George Mason University Bulletin of the Undergraduate Colleges 1974-75

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The information contained herein and any other information conveyed to students or to prospective students is subject to change at anytime by the appropriate university official.

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

George Mason University is an Equal Employment Opportunity and Affirmative Action institution. The university is committed to the principle that access to study or employment at the university and all benefits, privileges, and opportunities afforded by the university should be accorded each person—student, faculty member, or staff member—according to individual merit and regardless of race, color, religion, sex, or national origin. Furthermore, the university is pledged to the promotion of this principle in every phase of the university's operations and to the use of procedures necessary to insure adherence to this principle.
"... I charge them on a father's blessing never to let the motives of private interest or ambition induce them to betray, nor the terrors of poverty and disgrace, or the fear of danger or of death, deter them from asserting the liberty of their country and endeavoring to transmit to their posterity those sacred rights to which themselves were born."

Admonition to his sons by George Mason in his will, 1792
Visitors are always welcome at the university and prospective students are especially encouraged to visit the campus. Administrative offices are open Monday through Friday but it is suggested that appointments be made in advance by calling the Office of Admissions at 323-2102.

Correspondence Directory

Inquiries to the university should be addressed as indicated below:

Academic Programs (undergraduate) ........................................ Dean of Arts & Sciences
Academic Programs (graduate) ........................................ Dean of Professional Studies
Admissions ................................................................. Director of Admissions
Athletics ................................................................. Director of Athletics
Catalog ................................................................. Director of Admissions
Financial Matters ............................................................ Comptroller
Gifts and Bequests .......................................................... Director of Development
Placement Services .......................................................... Director of Career Planning
Public Relations ............................................................. Director of Information Services
Scholarships ............................................................... Dean of Students
Student Affairs ............................................................. Dean of Students
Summer Sessions ........................................................... Dean of Summer Session
Transcripts ................................................................. Registrar

George Mason University, Fairfax, Virginia 22030

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Contents

Correspondence Directory 4
Calendar 7-9
Map 10
Degree Programs (Table) 240

Chapter I. History, Facilities and Services

History of the University 12
About the University 13-15
Student Activities 15-16
Athletics 16
Student Services 17-19
Regulations 19-20

Chapter II. Admission

Admission to the University 22-23
Admission from Secondary School 24
Admission from Another College 25
Registration 25-26
Classification as a Virginia Student 26-27
Tuition and Fees 27-29
Financial Assistance 29-32
Veterans' Affairs 32

Chapter III. Academic Regulations

Credit and Grades 34-38
Examinations 38
Academic Standing 38-40
Placement and Transfer Credit 40-43
Classification of Students 43
Declaration of Major 43-44
Honors 44

Chapter IV. Academic Programs

Academic Programs 46-47
American Minority Cultures 47
Requirements 47-49
Application for Degree 49
Evening Session 50
Graduate School 50
Summer Session 50
Consortium Membership 50

(Contents Continued on page 6)
Chapter V. Degree Requirements and Courses of Instruction

Introduction 52

College of Arts and Sciences 53-173
Degree Requirements 53-54
  Bachelor of Arts 55
  Bachelor of Science 56
Engineering 57-64
Department of Biology 57-64
Department of Chemistry 65-69
Department of Economics 70-75
Department of English 76-84
Department of Fine and Performing Arts 85-93
Department of Foreign Languages 94-114
Department of Mathematics 115-119
Department of Philosophy and Religion 120-126
Department of Physics 127-132
Department of Psychology 133-138
Department of Public Affairs 139-145
Department of Sociology 147-155
Interdisciplinary Programs 157-173
  American Studies 157-161
  European Studies 162-167
  Latin American Studies 168-170
  Law Enforcement 171-173

College of Professional Studies 175-204
Programs and Requirements 175-176
Department of Business Administration 177-183
Department of Education 184-202
Department of General Studies 203-204

Chapter VI. University Directory

Rector and Visitors 206
Administration 207-208
Faculty 209-231
Foundations and Organizations 232-233
Awards 234
Index 236-239
Undergraduate Academic
Calendar 1974-75

First Semester

Wednesday, May 1 .................. Recommended filing date for financial aid applications for 1974-75 session
Saturday, May 18 .................. Foreign language placement examinations (10:00 a.m.); mathematics proficiency test (1:00 p.m.)
Friday, June 28 .................. Last day for students not in continuous registration, Summer Session excluded, to notify Admissions Office for readmission first semester
Monday, August 19 ................. Tuition and fees due for prebilled students
Thursday, August 22 .............. Foreign languages placement examinations (10:00 a.m.); mathematics proficiency test (10:00 a.m.)
Monday, August 26 ............... Welcoming day—orientation programs for new students and new faculty; English proficiency test
Tuesday, August 27 and
Wednesday, August 28 .......... Advising and registration for new day students (pre-assigned times—priority notice must be presented); registration for evening students (4:30-7:30 p.m.)
Thursday, August 29 ............. Advising and registration for all students not yet registered (9:30 a.m.-3:30 p.m.)
Friday, August 30 through
Monday, September 2 .......... Labor Day recess
Tuesday, September 3 ............ First day of classes
Monday, September 9 ............. Last day for adding new courses (except evening: September 17)
Friday, September 27 ............ Last day for filing winter degree applications in Office of the Registrar
Monday, October 14 .............. Last day for dropping a course without incurring a grade of "F"
Friday, October 25 .................. Last day for filing spring degree applications in Office of the Registrar

Friday, November 8 .................. Patriots' Day—special class schedule

Friday, November 15 .............. Last day for students not enrolled in first semester to notify Admissions Office for readmission second semester

Monday, November 25 .......... Spring semester Schedule of Classes and preregistration/registration calendar published

Thursday, November 28 .......... Thanksgiving recess
through Sunday, December 1

Monday, December 2 .......... Advising and preregistration for spring semester (in order of class standing; see preregistration calendar in Schedule of Classes)
through Friday, December 6

Friday, December 13 .............. Last day of classes

Monday, December 16 through . Examinations
Saturday, December 21

Sunday, December 22 .......... Christmas recess
through Tuesday, January 14

Second Semester

Thursday, January 9 ............. Tuition and fees due for prebilled students

Monday, January 13 ............ Foreign language placement examinations (10:00 a.m.) ; mathematics proficiency test (1:00 p.m.)

Tuesday, January 14 ............ Welcoming day; English proficiency test (10:00 a.m.)

