Hager, Walter Richard, Lecturer in Government and Politics, BS, University of Mississippi 1949; MA, University of Texas at Austin 1954.

Haines, James Jordan, Acting Assistant Professor of Economics, BA, Westminster College 1969.


Halbrook, Stephen P., Assistant Professor of Philosophy, BS, Florida State University 1968; PhD, Florida State University 1974; JD, Georgetown University Law Center 1978.

Hall, Judith M., Assistant Professor of Nursing, BSN, University of Pennsylvania 1971; MSN, Pennsylvania State University 1977; MA, Catholic University of America 1978.


Hammel, Stuart Frederick, Lecturer in Communication, BA, Pennsylvania State University 1970; MA, University of Maryland 1972.

Hammond, Jeffrey A., Assistant Professor of English, BA, University of Texas at Austin 1971; MA, Kent State University 1974.

Hammond, Robert Davey, Assistant Professor of Biology, BA, State University of New York 1967; MS, Tulane University 1969; PhD, Tulane University 1974.

Hampton, Felix Gene, Lecturer in Business Administration, BS, Boston University 1952; MBA, Harvard University 1955.


Harrell, Mark, Lecturer in Mathematics, BA, Duke University 1965; PhD, Duke University 1970.

Harris, Judith Louise, Assistant Professor of Nursing, BSN, University of Minnesota 1964; MSN, University of California at Los Angeles 1974.

Harris, Willey Valentine, Jr., Lecturer in Business Administration, BA, University of Texas at Austin 1965.


Hauser, Joseph Lee, Instructor in Dramatic Arts, BA, University of Virginia 1975.

Hawkes, Robert Thomas, Jr., Assistant Professor of History, Dean of the Division of Continuing Education, BA, Randolph-Macon College 1964; MA, University of Virginia 1967; PhD, University of Virginia 1975.

Hayes, James Sue, Assistant Professor of Nursing, BS, University of Evansville 1968; MSN, Indiana University 1971; PhD, Purdue University 1977.

Hedges, Lydia DeLeon, Associate Professor of Spanish, BA, University of Colorado 1945; AM, University of Michigan 1949; PhD, The George Washington University 1971.

Hedge, Michael, Associate Professor of Russian, Chairman, Department of Foreign Languages and Literature, BS, Columbia University 1961; MA, Columbia University 1961; PhD, Columbia University 1963.

Heinrich, George Fred, Lecturer in Business Administration, BS, United States Naval Academy 1954; MS, Air Force Institute of Technology 1963; MS, The George Washington University 1966; PhD, Texas A & M University 1972.

Henriquez, Peter Ros, Assistant Professor of History, BA, Trinity College 1959; BD, Princeton Theological Seminary 1963; PhD, University of Virginia 1971.

Herrell, James M., Lecturer in Psychology, BA, University of Texas at Austin 1963; MA, University of Maryland 1965; PhD, University of Maryland 1967.

Hickey, Anthony Andrew, Associate Professor of Sociology, BS, Cornell University 1971; MA, Cornell University 1973; PhD, Stanford University 1977.

Hicks, Charles Thomas, III, Lecturer in Business Administration, BS, Virginia Polytechnic Institute 1967; JD, University of Georgia 1970; LLM, George Washington University 1971.

Hill, Thomas Harry, Associate Professor of Music Education, BM, Boston University 1949; MM, Boston University 1955; DMA, The Catholic University of America 1965.

Hindle, Janet Suzanne, Lecturer in Nursing, BS, Medical College of Virginia School of Nursing 1967; MA, New York University 1973.

Hittner, Amy, Assistant Professor of Education, BA, Brooklyn College 1963; MA, San Francisco State College 1969.

Ho, Abana Wang, Assistant Professor, Librarian, BA, Providence College, Taiwan 1964; MS, Kansas State Teachers College 1967.

Hobson, Irmgard Wagner, Associate Professor of German, Staatstehnische, Tubingen, Germany; MA, Tufts University 1965; PhD, Harvard University 1970.

Hoefliger, Patricia Ann, Lecturer in Nursing, BSN, Alverno College 1963; MSN, The Catholic University of America 1965.


Hogue, Dale Curtis, Lecturer in Business Administration, BS, Washington State University 1964; JD, Georgetown University 1972.

Holden, Merle Gwencoline, Associate Professor of Economics, BCom, University of Natal 1963; MA, Duke University 1971; PhD, Duke University 1974.

Hollenbeck, Albert Russell, Assistant Professor of Psychology, BS, University of Virginia 1957; MS, University of California at Davis 1966; PhD, University of California at Davis 1970; PhD, University of California at Davis 1976.

Holman, Emmet Lou, Associate Professor of Philosophy, BS, Penn State University 1963; MA, University of Maryland 1967; PhD, University of Maryland 1973.

Holroyd, William McGinnis, Lecturer in Business Administration, BS, University of Cincinnati 1950; MA, University of Cincinnati 1951; MBA, Indiana University 1960; PhD, University of Maryland 1972.

Holt, Robert W., Assistant Professor of Psychology, AB, University of Illinois 1970; MA, University of Illinois 1975; PhD, University of Illinois 1979.