Wednesday, January 15 and Thursday, January 16 Advising and registration (for times and priorities, see registration calendar in Schedule of Classes)

Friday, January 17 ............. Winter commencement

Monday, January 20 ............ First day of classes

Friday, January 24 ............. Last day for adding new courses (except evening: January 31)

Friday, February 28 .......... Last day for dropping a course without incurring a grade of "F"
Friday, March 7 ............................................ Last day for filing summer degree applications in Office of the Registrar

Saturday, March 22 ............................... Spring recess  
through Sunday, March 30

Tuesday, April 1 .............................. Recommended filing date for financial aid applications for summer 1975

Friday, April 18 .............................. George Mason Day—special class schedule

Monday, April 21 .................................... Fall semester Schedule of Classes and preregistration/registration calendar published

Monday, April 28 through ............... Advising and preregistration for fall semester (in order of class standing: see preregistration calendar in Schedule of Classes)

Friday, May 2 .................................. Summer Session 1975

Thursday, May 1 .............................. Recommended filing date for financial aid applications for 1975-76 session

Friday, May 9 .................................. Last day of classes

Monday, May 12 through .............................. Examinations  
Saturday, May 17

Thursday, May 22 ...................................... Spring commencement

Summer Session 1975

*Wednesday, May 28 and ....................... Registration for first term  
Thursday, May 29

*Monday, June 2 .............................. First term, except graduate education  
through Wednesday, July 2

*Monday, June 16 .............................. First term, graduate education only  
through Thursday, July 17

*Monday, July 7 .............................. Registration for second term

*Tuesday, July 8 through ............... Second term, except graduate education  
Wednesday, August 6

*Monday, July 21 through ..................... Second term, graduate education only  
Wednesday, August 13

*Saturday, August 9 .............................. Summer commencement

*These dates are tentative; details and final dates for the Summer Session are published in the Summer Session Catalog which is available in February.
George Mason University, the state-supported regional university for Northern Virginia, is located in Fairfax County. The Main Campus is south of the City of Fairfax on Route 123 and University Drive while the North Campus is on U. S. Routes 50, 29, and 211 within the city.
CHAPTER I.

The University

History, Facilities and Services
Chapter I.

History of the University

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 co-educational 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 University into a four-year degree-granting institution and gave it the long-range mandate to expand into a university of major proportions. Consequently, 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. Thus by July, 1970, the size of the campus had reached 572 acres. In January, 1972, the George Mason College Foundation, Inc. acquired the former Fairfax High School on Route 50 in Fairfax City and this facility is now known as the North Campus.

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, signed by the Governor, and on March 1, 1972, the former branch of the University of Virginia became an independent institution under the name of George Mason University.
About the University

George Mason University, the state-supported regional university for Northern Virginia, offers a wide range of undergraduate and graduate degree programs at two convenient locations. The university's Main Campus is located just south of the City of Fairfax at Route 123 and University Drive. The North Campus is located on U. S. Routes 50, 29 and 211, within the City. Both campuses are 16 miles from downtown Washington, D. C.

Since 1964, when George Mason opened its first four academic buildings on the main campus, expansion has been rapid. Today, the university serves more than 5,000 day and evening students through its College of Arts and Sciences, its College of Professional Studies, and its Graduate School. Several summer sessions provide courses for more than 2,400 students.

Although George Mason is Northern Virginia's regional university it serves commuting students from all parts of Metropolitan Washington. More than one-third of the student body is over 25 years-of-age and more than 80 percent of the university's students are employed on either a part-time or full-time basis.

In the development of George Mason's 576-acre Main Campus, careful attention has been paid to the preservation of as much of the natural beauty of the area as possible—particularly the many wooded areas. Parking is located on the perimeters of the campus, and buildings are surrounded by groves of trees and park-like recreational areas.

Several new buildings, including a major academic building, an addition to the University Union, and a five-story addition to the Charles Rogers Fenwick Library, are under construction. The academic building, when completed in September 1975, will house the College of Professional Studies. The library addition is the first of six such modules tentatively scheduled to be built at two-year intervals. The newly completed University Union, a physical education building, library, lecture hall, and several modern classroom buildings dot the campus.

The College of Arts and Sciences is located on the Main Campus, and the College of Professional Studies is temporarily situated on the university's North Campus. The former Fairfax High School serves as the university's North Campus.

Planning is currently under way for the construction of the second phase of the new academic building, the second addition to the library, an administrative center, and a science research building.
Vergil H. Dykstra
President
Counseling, financial aid, job placement, career planning, and health insurance are among the services available to students. Although the university provides no on-campus housing, its Office of Career Planning, Placement, and Financial Aid can assist students in finding suitable housing in the vicinity.

Campus clubs, student publications, student government and intramural and intercollegiate athletics provide students with a variety of activities from which to choose.

University library services are provided on both campuses. An open stack arrangement encourages direct access to the collections, which number 100,000 volumes and 150,000 microform units. Approximately 1,800 current periodicals are received. The library is a selective depository for United States Government publications. Services available to students and faculty at both campus locations include inter-library loan for needed items the library does not own.

Students who study at the university also have the research and cultural resources of Metropolitan Washington at their disposal. Many specialized libraries and the collections of the National Archives, the Library of Congress and the Smithsonian Institution are easily accessible.

The University Union building, Main Campus, opened in March, 1974, with a number of services for students. Its physical facilities include conference rooms, lounges, an information desk and recreational rooms (table tennis, pinball and pool). The dining facility is open daily, offering three full meals each day. Snack facilities are open during the union's full operation hours.

The University Bookstore which is located on the second floor of the University Union is open Monday through Friday from 9:00 a.m. to 3:00 p.m. except during the first two weeks of registration for any semester when the hours are extended.

**Student Activities**

George Mason University encourages the participation of students in shaping the character and quality of the institution. Involvement through the committee structure has proven to be a motivating force in the university system while at the same time increasing the university’s responsiveness to the needs of students or individuals, and has resulted in the development of policies and programs advantageous to the university community as a whole.

The level of student participation at George Mason University includes the Honor Committee, Student Government, student publications,
There are student organizations which cater to many student interests: political, forensic, musical or dramatic, scientific, recreational, social and religious. For a complete listing of recognized student organizations, inquire at the Student Government office.

Student publications comprise a yearbook, newspaper and literary magazine.

Participation in student activities is limited to bona fide registered students.

A student is ineligible to hold elective or appointive office in any organization or activity associated with the university if his cumulative grade point average is less than 2.000. Moreover, any student on probation is ineligible to participate in any athletic or other activity representing the university on either an intercollegiate or club level and/or to serve as a working staff member of any student organization. It is the responsibility of the individual student to notify his organization when he becomes ineligible. The student's academic dean, however, has the authority to remove the restriction on activities, in whole or part.

Athletics

The intercollegiate athletic program offers competition between the university and various colleges in Virginia, Maryland and other states on the East Coast. Men's intercollegiate competition is conducted in cross-country, soccer, basketball, wrestling, fencing, baseball, golf and tennis. The university is a member of two national athletic organizations—National Collegiate Athletic Association and National Association of Intercollegiate Athletics. Under their auspices freshmen are eligible for varsity competition. The university participates in the Mason-Dixon Intercollegiate Athletic Conference and the Potomac Intercollegiate Conference. Competition outside of conference play is furnished by American University, University of Virginia, University of Richmond, Georgetown University, George Washington University, University of Delaware and others.

The women's intercollegiate athletic program is conducted in basketball, volleyball, and tennis. The university participates in the Metropolitan Intercollegiate Sports Association for Women competing against D.C. Teachers College, Immaculata College, Gallaudet College, American University, Catholic University and others.

The intramural program enables students to participate voluntarily
in sports of their own choosing. Facilities are available for tennis, volleyball, flag-football, trap and skeet, cross-country, table tennis, and softball. The Intramural Council, composed solely of students, conducts the intramural program.

The Athletic Council has general supervision over both the men's intercollegiate athletic program and the women's intercollegiate athletic program.

Student Services

Living Accommodations—The Placement Office located in the University Union provides assistance in locating suitable housing in the vicinity of the university for students living away from home. The university provides no housing facilities of its own at present.

Insurance—George Mason University has no provisions for rendering health services to students. It is the individual student’s responsibility to arrange for needed health services. A combined hospitalization and accident policy is available to students at George Mason University. This policy provides twenty-four hour coverage including vacation periods. Applications and brochures are available in the Office of the Dean of Students.

Career Planning and Placement—The Office of Career Planning, Placement and Financial Aid assists students in developing career plans and obtaining full time employment upon leaving the university. The major services offered by the office include (1) job referrals; (2) individual and group counseling on vocational decision-making and job hunting skills; (3) an extensive occupational and graduate school library; (4) employer recruitment program; (5) special career seminars, job fairs; (6) permanent credential files which can be made available to prospective employers.

These services are also available to alumni on a continuing basis.

Part-time and summer employment information is made available to students through listings posted on a bulletin board in the University Union by the Placement Office. Referrals are made after consultation with a placement interviewer. Effort is made to assist students in obtaining employment that will provide experience in the students' study areas.

Counseling—The University Counseling and Psychological Services Center provides specialized psychological services in educational-vocational testing and counseling, and in personal adjustment counseling. These services aid the student in exploring his interests, personality, and
achievement level and assist him in making the most of his opportunities for academic and personal development while in college. The center is staffed by professionally trained psychologists and counselors. There is no charge for center services. Appointments are recommended.

_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, 1962. It is recognized and approved as an integral part of the university. The essence of the code is that a student’s word, as a member of the university, 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 members of this community 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 his 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 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.

Entering students participate in an orientation given by the Honor Committee. A statement of willingness to conform to and uphold the Honor System is included in the application form for admission to George Mason University.

_Campus Ministry Association_—The Campus Ministry Association is an ecumenical group of clergy and concerned laymen of Judaeo-Christian orientation whose objective is to provide opportunities for service as well as religious, educational and social activities for the uni-
versity community. It is sponsored presently by the Christian (Disciples), Christian Science, Episcopal, Lutheran, Presbyterian, Roman Catholic and United Methodist Churches. Others are cordially invited to participate. The association draws on the resources of United Ministries to Higher Education and the Council of Churches of Greater Washington.

Chaplains are on campus daily for discussion and counseling with all members of the university community. A counseling and seminar room is available in the University Union.

Regulations

Conduct—George Mason University is a community of scholars in which the ideals of freedom of inquiry, freedom of thought, freedom of expression, and freedom of the individual are sustained. It is committed to preserving the exercise of any right guaranteed to individuals by the Constitution. However, the exercise and preservation of these freedoms and rights require a respect for the rights of all in the community to enjoy them to the same extent. Actions which deprive others of the opportunity to be heard, involve take-overs of buildings that materially and substantially disrupt the educational process, incarceration of or assaults on persons, destruction of property and rifling of files, are incompatible with the nature and function of educational institutions. 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. Further amplification of the Standards of Conduct can be found in the Student Information Handbook.

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. At 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 will be governed by University Motor Vehicle and Traffic Rules and
Regulations, a copy of which will be furnished at time of registration of vehicle. A fee of $1.00 will be charged for the first vehicle registered by the student. After the initial vehicle registration, the student may register two additional (family) vehicles without charge. Every registered vehicle shall display in full view the university's vehicular registration decal, which shall 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 by students 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.

Solicitors and Salesmen—Solicitors and salesmen, except on official business with the university, are not permitted on the campus without permission of the Business Office.

Non-Academic Events and Publications—Organizations or groups of students wishing to use university facilities for non-academic matters must obtain approval of the Dean of Students. Each request must indicate the name of the organization, the type of event for which the facility is intended and be registered in advance with the Office of the Dean of Students.

George Mason University students may publish and/or disseminate publications on campus which are not funded by the Publication Board, if they are not in violation of state or local ordinances. Students should exercise this option responsibly. The university assumes no responsibility for the contents of the material published and/or disseminated. Distribution of publications on campus does not signify that the university necessarily approves or supports the contents of the publications.

Change of Status and Address—Each student is required to notify the Office of the Registrar of any change of home address, 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 will be kept in the student’s permanent file.

Enforced Withdrawal—The university may impose enforced withdrawal as a penalty for habitual delinquency in class, habitual idleness, or any other fault which prevents the student from fulfilling the purposes of enrollment in the university.
CHAPTER II.

Admission

Tuition and Fees, Financial Assistance

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Chapter II.

Admission to the University

Application should be made to the Office of Admissions, George Mason University, on forms which are provided upon request. A non-refundable fee of $10.00 must be attached when the application form is submitted.

To be assured of consideration, applications should be submitted no later than July 1. 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 will normally be 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.

All freshman candidates for admission are required to take the Scholastic Aptitude Test given by the College Entrance Examination Board, or its equivalent. 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 will be given in various test centers distributed throughout the United States and overseas. Both descriptive information about the test and registration blanks are available without cost to applicants. Requests should be addressed to either of the board’s offices.*

The English department strongly suggests that students in the arts, sciences, and elementary education programs take the language achievement tests of the College Entrance Examination Board. Scores of these tests may be used for advanced placement of students by the English department.

*Address of the College Board Offices: Box 592, Princeton, New Jersey, 08540, or Box 1025, Berkeley, California, 94701.
Applicants for 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. Evidence of good character and acceptable social habits.
3. Complete secondary school record, examination results, and recommendations from schools.

The following general requirements are set forth for the guidance of students interested in admission: The applicant must be at least 16 years of age and a graduate of an accredited high school or preparatory school with graduation based on no fewer than 15 units (see specific subject requirements below). Applicants should rank in the upper half of their senior class. A personal interview is not required unless requested by the Director of Admissions.

In summary, a complete application includes (1) a properly executed application form, (2) a non-refundable application fee of $10.00 accompanying the application, (3) a transcript of grades from secondary school and all colleges attended, and (4) a record of the scores of the Scholastic Aptitude Test for the College Entrance Examination Board.