Hopple, Gerald Wayne, Lecturer in Government and Politics, BA, Western Maryland College 1971; MA, University of Maryland 1973; PhD, University of Maryland 1975.

Horn, Kevin Herbert, Assistant Professor of Business Administration, BS, Indiana University 1969; MBA, Indiana University 1971; PhD, Pennsylvania State University 1975.
University of New York at Stony Brook 1977; PhD, State University of New York at Stony Brook 1979.

McCart, John Daniel, Jr., Lecturer in Art, BA, University of Virginia 1961; MFA, Pratt Institute 1967.

McDermott, Michael James, Jr., Associate Professor of Philosophy, Registrar. AB, Fordham University 1959; MS, Fordham University 1959.

McDermott, Paul D., Lecturer in Geography, BA, University of Washington 1962; MA, University of Washington 1964.

MCFarlane, William Hugh, Professor of Philosophy, Chairman, Department of Philosophy and Religion (Fall Semester, 1979), BA, University of Virginia 1950; PhD, University of Virginia 1957.

McGuire, John W., Assistant Professor of Social Work, AB, Central Methodist College 1961; MDiv, Boston University 1964; MS, Boston University 1967.

McKillop, Francis J., Assistant Professor of Business Administration, BS, University of Maryland 1954; MBA, Michigan State University 1964; CPA, State of Maryland.

McLoughlin, William, Assistant Professor of Business Administration, BA, University of Illinois 1956; MA, Western Michigan University 1961; DEd, Western Michigan University 1971.

McNamar, William F., Professor of Business Administration, BA, University of Maryland 1949; MA, Michigan State University 1956; MS, The George Washington University 1967.


Mellinger, Jeanne Cummins, Associate Professor of Psychology, AB, The Ohio State University 1951; MA, New York University 1960; PhD, New York University 1975.

McNab, William, Professor of Business Administration, BS, United States Air Force Academy 1969; PhD, Harvard University 1972.

Metcalfe, James Alfred, Associate Professor of Health and Physical Education, BS, University of Maryland 1963; MA, University of Maryland 1966; PhD, University of Maryland 1970.

Meyer, Henry Pierre, Associate Professor of French, BA, The College of Wooster 1954; MA, University of Maryland 1962; PhD, University of Maryland 1970.

Michael, Michele Ann, Assistant Professor of Nursing, MS, Marquette University 1968; MS, University of Maryland 1974.

Michaelis, Carol Tinge, Assistant Professor of Education, BS, University of Utah 1970; MA, University of Utah 1974; PhD, University of Utah 1979.

Michaels, David B., Lecturer in Business Administration, BA, New York University 1954; MBA, University of Maryland 1959; MA, University of Maryland 1970.

Mielczarek, Eugene Vorburger, Professor of Physics, BS, Queens College 1953; MS, The Catholic University of America 1957; PhD, The Catholic University of America 1960.

Miller, John James, Professor of Business Administration, BBA, Loyola College 1973; MA, Loyola College 1978.

Miller, Earl R., Professor in Business Administration, BBA, St. Bonaventure University 1952; MBA, Syracuse University 1966.

Miller, James Philip, Lecturer in Business Administration, BBA, St. Lawrence University 1968; MBA, Syracuse University 1970; PhD, The American University 1975.

Miller, John James, Assistant Professor of Mathematics, BBA, University of Rochester 1968; MS, Stanford University 1969; PhD, Stanford University 1974.

Miller, Milton L., Lecturer in Business Administration, BS, United States Military Academy 1958; MS, Pennsylvania State University 1965; MSBA, Boston University 1976.

Millionig, Virginia Ann, Assistant Professor of Nursing (on leave, 1979-80), BSN, Marquette Univer-
Walborn, Karen, Assistant Professor of Nursing. BS, M.S. University of Virginia 1970; MS, Emory University 1973.

Walker, David N., Lecturer in Physics. BS, University of Maryland 1965; MS, University of New Hampshire 1972; PhD, University of New Hampshire 1975.

Walker, Dorothy Jean, Professor of Nursing. BSN, Louisiana State University School of Medicine 1954; MS, Louisiana State University 1966; JD, Boston College Law School 1979.


Walker, Louis S., Assistant Professor of Nursing. AS, Rutgers The State University 1962; BS, Rutgers The State University 1964; MSN, The Catholic University of America 1970.

Wall, James Robert, Professor of Biology. BS, Vmistration. The George Washington University 1968; PhD, Cornell University 1955.

Wall, Phillip Collie, Lecturer in Government and Politics. BS, California State Polytechnic University 1966; MA, California State University 1968; PhD, California State College at Los Angeles 1975.


Walowit, Karen M., Assistant Professor of English. BA, University of California, Los Angeles 1962; MA, University of Arizona 1969; PhD, University of California at Berkeley 1976; PhD, University of California at Berkeley 1974.

Walsh, Grace Keller, Lecturer in Business Administration. BS, Boston College 1976; PhD, The American University 1972; MS, University of Texas at Arlington 1974.

Walton, Charles Robert, Jr., Professor of Chemistry, University of Dayton 1964; PhD, The University of Dayton 1969.

Weaver,強いジャンク, Lecturer in Business Administration. BS, Boston College 1976; MA, University of California 1972; PhD, Air Force Institute of Technology 1972.