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

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

Medical Report—All students approved for admission are required to complete a health form provided by the university.
Admissions from Secondary School

Arts, Sciences and Elementary Education

For admission to the arts, sciences, and elementary education programs, an applicant must take the Scholastic Aptitude Test given by the College Entrance Examination Board and must present not less than 15 units of high school work in the following academic fields:

- **English**: 4 units
- **Mathematics**: 3 units
- **Foreign Language**: 2 units
- **Social Studies**: 1 unit
- **Laboratory Science—Biology, Chemistry, or Physics**: 1 unit
- **Electives**: 4 units
- **Minimum Total**: 15 units

Two-Year Engineering

For admission as a student in the two-year engineering program, an applicant must present 16 units from high school in the following fields:

- **English**: 4 units
- **Mathematics**: 3½ units
- **History**: 1 unit
- **Science**: 2 units
- **Electives**: 5½ units

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

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1. These units must be selected from Algebra I, Algebra II, geometry, trigonometry, probability, and elementary calculus.
2. No credit is allowed for less than two units in a foreign language.
3. These units must be two of algebra, one of plane geometry and ½ unit of advanced mathematics—trigonometry, solid geometry, or advanced algebra.
4. Chemistry and physics are recommended.
5. Not more than four units of vocational subjects relevant to engineering will be accepted.
Admission from Another College

George Mason 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 he has attended to send an official transcript of his record to the Office of Admissions, George Mason University. A complete secondary school record will also be required. Normally, transfer students will be expected to meet the university's requirements governing initial admission from high school. An applicant may be considered for transfer only if he is entitled to an honorable dismissal without social or academic probation and only if he has an average of at least "C" in the institution from which he wishes to transfer. A student who has been suspended or dropped from another institution for scholastic deficiency or other reasons can not be considered for admission. Transfer students should note the requirements shown under the heading Credits Earned at Other Colleges.

Transfer students may be required to present Scholastic Aptitude Test scores of the College Entrance Examination Board before approval for admission.

Foreign Students—Applications are considered from students who are not United States citizens under the following conditions:

1. That they are currently residing in the United States on a bona fide student or other visa.
2. That they have completed the TOEFL (Test of English as a Foreign Language) and attained a score of not less than 550.
3. That they make the necessary arrangements for a personal interview with the Director of Admissions.

Conditional Admission—Applicants for admission to George Mason University who are offered admission on a "Conditional" status must complete a full program of course work (12-17 credit hours) during the first semester of attendance and maintain an overall "C"/2.000 average. The program must be accomplished in the regular sessions, not to include the Summer Session. A student who fails to fulfill the prescribed condition will not be permitted to re-enroll but may petition for readmission after a lapse of two calendar years.

Registration

Applicants seeking membership in the university, having been accepted for admission by the proper admitting authority, should present themselves to their faculty advisers on the date specified in the Calendar of the university. Applicants must also attend and participate in the
orientation program announced in the calendar. New and returning students are given written instructions for the registration procedure in the Schedule of Classes. Students are responsible for following and completing the process properly. The student who fails to do this will not be a registered student.

Each registering student must complete and sign the Information Card. Information requested on this card is used to set up the student's master record and for numerous statistical reports. George Mason University does not discriminate with regard to race, color, sex, religion, or national origin; the information requested is for reports the university provides to federal authorities and to other agencies collecting data on equal opportunity for education or employment. The card carries the following statement which must be signed by the student. “I voluntarily enroll as a student of George Mason University with a serious desire to reap the benefits of its instruction and hereby agree to conform to its rules and regulations, in testimony whereof I subscribe my name.” A student failing to complete this card is not a registered student.

Preregistration—Preregistration is conducted near the end of each semester for those students currently enrolled who intend to return for the next semester. Students who preregister for a regular semester of the academic year must complete their financial arrangements by the date specified in the Calendar or their preregistration will be cancelled. A student whose preregistration is cancelled must appear in person on the announced date to register on a space-available basis.

Delayed Registration—Students who fail to register during the time specified will not be allowed to enroll without an explanation satisfactory to the dean of the student's college. If permission for late registration is granted, the student may be charged a delayed-registration fee of $5.00 - $15.00.

Student Identity Card—As an integral part of the registration process, each student is issued without charge an identity card. This card serves as the student's official university identification. 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 each semester.

Classification as a Virginia Student

To be classified as a Virginia resident it is mandatory that the applicant, or father, which ever applies, shall have been domiciled in the
State of Virginia for one full year immediately preceding the beginning of the semester, and shall have filed Virginia State Income Tax for this same period. Dependent living with their families, or being supported by same, have the domicile of the father or other legal guardianship created only by widowhood, adoption, or divorce. Any student in doubt about his status as a Virginia resident should contact the Office of Admissions.

### Tuition and Fees

<table>
<thead>
<tr>
<th>In-State Students</th>
<th>Out-of-State Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application Fee</strong></td>
<td>$10.00</td>
</tr>
<tr>
<td><strong>Tuition, Full-time (12 or more semester-hours) per semester</strong></td>
<td>315.00</td>
</tr>
<tr>
<td><strong>Tuition, part-time (11 semester-hours or less) per semester, per hour</strong></td>
<td>27.00</td>
</tr>
<tr>
<td><strong>Comprehensive Fee (7 hours or more) per semester</strong></td>
<td>30.00(a)</td>
</tr>
<tr>
<td><strong>Building Fee, per semester</strong></td>
<td>25.00(a)</td>
</tr>
<tr>
<td><strong>Laboratory Breakage Deposit</strong></td>
<td>5.00(b)</td>
</tr>
<tr>
<td><strong>Diploma Fee (Seniors Only)</strong></td>
<td>5.00</td>
</tr>
<tr>
<td><strong>Special Registration Fee</strong></td>
<td>15.00(c)</td>
</tr>
<tr>
<td><strong>Private Music Instruction</strong></td>
<td>(d)</td>
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<tr>
<td><strong>Private Music Instruction</strong></td>
<td>(d)</td>
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</tbody>
</table>

(a) Students enrolled for six semester-hours or less are required to pay one-half of the Comprehensive and Building Fees.
(b) Chemistry only. Same laboratory card may be used for both semesters.
(c) See Application.
(d) $75.00 for one half-hour lesson per week per semester. Fee is non-refundable after 30 calendar days. Refund prior to completion of 30 days is $50.00.

**Payment of Tuition and Fees**—Tuition and fees are due and payable at the Business Office on or before August 19, 1974 and January 9, 1975. No student is permitted to register for classes until satisfactory financial arrangements have been made with the Business Office (cashier).

All students are urged to make payments (whether by mail or in person) by personal check, money order or bank draft.

**Deferred Payment Plan**—There is a deferred payment plan available for students whose tuition for the semester exceeds $150.00. The student must pay all fees and at least one-third of the tuition as the initial payment, with the remaining tuition payable in two equal

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installments. Bills for installment payments will not be prepared. It is the student's responsibility to ensure payment of his installments on or before the due dates published.

Failure to make any tuition payment on or before due date results in a late charge of $5.00 per day, up to three days. Students who have not made payment within three days following due date will be placed on financial probation for a period of ten calendar days. If satisfactory arrangements have not been completed by the end of the probationary period, the student will be suspended for the remainder of the semester.


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 will result in a $5.00 penalty fee for the payer. Further, the student who fails to make good such check within five calendar days following notification by the Business Office will be suspended.

A student whose check is returned by the bank marked "Insufficient Funds" will be subject to the prescribed late penalty of $5.00 per day if he fails to make the check good on or before the deadline for the payment in question.

Withholding Academic Credit—Transcripts of record will be withheld from students and former students who have failed to meet their official financial obligations. This includes traffic and library fines.