Weiner, Nicholas William, Assistant Professor of Art. MFA, Maryland Institute College of Art 1971.


Waynant, Priscilla Plison, Lecturer in Education. BS, University of Maryland 1968; MEd, University of Maryland 1970; PhD, The George Washington University 1974.

Ward, Nicholas William, Assistant Professor of Art. MFA, Maryland Institute College of Art 1971.

Watson, Joyce Knowles, Lecturer in Nursing. BS, Brooklyn College 1964; MS, Boston University 1966; MEd, Boston University 1963; CAGS, Boston University 1965.

Wein, Karen Precious, Assistant Professor of Psychology. BS, Oberlin College 1975; MA, Texas A&M University 1978.

William, Russell H., Associate Professor of Economics. BS, Millersville State College 1970; MA, University of Montana 1973; PhD, University of Arizona 1976.

Williams, John H., Lecturer in Business Administration. BS, Millersville State Teachers College 1955; MBA, University of Maryland 1969.

Williams, flooding Burch, Assistant Professor, Director of Alumni College. BS, AB, Indiana University 1970; BS, Indiana University 1972; EdD, Indiana University 1977.

Williams, Gail W., Acting Assistant Professor of Economics. BS, The University of Tulsa 1958; MFA, Fairleigh Dickinson University 1968; MA, New York University 1976.

Williams, Joyce Knowles, Lecturer in Nursing. BS, Brooklyn College 1964; MS, Boston University 1966; MEd, Boston University 1963; CAGS, Boston University 1965.

Williams, Karen Precious, Assistant Professor of Psychology. BS, Oberlin College 1975; MA, Texas A&M University 1978.


Wilt, Leroy Eugene, Lecturer in Business Administration. BS, Western Michigan University 1959; MFA, Minnesota State University 1969.

Witt, John William, III, Associate Professor of Biology. BA, Amherst College 1966; PhD, University of Chicago 1972.


Worner, Barbara Ford, Acting Assistant Professor of Art. BA, Old Dominion University 1969; MS, Old Dominion University 1977.


Worsham, Doris, Lecturer in Sociology. BS, Wisconsin State University 1971; MA, Marquette University 1974.

Wright, John Hamilton, Lecturer in Psychology. BA, Chapman College 1957; MA, Ohio University 1959; PhD, University of Maryland 1975.

Wyatt, John, Lecturer in Nursing. BS, Purdue University 1976; MSN, University of Alabama at Birmingham 1977.

Whitney, Scott C., Professor of Law. JD, Harvard Law School 1955.

Wiest, Philip Ray, Associate Professor of Economics. BA, Franklin and Marshall College 1966; MS, Lehigh University 1967; PhD, University of Princeton 1970.

Wilhelmi, Mary Charlotte, Assistant Professor, Consortium Administrator, Consortium for Continuing Higher Education in Northern Virginia. BS, Iowa State University 1950; MA, Virginia Polytechnic Institute and State University 1973; CAGS, Virginia Polytechnic Institute and State University 1978.

Wills, William J., Lecturer in Business Administration. BS, Millersville State Teachers College 1955; MBA, University of Maryland 1969.

Williams, Frederick Burch, Assistant Professor, Director of Alumni College. BS, AB, Indiana University 1970; MS, Indiana University 1972; EdD, Indiana University 1977.

Williamson, Gail W., Acting Assistant Professor of Economics. BS, The University of Tulsa 1958; MFA, Fairleigh Dickinson University 1968; MA, New York University 1976.

Williams, Joyce Knowles, Lecturer in Nursing. BS, Brooklyn College 1964; MS, Boston University 1966; MEd, Boston University 1963; CAGS, Boston University 1965.


Williams, John H., Lecturer in Business Administration. BS, Millersville State Teachers College 1955; MBA, University of Maryland 1969.

Williams, John H., Lecturer in Business Administration. BS, Millersville State Teachers College 1955; MBA, University of Maryland 1969.

Williamson, Gail W., Acting Assistant Professor of Economics. BS, The University of Tulsa 1958; MFA, Fairleigh Dickinson University 1968; MA, New York University 1976.

Wills, William J., Lecturer in Business Administration. BS, Millersville State Teachers College 1955; MBA, University of Maryland 1969.
MA, The Catholic University of America 1974; PhD, The Catholic University of America 1978.


Yang, Chao Yuan, Lecturer in Astronomy. BS, National Taiwan University 1956; MS, National Central University 1964; MS, University of Michigan 1968; PhD, York University 1973.

Yanosky, Thomas Michael, Instructor in Biology. BS, Cornell University 1968; MS, George Mason University 1976.

Yocom, Margaret Rose, Assistant Professor of English. BA, Pennsylvania State University 1970; MA, University of Massachusetts 1972.

Yoselle, Harriet, Lecturer in Nursing. BSN, Boston University 1969; MSN, The Catholic University of America 1972.

Young, Rebecca Ann, Lecturer in Health Education. BA, Skidmore College 1972; MSPH, University of Missouri 1976.

Zabel, Shirley C., Visiting Associate Professor of Law. BA, Earlham College 1948; MA, University of New Mexico 1952; JD, University of Utah 1960; LLM, University of Pennsylvania 1979.