Refunds—A student withdrawing within five week days following registration shall have tuition and comprehensive fee refunded in full; however, $10.00 will be withheld to cover the administrative cost of registration.

Tuition only will be refunded on a graduated scale for subsequent voluntary withdrawals.

Other Required Fees

Deposits—Each student enrolled in a laboratory course (in chemistry) is required to purchase from the cashier at the time of registration one laboratory card priced at $5.00. This is intended to cover breakage or loss of equipment by the student. As such loss(es) occur, the card is "punched" for the cost of the item in question. Un-
used portions of the card will be redeemed upon presentation to the cashier at the end of the second semester (but no later than June 30, 1975).

Transcript Fee—A fee of $1.00 is charged for each transcript of record when requested by the student. 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 security office and pay a fee of $1.00 for a parking decal. (See Regulations on Motor Vehicles).

Financial Assistance

George Mason University has a limited amount of financial assistance available which is administered by the Office of Career Planning, Placement and Financial Aid. This assistance consists of scholarships, grants, loans, and employment. Financial aid awards are based primarily upon financial need and secondarily upon scholarship.

New and currently enrolled students should obtain an application for financial aid from the Office of Career Planning, Placement and Financial Aid and apply as soon as possible. In addition, a “Parents’ Confidential Statement” or “Student’s Financial Statement” in support of the application for financial aid must be filed with the College Scholarship Service. Students may consult with a member of the office staff for financial aid counseling and further information. The following submission dates are suggested for financial aid applications:

- 1973-74 Session ........................................ May 1, 1974
- Summer 1975 .......................................... April 15, 1975
- 1975-76 Session ........................................ May 1, 1975

Federal Programs

George Mason University participates in federally supported programs of student financial aid. The following programs are available to eligible students.

The National Direct Student Loan Program—The university makes available to qualified students, long term, low-interest loans from the federally-sponsored National Direct Student Loan Program. Repayment begins nine months after graduation and may be deferred if one enters graduate school, the Peace Corps, VISTA, or military service.
Supplemental Educational Opportunity Grant Program —
There are available a limited number of direct grants to undergraduate full-time students with exceptional financial need who require such assistance to attend college. To receive this grant, a matching scholarship or loan must be awarded to the student.

The College Work-Study Program—Limited funds are available to provide work opportunities to full-time students from low-income families who need earnings from part-time work to help meet college expenses. An aid applicant who is eligible for this assistance and who indicates a desire and willingness to work will be considered for Work Study job placement.

U. S. Loan Program For Cuban Students—Long-term, low-interest loans are available to Cuban nationals residing in the U. S. who are unable to receive support from sources within Cuba as a result of actions by the Cuban government, and who are without sufficient resources in the United States to finance their education. Repayment begins nine months after graduation and may be deferred if one enters graduate school, the Peace Corps, VISTA, or military service.

Law Enforcement Education Program—This program provides loans and/or grants to state and local law enforcement personnel and to students who promise to enter the law enforcement field (police, corrections, etc.). Because of limited funds students in police work or in the Law Enforcement major field of study will receive first priority. Additional information may be obtained from the Office of Career Planning, Placement and Financial Aid.

State Loans and Grants

The state of Virginia makes available financial assistance for Virginia residents. Most programs require students to be enrolled full-time.

Virginia Loans—The state provides funds to be used for long term, low interest loans for eligible students.

Virginia Scholarships—These scholarships are for students who demonstrate financial eligibility, and have established a record of academic and personal achievement.

State Teachers Scholarships Loans — These scholarships are loans in the amount of $450.00 per year which are cancelled at a fixed rate for each year of teaching in Virginia schools after graduation. Applicants must be Virginia residents, full-time undergraduate students, and meet the qualifications set by the State Board of Education. Appli-
cation forms are available in the Office of Career Planning, Financial Aid and Placement, and should be returned during the spring semester for the following academic year.

**Virginia State Law Enforcement Scholarship Program** — A law enforcement officer of Virginia, enrolled in a program leading to a degree in law enforcement, may apply for a tuition refund to the Virginia Department of Education. One-half of the tuition costs, not to exceed $40.00 per course, may be received upon completion of the course, and the remaining one-half received after one year of service as a law enforcement officer.

For further information contact the Office of Career Planning, Financial Aid and Placement of the university, or contact the Virginia Department of Education, Ninth Street Office Building, Richmond, Virginia 23219.

**Other Programs**

**George Mason University Foundation, Inc.**—The George Mason University Foundation, 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 and grants for special research.

The Foundation operates solely on private philanthropies.

**George Mason University “GM” Club Foundation, Inc.**—The “GM” Club Foundation is formed for educational, 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.

**George Mason University Patriot Educational Foundation, Inc.**—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 will be used to defray scholarship costs for student-athletes at the university. All activities of the corporation will be administered in accord with the latest National Collegiate Athletic Association regulation, policies and procedures with no funds being used for recruitment purposes.
**Fulbright-Hays Award**—Students seeking information regarding these awards which provide funds for pre-doctoral study or research abroad should contact Dr. Angela Khoury, George Mason University Program Adviser. Faculty members nominate promising students.

**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 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.

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

**Emergency Loan Fund**

Short-term, interest-free loans are available to students, through the Office of Career Planning, Placement and Financial Aid.

**Veterans’ Affairs**

The Office of the Registrar is the university’s liaison with the Veterans Administration (VA) in matters concerning educational benefits to veterans and their dependents.

Veterans eligible for educational benefits under Public Law 89-358 (Peacetime G.I. bill) must make application to their nearest VA Regional Office for approval of their program and authorization for benefits. It is important that this be done in advance of taking up residence so that programs may be approved before funds are needed. Application forms for educational benefits are available from the Office of the Registrar or at the Veterans Administration Regional Office.

Persons eligible for benefits under Public Law 634 (War Orphans Program) must also make application to their nearest Veterans Administration Regional Office. The Office of the Registrar assists the eligible person in his relations with the Veterans Administration upon his authorization for benefits and enrollment in the university.

For undergraduate students registered in the regular session, eligibility for full-time institutional training consists of 12 semester-hours, three-quarter time consists of nine to 11 semester-hours, half-time consists of six to eight semester-hours. Payments to students enrolled for less than half-time are computed on the basis of tuition fees and charges. Payments for attendance at Summer Sessions are determined on the basis of an accelerated program.
CHAPTER III.

Academic Regulations
Chapter III.

Academic Regulations

It is each student's responsibility to know all the rules, regulations, requirements, and academic policies of George Mason University. If doubt should arise with regard to any matter, it is the further responsibility of the student to consult with a faculty adviser or the dean of his college.

While the university appreciates the need on the part of many students to assume part-time employment in order to meet their living expenses, such employment must not take priority over academic responsibilities. Accordingly, a student who is 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 not attempt more than six semester-hours. A student who fails to observe these guidelines may expect no special consideration for academic problems arising from the pressures of employment.

Credit and Grades

Grades and Grade Points—University course work is measured in terms of quantity and quality. Using the semester-hour as the unit of credit, the number of semester-hours of credit is a measure of quantity. The grade is a measure of quality. The university recognizes four passing grades: "A," "B," "C," and "D." Grade "F" signifies that the work was failed. In instances in which a student otherwise passing a course is for some cause, beyond reasonable control, unable to complete the work of that course on schedule, the instructor may assign a temporary grade of "I" (Incomplete). An "I" grade not removed from the record by the end of the following semester will be automatically changed to "F." A student who has received an excuse from the dean of his college 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" will be given by the dean of the respective college, or by his designated representative, to a student
faced with a delinquency because of very special circumstances such as a major illness.

To compute an average of the quality of work for a semester or for an entire program, 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. The grade point average is computed by dividing the number of grade points earned at George Mason University by the number of semester-hours attempted.

Academic achievement of a student in a course is generally rated as follows:

- “A” = 90-100 (excellent)
- “B” = 80-89 (good)
- “C” = 70-79 (satisfactory)
- “D” = 60-69 (poor)
- “F” = Failure

**Credit without Grade**—Each student who is a candidate for a degree at George Mason University, having earned a minimum of 54 semester-hours and being in good academic standing, may during his total remaining program elect to take not more than two one-semester courses for credit without grade. The courses selected may not be within the field of major concentration and may not be advanced in satisfaction of any degree requirement except that requiring a total of 120 semester-hours of credit for graduation and may not include a course for which a previous grade of “F” has been received. For enrollment in a course under this provision, a student must meet the stated prerequisites and secure in advance of enrollment permission of the instructor. Permission Request Forms are available at the Office of the Registrar. Any student so enrolled will be regarded as a regular member of the class for all academic purposes, and to receive hours of credit toward graduation must demonstrate, in the judgment of the instructor, attainment of a passing level of achievement. Students who are majoring in the field will be given enrollment priority over students entering for credit without grade. Hours earned in such courses will not enter into determination of the student’s grade point average. Courses taken for credit without grade are not considered when computing a student’s grade point average.

**Semester-Hour and Course Load**—A semester-hour, the unit in which courses are measured, is defined as one hour per week of
lecture recitation or not less than two hours per week of laboratory work throughout a semester. Although 12 semester-hours per semester represent a minimum full-time load, a student is expected to carry not less than 14 nor more than 17 hours of work. A load in excess of 17 hours must be approved by the dean of the respective college or his representative.

Audit—Auditing a course requires the permission of the chairman of the department in which the course is offered. This permission should be secured in advance of enrollment. A student may not change from credit to audit status after the Add period is completed. A previously audited course may not be taken for credit at a later date. However, a student may audit a course previously taken and passed. The usual university 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 that course. In cases where courses are repeated, the following conditions apply:

1. All hours attempted are to count in computation of the student's cumulative grade point average.
2. A transcript will show both the original and repeat grades and the respective grade points.
3. Only one grade with appropriate grade points may be presented on the degree application.

Change of Courses—In order to drop and/or add a course, a student must first obtain the written permission of the faculty adviser and the chairman of the department in which the dropped or added course is taken. Forms for this purpose may be obtained from the department secretaries. The last day for adding courses is no later than seven calendar days after and including the first day of classes.

The last day to drop a course without incurring an "F" is six calendar weeks after and including the first day of classes. Subsequent to this time, a student who discontinues a course without permission of the dean of his college will receive a grade of "F" in that course. All of the required signatures must be obtained on or before the deadlines shown in the Calendar.

Attendance—Students are expected to attend the class periods of the courses for which they are registered. 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 that course may warrant.
Grade Reports—Reports are sent at the end of each semester to the parent or guardian of each student unless the student is over 18 years of age or married, in which case the reports are sent directly to the student.

Examinations

Final Examinations—Written examinations are held at the end of each semester except in predominantly laboratory courses. In such courses an examination may be given in the last regularly scheduled laboratory period. No changes may be made in the announced examination schedule unless approved in writing by the student’s academic dean.

Absence from Final Examinations and Special Examinations—Absence from final examination will not be excused except for sickness on the day of the examination attested by a physician’s certificate, 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.

Re-examination—Re-examinations are not permitted.

Academic Standing

Satisfactory Standing—A student with a cumulative grade point average of at least 2.000 for all work attempted is in satisfactory academic standing. In order to hold elective or appointive office in any organization or activity associated with the university a student must maintain satisfactory academic standing.

Probation—Probation is an official warning to the student of failure to make satisfactory progress towards a degree. A student will be placed on probation when he has a grade point deficiency of 13 points below satisfactory standing (2.000); the academic record of a student placed on probation is stamped “probation.” A student on probation is ineligible to participate in any athletic or other activity representing the university either on an intercollegiate or club level, and/or to serve as a working member of any student organization. It is the responsibility of the individual student to notify his organization when he becomes ineligible. The student’s academic dean, however, has the authority to remove the restriction on activities in whole, or in part.

Suspension—Suspension is enforced withdrawal from the uni-
versity. No student will be suspended at the end of a semester in which his grade point average for the semester is 2.000 or higher. Suspension is imposed after a semester which shows at least one of the two following conditions to be true of a student's record:

1. A cumulative grade point deficiency of 25 points below satisfactory standing (2.000).
2. Three semesters of consecutive probation; the three semesters of consecutive probation are extended to four if the student attempted fewer than 12 hours of work each semester.

No course credits earned by a student during the period of suspension from George Mason University will be accepted for the degree program.

Readmission after Suspension—(1) Normally, a student on suspension for the first time may establish his eligibility for probationary readmission only if he attends the Summer Session of this university and displays satisfactory progress by earning a minimum of eight semester-hours, on which he achieves an average grade of "C" while passing all work attempted. If the student chooses to carry more than eight hours, all work attempted must be passed, and the student must achieve an average grade of "C" on all work attempted. Courses taken to establish eligibility for readmission to George Mason University must be approved by the dean of the respective college.

(2) Under special circumstances, a student on suspension for the first time may petition for readmission after the lapse of one calendar year, provided that he demonstrate that his circumstances have so changed as to make likely the successful continuation of his college program.

(3) A student who has been readmitted under either of these procedures will be restricted in university activities as if he were on probation.

(4) A student who has been reinstated after suspension and is subsequently suspended again will not be considered for readmission until after two calendar years have elapsed.

(5) No course credits earned during the period of suspension from George Mason University will be accepted for the degree program.

Effect of Attending Summer Session—The student's academic status shall not change as a result of his attending the Summer Session at George Mason University, except in those cases where students are seeking to remove the academic suspension in accord with George Mason University regulations (see Rule (1) under Readmission after
Suspension). However, in the case of a student's requiring certification of good standing for participation in activities or for transfer to another school, the Registrar is authorized to determine the student's standing on the basis of all hours attempted at George Mason University.

**Voluntary Withdrawal**—An official application form to withdraw must be obtained from the Office of the Registrar, and must be approved in writing by the dean of the respective college. A student under eighteen years of age must have parental approval for such withdrawal. To clear the student's record, the application must then be endorsed by the Business Office, and if the student is enrolled in a laboratory course, by the chairman of the science department. When complete, the withdrawal form must be submitted to the Office of the Registrar.