Zaphiriou, George, Professor of Law. JD, University of Athens 1940; LLM, University of London 1950.

Zarur, George Louis, Lecturer in Chemistry. BS, Georgetown University 1967; MS, The Catholic University of America 1971; PhD, The Catholic University of America 1972.

Zimmer, Arnold Edward, Lecturer in Business Administration. AB, San Francisco State College 1959; MS, University of Colorado 1964.

Zink, Margo Latina, Assistant Professor of Nursing. BS, Fresno State College 1966; MN, University of Washington 1973.
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.

Enforced parking regulations are in effect Monday through Friday from 7:30 a.m. to 5:30 p.m. Visits to the campus during these times require a special parking permit. Special parking places are also provided for handicapped persons. Parking permits and assistance in parking are available through the Security Office trailer (13). University buildings are accessible to persons in wheelchairs, as noted.

1. FINLEY BUILDING
   (First floor accessible to wheelchairs.)
   Accounting
   Admissions (Undergraduate)
   Affirmative Action
   Board of Visitors
   Cashier
   Comptroller
   George Mason Foundation, Inc.
   Information
   Institutional Analysis

2. KRUG HALL
   (Ground and first floors accessible to wheelchairs.)
   Biology Laboratories
   Chemistry Department

3. WEST BUILDING
   (Ground and first floors accessible to wheelchairs.)
   Engineering
   Physics Department

4. EAST BUILDING
   (First floor accessible to wheelchairs.)
   BIS Degree Program
   Community Service
   Dean, Continuing Education
   Extended Studies Enrollment
   Facilities Planning
   Off-Campus Coordination
   Payroll

5. FENWICK LIBRARY
   Alumni Office
   Federal Theatre Project
   Library Offices
   Media Services Center
   Self-Study

6. LECTURE HALL

7. THOMPSON HALL
   Dean, Arts and Sciences
   English Department
   Foreign Langs. and Lits. Department
   History Department
   Mathematical Sciences Department
   Media Services (distribution)
   University Computing Services

8. PHYSICAL EDUCATION BUILDING
   Athletics
   Health and Phys. Ed. Department
   Sports Information

9. ROBINSON HALL
   Admissions (Graduate)
   Biology Department
11. STUDENT HOUSING
Student Housing Office

12. GREENHOUSE
(Inaccessible to wheelchairs.)

13. TRAILERS
(Inaccessible to wheelchairs.)
Campus Police (main)

14. TRAILERS
(Inaccessible to wheelchairs.)
Credit Union
Faculty Offices
Institutional Testing/Tutorial Services (accessible)
Purchasing
Study Skills/Peer Advising
Women's Exchange

15. MAINTENANCE BUILDING
Buildings and Grounds

16. TALLWOOD (Roberts Rd.)
(Inaccessible to wheelchairs.)
Consortium for Continuing Higher Education in No. Va.

17. ST. GEORGE'S
(Inaccessible to wheelchairs.)
Conferences and Workshops
Classrooms

18. PRESIDENT'S HOUSE

19. CARTY HOUSE (Kelley Dr.)
(Inaccessible to wheelchairs.)
Psychological Clinic

20. OBSERVATORY
(Inaccessible to wheelchairs.)

- INSET—LAW SCHOOL
Metro Campus
(3401 N. Fairfax Dr., Arl.)
Admissions (Law)
Cafeteria
Dean, School of Law
Library (Law)
Metro Campus/Classrooms

- INSET—NORTH CAMPUS
(10675 Lee Highway)
(First floor accessible to wheelchairs.)
Advocate (yearbook)
Auditorium
Cafeteria
Campus Police (North Campus)
Center for Research and Advanced Studies (CRAS)
Central Shipping and Receiving
Citizens Applied Research Institute (CARI)
Design and Publications
Fine, Performing Arts and Communication Department
Library (specialized)
Media Services (distribution)
Northern Virginia Writers Project
Phoebe (literary magazine)
Public Management Institute
Student Affairs (for North Campus)
University Journals
Contents, vii

Continuing Education, Division of administration, 127
BIS degree program, 131
community service activities, 130
contract courses, 130
evening program, undergraduate, 129
Extended Studies enrollment procedure, 127
guest matriculant enrollment, 129
noncredit courses, 130
nursing continuing education, 129
off-campus credit instruction, 130
programs and services, 127
senior citizens enrollment, 129
Continuing nursing education, 129
Continuous registration, 34
Cooperative Education, 18
Core of arts and sciences, requirements, 57
Counseling Center, 17
Course Approval Form
graduate, 48
undergraduate, 34
Course Dictionary, 138
Course numbering system defined, 138
Credit courses, off-campus, 130
Credit and grades
graduate, 50
undergraduate, 36
Credit by examination, 32
Credits earned elsewhere financial responsibility for, 23
Credit without grade, 36