Failure to comply with the above regulations will subject the student to suspension from the university.

When a student withdraws after the last day for dropping a class, each of his instructors is asked to indicate whether the student withdrew passing or withdrew failing. The student's permanent record is marked accordingly. All courses that are marked withdrew failing will be figured into the total hours attempted. (See Grades and Grade Points).

**Readmission after Voluntary Withdrawal**—A student who withdraws with "WF" in half or more of his courses must qualify for readmission in the same way as a suspended student. A student who withdraws with "WP" in half or more of his courses and whose grade point average is more than 2.000 can be readmitted by the Director of Admissions. A student who withdraws with "WP" in half or more of his courses and whose grade point average is less than 2.000 may be required by the dean of the respective college to attend the Summer Session and complete satisfactorily a prescribed number of approved courses. His readmission will be considered on the basis of his previous record as well as his Summer Session courses.

**General Readmission**—Students not in continuous registration, summer sessions excluded, must notify the Office of Admissions 60 days in advance of registration for readmission.

**Placement and Transfer Credit**

**Foreign Language Placement**

All entering freshmen who intend to continue a foreign language studied in high school are required to take a foreign language placement test. These tests will be administered to students entering in
1974-75 on Saturday, May 18 and Thursday, January 9, 1975. Students who intend to take the placement test must register no later than four weeks in advance with the Department of Foreign Languages.

The following guidelines apply to students enrolling in the foreign language program:

1. The 151, 152 course is designed primarily for students who present less than two high school entrance credits in the language;
2. Students who present two or more entrance credits in a language and who wish to continue that language will be placed in 151, 152, 153 or 251, depending upon their scores on the foreign language placement test. If their scores place them beyond 251, they will have fulfilled the foreign language requirement by examination and receive four semester hours of credit for this achievement;
3. Transfer students who have not received credit for college-level foreign language study will be placed according to (1) or (2) above, whichever is applicable. Transfer students who have received credit for college-level foreign language study have to take the placement test. The lowest-level course such students may take for credit is the one immediately beyond the course for which they received transfer credit. They may take the placement test, however, in order to ascertain whether they first need to audit a lower-level course.

All students are urged to complete elementary and intermediate foreign language courses in immediate succession, for example: first semester, 151; second semester, 152; third semester, 251; or first semester, 153; second semester, 251.

Advanced Placement Program with Credit

First semester freshmen entering George Mason 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 respective 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.

Advanced Placement Program Without Credit

Entering first semester freshmen who do not qualify for advanced
placement with credit may establish their eligibility for admission to higher level courses on the basis of placement examinations prepared and administered by those departments desiring to participate. Transfer students may qualify to meet graduation requirements or requirements for a major field in courses listed in the catalog by examinations given by departments. All such examinations shall conform to university policy, shall be adequate to evaluate the competence and preparation of students in their respective areas, and shall afford a reliable basis for assigning students to advanced courses.

Credit and Advanced Placement by Examination

Proficiency examinations are offered to incoming freshmen degree candidates in a number of courses normally taken during the first two years. Examinations in English, government, geography, mathematics, and foreign languages will usually be announced by the appropriate departments. The foreign language placement test for incoming freshmen also serves as a proficiency examination. A satisfactory score on such an examination will afford a student credit for the course in question.

On the basis of examinations administered to candidates presenting some evidence of qualification, regularly enrolled students may be granted up to thirty semester-hours of undergraduate credit for other courses in the George Mason University curriculum. Credit is recorded for grades of “C” or above, but does not affect the student’s grade point average. In addition:

1. A student may not earn credit by examination in a course in which he is enrolled beyond the time allotted for adding courses in that semester, or in a course which he has already audited or failed at George Mason University.

2. A student 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.

3. Credit may not be earned by examination in foreign language at the 100 level but may be earned for foreign language courses at the 200 and 300 level.

These examinations will conform to university policies, be adequate to 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 office of the student’s academic dean.

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 University Counseling and Psychological Services Center is a certified CLEP Administration Center.

Credit Earned at Other Colleges

The credits of students transferring from other institutions will be tentatively evaluated upon registration. In general, credits are accepted from institutions that are accredited by the appropriate regional association provided they carry a grade of "C" or better and are comparable to courses offered at the university. If such institutions are not accredited, the transcript information may be used for purposes of advanced placement, and transfer credit as such will be recommended after the performance of the student at George Mason has been established. Generally, no more than half of the total required semester hours in a student's George Mason baccalaureate program may be transferred from one or more junior or community colleges. A maximum of six semester-hours may be transferred from correspondence courses sponsored by regionally accredited institutions. Permission to take courses at other colleges and universities, in extension centers, and by correspondence must be approved in advance by the dean of the respective college or his designated representative.

A student who expects to take summer courses at other colleges and to transfer credit to this university must submit his request to the dean of the respective college by June 1. Catalog numbers and descriptions of courses shall be submitted with the request.

Military services courses represent special cases and generally no credit is given.

A student may not assume that credit will be given for work at other institutions until he has an official signed statement from the office of the dean of the college.

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.

Classification of Students

Classification of students is determined by class standing as follows: sophomore, 24 semester-hours; junior, 54 semester-hours; senior, 84 semester-hours.

Declaration of a Major

Selection of a Major—In order to plan a sound academic program the 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 his departmental chairman and/or faculty adviser and file the necessary form.

Change of Major—A student who wishes to change a major should obtain the necessary form from his faculty adviser. In general, no student under academic sanction at George Mason University may transfer from one college within the university to another. Appeals for exception to this rule can be made to the dean of the college to which the student wishes to transfer. Prior to seeking a change of major, the student should become thoroughly acquainted with minimum requirements in the new department.

Double Major—A student who desires to graduate from George Mason University with a Bachelor of Arts degree or a Bachelor of Science degree in two subjects having established degree programs must meet departmental requirements for admission to the major in both fields.

The applicant should present to the chairmen of the departments involved a program showing in detail the curriculum he or she will pursue to graduation. This program must be approved by the departments involved and by the dean of the respective college. The departments involved and the dean must also approve all changes made thereafter.

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

Honors

The Dean's List—A student in the university is placed on the Dean's List of Distinguished Students if he has passed at least 14 semester-hours of work in the preceding semester, without failure in any course, and with a grade average in all courses of at least 3.000.

Graduation With Distinction—George Mason University will recognize as graduating with distinction a student who has a grade point average of 3.000, with high distinction a student who has a grade point average of 3.500, and with highest distinction a student who has a grade point average of 3.800. Such recognition shall be limited to students who have earned sixty hours or more at George Mason University. (This distinction shall appear on the graduation program and on the student's transcript.) Students entering before September 1972 should refer to previous catalogs in regard to graduation with distinction.
CHAPTER IV.

Academic Programs

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Chapter IV.