D

Dance
as concentration for BA degree with major in theatre, 79
courses (DANC), 150
Dean’s List, 37
Decision Sciences
as major for BS degree, 122
concentrations within the major, 122
courses (DESC), 150
faculty, 122
Deferred payment plan, tuition, 22
Degree, application for graduate, 54
undergraduate, 40
Degree programs listed, ii
Degree requirements (See also individual departments.)
Bachelor of Arts, 57
Bachelor of Individualized Study, 132
Bachelor of Music, 58
Bachelor of Music with Virginia Certification to Teach Music, 76
Bachelor of Science, 57
Bachelor of Science in
Education, 107
Doctor of Arts in Education, 112
Doctor of Public Administration, 99
Graduate, all, 51
Master of Arts in Teaching (History), 84
Master of Business Administration, 125
Master of Education, 109
Master of Public Administration, 97
Master of Science in Nursing, 116
Dental plan, students, 17
Departmental scholarships, 26
Deposits, 23
Directory
of Administration, 196
of Board of Visitors, 196
of Faculty 197-80, 197
telephone, inside back cover
Doctoral degree programs
Doctor of Arts in Education, 112
Doctor of Public Administration, 99
Doctoral dissertation
guide for preparing, 53
Domicile, 23
Dropping a course graduate, 49
undergraduate, 34
Due dates for deferred tuition payments, 22

E

Early Childhood and Upper Elementary education
courses (EDUC), 155
requirements for major, BS
Ed, 107
Early registration, 34
Economics, department of
BA degree requirements, 70
courses (ECON), 151
faculty, 70
MA degree requirements, 71
secondary teacher certification, 71
Education, department of
BS in Education degree requirements: early childhood or upper elementary, 107
industrial education, 107;
secondary school, 108
courses (EDAS), 155;
(EDCI), 155; (EDGC), 156;
(EDRO), 157; (EDSE), 157;
(EDUC), 153; (LSCI), 171
Doctor of Arts in Education degree requirements, 112
faculty, 105
Library Science certification, 109
M Ed degree requirements:
general; 99; elementary education, 110; guidance and counseling, 111; reading, 110;
school administration and supervision, 111; secondary education, 110; special education, 111
multicultural/bilingual education, 110
School Psychology certification, 112
student teaching, 106
teacher education programs, 105
Educational Child/Youth Study Center, 8
Electron microscope, 8
Elementary education
BS Ed degree requirements, 107
courses: (EDCI), 155; (EDUC), 153
M Ed degree requirements, 110
Emergency Loan Program, 25
Emeritus faculty, 197
Engineering (two-year only)
course of study, description, 88
courses (ENGR), 158
English, department of
BA degree requirements, 72
deadline discipline as part of DA Ed program, 73
Certificate in Teaching of English as a Second Language, requirements, 73
courses (ENGL), 158
faculty, 72
MA degree requirements, 73
undergraduate-graduate courses, 74
undergraduates in graduate English courses, 72
Enrollment
Extended Studies
procedure, 30, 35, 47, 127
graduate course enrollment by undergraduates, 35
guest matriculant, 35, 129
off-campus, 23, 120
senior citizens, 35, 129
Summer Session, 30, 47
European Studies committee, 60
courses (EUST), 162
departmental courses approved for, 60
requirements for the major in Area Studies, 60
Examinations, 36
Experimental Psychology, 91
Extended Studies Enrollment in graduate courses, 129
procedure, 127
Facilities, saving University, 15
Faculty, directory of, 197
Federal Aid Programs, 24
Federal Nursing Program, 124
Federal Theatre Project, 7
Fees and expenses, 21
Fellowships, graduate, 25
Fields of study, graduate, 43
Final examinations policies, 49
undergraduate, 36
Finance
as major for BS degree, 123
concentrations within the major, 123
courses (FMAN), 162
faculty, 123
Financial aid application, 24
federal programs, 24
other programs, 25
graduate assistance, 25
state loans and grants, 24
Financial suspension, 22
Fine, Performing Arts and Communication, department of
BA degree requirements: art, 74;
music, 76; speech, 76;
theatre, 78
BM degree requirements, 76
BM with Virginia certification requirements, 76
courses: (ART, 141; (COMM, 148;
DANC, 150;
MUSI, 174; THR, 191
faculty, 74
secondary teacher certification, 74
Firearms, regulations, 11
Fire Administration and Technology
as major for BS degree, 95
Foreign Languages and Literatures, department of
BA degree requirements:
French, 81
German, 81
Spanish, 82
courses: (CLAS, 148; (FREN, 162;
(FRLN, 162; (GERM, 165;
(GREE, 167; (JAPA, 171;
(KORE, 171; (LATN, 171;
(PORT, 191; (RUSS, 187;
(SPAN, 190; (VIET, 193
faculty, 80
MA degree requirements, 82
Spanish, BS under graduate-graduate courses:
French, 81
German, 82; Spanish, 83
Foreign language courses
(FRLN), 162
Foreign language testing and placement, 32
Foreign students
graduate, 46
undergraduate, 30
Forensics, activities, 16
Foundations, 26
French
BA degree requirements, 81
courses (FREN), 162
secondary teacher certification, 81
undergraduate-graduate courses, 81
General and Health Sciences courses (GHS), 163
Geography
BA degree requirements, 92
courses (GEOG), 163
MS degree requirements, 96
(geographic and cartographic sciences)
Geology
BS degree with major in, 70
courses (GEOL), 164
George Mason University Foundation.
26
German
BA degree requirements, 81
courses (GERM), 165
secondary teacher certification, 81
undergraduate-graduate courses, 82
Gerontology, certificate program
in, 134
“GM” Club Foundation, Inc., 26
Government and Politics
BA degree requirements, 93
courses (GOVT), 166
Grade Point Average
graduate, 50
undergraduate, 37
Grading policies, undergraduate, 36
Grading system, graduate, 50

http://catalog.gmu.edu
Industrial Education  
BS Ed degree requirements, 107  
Industrial/Organizational Psychology, 91  
Information Systems courses (INFS), 171  
In-service training program for teachers, 25  
In-state tuition, 23  
Interdisciplinary programs, 58, 60, 62  
International Studies  
BA degree requirements, 93  
concentrations described, 94  
Internships, noncredit, 18  
Identity card, 34  
Information  
Student, 13, 34, 48  
University, 9  
In progress, grade of  
graduate, 50  
undergraduate, 36  
J  
Japanese courses (JAPA), 171  
K  
Korean courses (KORE), 171  
L  
Language Arts and Cultures courses (LAC)  
See “Regional Cultures.”  
Latin American Studies  
committee, 62  
courses (LAS), 171  
Latin American-oriented coursework, 63  
requirements for the major in Area Studies, 62  
Latin courses (LATN), 171  
Law Enforcement  
BS degree requirements, 94  
professional preparation required, 94  
Law Enforcement Education Program, 24  
Law, School of, 9  
Library Sciences  
certification, 109  
courses (LSCI), 171  
Library services, 6  
Literacy, 39  
Loans and grants, 24  
M  
Major, undergraduate  
change of, 39  
more than one, 39  
selection of, 39  
Management  
as major for BS degree, 123  
concentrations within the major, 124  
courses (MGMT), 171  
faculty, 123  
Maps, 210  
Marketing  
as major for BS degree, 124  
concentrations within the major, 124  
courses (MKTG), 172  
faculty, 124  
Master of Arts degree programs  
in Economics, 71  
in English, 73  
in History, 83  
in Psychology, 90  
in Spanish, 92  
Master of Arts in Teaching (History) degree program, 84  
Master of Business Administration degree program, 125  
Master's degrees, general requirements, 51  
Master's thesis, guide for preparing, 53  
Master of Education degree programs  
certificate in School Psychology, 112  
general requirements for, 109  
in Elementary Education, 109  
in Guidance and Counseling, 111  
in Reading, 110  
in School Administration and Supervision, 110  
in Secondary Education, 110  
in Special Education, 110  
Multicultural/Bilingual Education specialization, 110  
Master of Public Administration degree program, 97  
Master of Science degree programs  
in Biology, 66  
in Geographic and Cartographic Sciences, 96  
in Mathematics, 86  
Master of Science in Nursing degree program, 116  
Mathematical Sciences, department of  
BA degree requirements:  
mathematics, 85  
BS degree requirements:  
computer science, 85; mathematics, 85  
courses: (CS), 149; (MATH), 172  
courses for non-majors, 85  
faculty, 85  
MS degree requirements:  
mathematics, 86  
secondary teacher certification, see p. 83  
undergraduate-grader courses, 86  
Mathematics courses (MATH), 172  
Media specialist, school library, 109  
Medical report, 29  
Medical Technology  
BS degree requirements, 65  
Ministry, Campus, 19  
Minority Affairs, 9  
Mission and Goals of the University, 3  
Motor vehicles  
registration fee, 11, 23  
regulations, 11  
Multicultural/bilingual education, 109  
Music  
activities, 16  
BA degree requirements, 76  
BM degree requirements, 76  
BM with Virginia teaching certification requirements, 76  
courses (MUSI), 174  
courses in support of graduate programs, 78  
N  
National Direct Student Loan Program, 24  
National Teacher Examinations, 33  
News and Information Services, Office of, 11  
Noncredit offerings, 130  
Northern Virginia Writing Project, 8  
Nursing, department of  
BS degree requirements, 115  
continuing nursing education, 117, 129  
courses (NURS), 176  
faculty, 115  
grade standards, additional, 116  
MSN degree requirements, 116  
quality standards, 116  
O  
Off-campus credit courses, 130  
Off-campus housing, 17  
On-campus housing, 17  
Organizations, student, 16  
P  
Patriot Educational Foundation, Inc., 26  
Pets, regulations, 11  
Philosophy and Religion, department of  
BA degree requirements:  
philosophy, 86  
courses: (PHIL), 177; (RELI), 186  
faculty, 86  
Physical Education  
BS Ed degree requirements, 113  
courses (PHED), 178  
field of study for M Ed in Secondary Education, 15  
Physiology, department of  
BA degree requirements, 87  
BS degree requirements, 87  
courses: (ASTER), 142; (ENGR), 158; (PHYS), 180  
courses in support of graduate programs, 88  
coursework recommendations, 88  
Engineering (two-year course of study) requirements, 88  
faculty, 87  
secondary teacher certification, 88  
voluntary comprehensive examination, 87  
Placement, proficiency, and testing, 30  
Politics  
See “Government and Politics” and “Public Affairs”  
Portuguese courses (PORT), 181  
Post baccalaureate status, 106  
Preclinical, 65, 70  
Premedical, 65, 70  
Preventive, 65, 70  
Prerequisite undergraduate courses, completion by graduate students, 48  
Privacy of student records, ii  
Probation, undergraduate, 37  
Proficiency examinations, 30  
Profile of George Mason University, 1
Satisfactory performance 50, undergraduate, 37
Schedule of Classes, 33, 48
Scholarships, 24
School Administration and Supervision courses (EDAS), 155
M Ed degree requirements, 111
School library media specialists, 109
School of Business Administration acceptance to Junior Standing in, 119
administration of, 119
BS degree requirements, 119
change in mathematics-statistics sequence, 120
concentrations within the majors: accounting, 121; business administration, 121; decision sciences, 122; finance, 123; management, 124; marketing, 124
courses: (ACCT), 140; (BUAD), 145; (BULE), 147; (DESC), 150; (FINA), 162; (INFS), 171; (MGMT), 171; (MKTG), 172; (REUD), 186
Faculties: Accounting/Business Legal Studies, 120; Decision Sciences, 122; Finance/Real Estate and Urban Development, 123; Management, 123; Marketing, 124
majors available, 119
MBA degree program: description of, 125; requirements of, 126; special school regulations, 126
pre-business students, 119
School of Law, 9
School Psychology Specialization/ certification department of Education, 112
department of Psychology, 91
Scientific research opportunities, 6
Second bachelor's degree, 40
Secondary School Education BS Ed degree requirements, 108
courses: (EDCI), 155; (EDUC), 153
M Ed degree requirements, 110
Secondary Teacher Certification, 105
Selection of a major, undergraduate, 39
Semester hour classification by, 37
defined, 36
Senior citizens enrollment, 35, 129
Services, student, 17
Social Work BS degree requirements, 103
courses (SOCW), 187
Sociology, department of BA degree requirements: sociology, 102
BS degree requirements: social work, 103
courses: (ANTH), 140; (SOCI), 188; (SOCW), 187
courses in support of graduate programs, 103
faculty, 102
secondary teacher certification, 103
social/political analysis specialization, MPA degree, 103
Solicitors and salesmen, regulations, 11
Spanish BA degree requirements, 82
courses (SPAN), 190
MA degree requirements, 82
secondary teacher certification, 81
undergraduate-graduate courses, 83
Special Education courses (ESE), 157
M Ed degree requirements, 111
Special facilities for study, 6
Special library collections, 7
Speech BA degree requirements, 78
courses (COMM), 148
State loans and grants, 24
Student activities, 15
affairs, 15
consumer information, ii
identity card, 34
information, 13
organizations, 16
regulations, 19
services, 17
status for tuition purposes, 23
teaching, 106
Union, 15
Student Education Association Endowment Scholarships Fund, 26
Student teaching, 106
Studio Theatre, 7
Study abroad, 33
Study Skills Service, 18
Summer Session graduate, v, 47
undergraduate, v, 33
Supplemental Educational Opportunity Grant Program, 24
Suspension academic, graduate, 50;
undergraduate, 37
financial, 22
T
Teacher certification, 105
Teacher Education Programs department of Education, 105
department of Health and Physical Education, 113
Telephone Directory, inside back cover
Testing, 31
Test of Standard Written English, 31
Theatre BA degree requirements, 78
concentrations within the major, 78
courses (THR), 191
# Telephone Directory

**NOTE:** The University exchange is "323" except where otherwise indicated.

<table>
<thead>
<tr>
<th>OFFICE</th>
<th>PHONE</th>
<th>NAME</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Mason University</td>
<td>(703) 323-2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting/Business Legal Study Faculty</td>
<td>2752</td>
<td>John Jones</td>
<td>4638 Robinson Hall</td>
</tr>
<tr>
<td>Admissions</td>
<td>2102</td>
<td>Clinton A. Blount</td>
<td>117 Finley Bldg.</td>
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<tr>
<td>Undergraduate</td>
<td></td>
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<tr>
<td>Graduate</td>
<td>2104</td>
<td></td>
<td>2202 Robinson Hall</td>
</tr>
<tr>
<td>Law School</td>
<td>841-2640</td>
<td></td>
<td>3401 N. Fairfax Dr., Arl.</td>
</tr>
<tr>
<td>Affirmative Action</td>
<td>2519</td>
<td>Frank L. Matthews</td>
<td>221 Finley Bldg.</td>
</tr>
<tr>
<td>Athletic Director</td>
<td>2320</td>
<td>Robert Epskamp</td>
<td>203 Physical Ed. Bldg.</td>
</tr>
<tr>
<td>Biology Department</td>
<td>2181</td>
<td>Averett Tombs</td>
<td>2256 Robinson Hall</td>
</tr>
<tr>
<td>Bookstore</td>
<td>423-2911</td>
<td>Robert T. Marshall</td>
<td>325 Student Union</td>
</tr>
<tr>
<td>Business and Finance, Vice President</td>
<td>2114</td>
<td>Maurice W. Scherrens</td>
<td>201 Finley Bldg.</td>
</tr>
<tr>
<td>Campus Ministry</td>
<td>2160</td>
<td></td>
<td>229 Student Union</td>
</tr>
<tr>
<td>Campus Police—Main Campus</td>
<td>2158</td>
<td>Arthur Jb. Sanders</td>
<td>Trailer #1</td>
</tr>
<tr>
<td>North Campus</td>
<td>691-7944</td>
<td></td>
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</tr>
<tr>
<td>Career Services</td>
<td>2476</td>
<td>Patricia Carretta</td>
<td>385 Student Union</td>
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<tr>
<td>Cashier</td>
<td>2119</td>
<td></td>
<td>100 Finley Bldg.</td>
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<tr>
<td>Chemistry Department</td>
<td>2191</td>
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<td>240 Krug Hall</td>
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<tr>
<td>Comptroller</td>
<td>2569</td>
<td>Hope Williams</td>
<td>115A Finley Bldg.</td>
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<tr>
<td>Consortium</td>
<td>2155</td>
<td>Charlotte Wilhelm</td>
<td>Tallwood (Robts. Rd.)</td>
</tr>
<tr>
<td>Cooperative Education</td>
<td>2535</td>
<td></td>
<td>303 Student Union</td>
</tr>
<tr>
<td>Counseling Center</td>
<td>2165</td>
<td>Ralph K. Roberts</td>
<td>365 Student Union</td>
</tr>
<tr>
<td>Dean of the College of Arts and Sciences</td>
<td>2652</td>
<td>Dorothy I. MacKoneky, Acting</td>
<td>206 Thompson Hall</td>
</tr>
<tr>
<td>Dean of the College of Professional Studies</td>
<td>2400</td>
<td>Larry S. Bowen</td>
<td>2237 Robinson Hall</td>
</tr>
<tr>
<td>Dean of Continuing Education</td>
<td>2125</td>
<td>Robert T. Haake</td>
<td>204 East Bldg.</td>
</tr>
<tr>
<td>Dean of the Graduate School</td>
<td>2123</td>
<td>Thomas R. Williams</td>
<td>2203 Robinson Hall</td>
</tr>
<tr>
<td>Dean of the Law School</td>
<td>841-2640</td>
<td>Ralph Norvell</td>
<td>3401 N. Fairfax Dr., Arl.</td>
</tr>
<tr>
<td>Dean of the School of Business Administration</td>
<td>2760</td>
<td>Lloyd M. DeBoer</td>
<td>4613 Robinson Hall</td>
</tr>
<tr>
<td>Dean of the Summer Session</td>
<td>2300</td>
<td>William C. Johnston</td>
<td>205 East Bldg.</td>
</tr>
<tr>
<td>Decision Sciences Faculty</td>
<td>2758</td>
<td>Frederick Siff</td>
<td>4647 Robinson Hall</td>
</tr>
<tr>
<td>Education Department</td>
<td>2421</td>
<td>Mark Spelke</td>
<td>3316 Robinson Hall</td>
</tr>
<tr>
<td>English Department</td>
<td>2220</td>
<td>Jan Cohn</td>
<td>235 Thompson Hall</td>
</tr>
<tr>
<td>Finance Faculty</td>
<td>2756</td>
<td>Robert D. Johnston</td>
<td>4641 Robinson Hall</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>2176</td>
<td>Mary Y. Neal</td>
<td>354 Student Union</td>
</tr>
<tr>
<td>Fine, Performing Arts and Communication Department</td>
<td>691-7950</td>
<td>Anita Taylor</td>
<td>100 North Campus</td>
</tr>
<tr>
<td>Food Service</td>
<td>1120</td>
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<td>Student Union</td>
</tr>
<tr>
<td>Foreign Languages and Literatures Department</td>
<td>2231</td>
<td></td>
<td>231 Thompson Hall</td>
</tr>
<tr>
<td>Handicapped Services</td>
<td>2134</td>
<td>Susan Sedlock</td>
<td>302 Student Union</td>
</tr>
<tr>
<td>Health and Physical Education Department</td>
<td>2593</td>
<td>John H. Cooper</td>
<td>203 Physical Ed. Bldg.</td>
</tr>
<tr>
<td>History Department</td>
<td>2242</td>
<td>Joseph L. Harsh</td>
<td>219 Thompson Hall</td>
</tr>
<tr>
<td>Institutional Analysis</td>
<td>2132</td>
<td>Charles R. Renter</td>
<td>206 Finley Bldg.</td>
</tr>
<tr>
<td>Library</td>
<td>2391</td>
<td>John Veenstra</td>
<td>2226 Fenwick Library</td>
</tr>
<tr>
<td>Management Faculty</td>
<td>2750</td>
<td>Raleigh Steinhauser</td>
<td>4637 Robinson Hall</td>
</tr>
<tr>
<td>Marketing Faculty</td>
<td>2754</td>
<td>Richard L. Ehrlich</td>
<td>255 West Bldg.</td>
</tr>
<tr>
<td>Mathematical Sciences Department</td>
<td>2262</td>
<td>John L. Oppelt</td>
<td>212 Thompson Hall</td>
</tr>
<tr>
<td>Media Services</td>
<td>2297</td>
<td>Victor Bloechel</td>
<td>2nd Flr. Fenwick Library</td>
</tr>
<tr>
<td>Minority Affairs</td>
<td>2383</td>
<td>Lillian D. Anthony-Welch</td>
<td>309 Student Union</td>
</tr>
<tr>
<td>News and Information Services</td>
<td>2138</td>
<td>Helen J. Ackerman, Acting</td>
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