Academic Programs

Various academic programs are available to students at George Mason University. Courses of study in the College of Arts and Sciences leading to the Bachelor of Arts degree are available with majors in 19 areas: American studies, art, biology, chemistry, economics, English, European studies, French, German, government and politics, history, Latin American studies, mathematics, music, philosophy, physics, psychology, Spanish, and sociology. Courses of study in the College of Arts and Sciences leading to the Bachelor of Science degree are available in biology, chemistry, economics, law enforcement, mathematics, physics, public administration and social welfare. At the same time while completing the requirements for a baccalaureate degree within the College of Arts and Sciences, interested students have the option of obtaining teaching certification at the secondary level. The college offers a two-year engineering program designed to meet most of the basic requirements of the first two years of the standard engineering curriculum.

Majors and degrees possible in the College of Professional Studies are: Bachelor of Science in Business Administration (B.S.) and Bachelor of Science in Education (B.S. in Ed.) with majors in early childhood education, elementary education, and health and physical education.

For information regarding declaration of a major, see Academic Regulations, Chapter III.

In consultation with a faculty adviser, each student should plan an academic program to meet the general degree requirements stated below and the specific requirements within a major field. The role of the faculty adviser is to help a student in the planning of an academic program. It must be emphasized, however, that the responsibility for reading the catalog and knowing the requirements of a specific baccalaureate degree rests with the student.

An undergraduate student with the permission of his adviser, the chairman of the department offering the courses, the course instructor, and the Dean of the Graduate School may be permitted to enroll in graduate course work for grade and if successful, apply the credit gained
toward an undergraduate degree. The student should consult with the chairman of the department for identification of graduate course work which can be taken for undergraduate credit.

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 to the courses in minority studies listed below, George Mason 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 religious thought include the contributions of American minorities to the total field. Academic departments seek textbooks which adequately represent the aspirations and contributions of American minorities. The university welcomes students from all minority groups. The following separate courses in minority culture are offered at this time:

Religion 238: Black Religion (3)
Sociology 308: Sociology of Race Relations and Minorities (3)
English 386: Literature of Black America (3)
*History 510: Race in American Life and Thought (3)

Requirements

Residence Requirements—At least one-fourth of the total semester-hours presented on the degree application must be completed at George Mason University; these shall include at least 12 semester-hours of advanced-level courses in the major program. Moreover, except with special permission of the dean of the appropriate college, the student’s final one-fourth of his college study must be completed at George Mason University.

Academic Achievement—To qualify for a baccalaureate degree a student must be in good standing and must have satisfied all relevant requirements. In addition, the student must have maintained a 2.000 (C) average in his major, an average grade of 2.000 (C) on all courses presented for the degree, and a cumulative grade point average of 2.000 (C) on all work attempted at George Mason University.

A Graduation Appeals Committee in each college considers appeals in writing from students who may be two quality grade points and/or one semester-hour short of meeting degree requirements, considers

*May be taken by undergraduates with permission of instructor.
written appeals from students who have lost credit in transferring from a quarter-system, and considers written appeals from students who have failed to meet certain area requirements.

**Catalog Requirements for Graduation**—A candidate for a degree may elect to graduate under the provisions of the catalog under which he entered or may elect to graduate under the provisions of a catalog subsequent to his entry if the student has been enrolled in a continuous progression from date of entry 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 under which he entered or the requirements in effect at the time the student shall be graduated.

**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.

**Application for Degree**

Students who expect to complete graduation degree requirements in 1974-75 must secure an Application for Degree Form from the Registrar's office, complete, and return it to the Office of the Registrar by the date designated on the university Calendar. There is a $5.00 diploma fee which is payable at the time the student submits the Application for Degree. A new $5.00 fee is required each time a new application for graduation is submitted.

Any student not in attendance at George Mason University who is preparing a dissertation 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 $15.00 registration fee for that semester and is exempt from all other fees.

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

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.

http://catalog.gmu.edu
Evening Session

George Mason University offers an extensive number of courses and some degree programs of the College of Arts and Sciences and of the College of Professional Studies through an Evening Session for the convenience of adult part-time students. Majors now available in the evening include business administration, English, history and psychology. The Evening Session is administered by the Office of Extended Studies which maintains evening office hours on both campuses to serve the needs of evening students. Information on the Evening Session is presented in separate publications which are available in November and April.

Graduate School

George Mason University offers a number of master’s degree programs through the Graduate School. Information concerning these graduate programs is presented in a separate Graduate School catalog which may be obtained from the Graduate Admissions Office. Graduate programs currently available at George Mason University are biology, business administration, economics, elementary education, English, guidance and counseling, history, mathematics, psychology, reading, school administration, school supervision, and secondary education. A graduate program in Spanish is planned for Fall 1974.

Summer Session

Information concerning the George Mason University Summer Session is presented in a separate catalog which is available in February from the Office of Admissions.

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 Northern Virginia Community College, University of Virginia, and Virginia Polytechnic Institute and State University. The consortium concept is designed to permit acceptance of credit between member institutions. Specific information is available in “The Consortium Guide to College and University Courses for Adults” distributed three times a year by the Office of the Consortium Administrator, 4210 Roberts Road, Fairfax, Virginia 22030.
CHAPTER V.

Degree Requirements
and Courses of Instruction

College of Arts and Sciences
College of Professional Studies

http://catalog.gmu.edu
Introduction

A schedule of classes will be available before registration for each semester. The number and variety of courses will be 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.

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.

The number designations of the course descriptions below have the following significance:

A single number (as History 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.

A double number separated by a hyphen (as Biology 497-498) 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. A student may not take the second semester of a hyphenated course unless he has received either transfer credit for the equivalent of the first semester or advanced placement from the department concerned.

A double number separated by a comma indicates that the subject matter or content of the course extends through two semesters but that either semester may be taken by itself. Unless otherwise specified, the first semester is not prerequisite to the second semester.

In general, an odd number (as Biology 103) indicates that the course is given in the first semester of the session; an even number (Biology 104) indicates that the course is given in the second semester.

The credit in semester-hours is shown in brackets in each course description [3].

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.
BACHELOR OF ARTS/53

College of Arts and Sciences

Degree Requirements

Bachelor of Arts

<table>
<thead>
<tr>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-30</td>
</tr>
</tbody>
</table>

I. Arts and Literature ........................................ 12-30
   a. English Composition (6)
   b. Literature (6)
      This requirement is met by taking two of the one-semester courses of literature offered at the 200-level carrying the "English" designation.
   c. Art, Music, Philosophy, Religion (6)
      Music 113, 114, 115, 116, 171, 172, 215, 216, 218, 277, 278, 495, University Chorus, Concert Band, Chamber Orchestra, Collegium Musicum, Private Music Instruction, and art studio courses may not be used to meet this requirement.
   d. Foreign languages (0-12)
      The student must demonstrate proficiency in one foreign language through the intermediate level, either by examination or by completion of course work.

II. Social and Behavioral Sciences .................................. 12
   Disciplines included are grouped as follows:
      Group A: anthropology, psychology, sociology
      Group B: economics, geography*, government, history
   Six semester-hours are required from each group.

III. Mathematics and Natural Sciences .......................... 11
    Mathematics, geology, physics, astronomy, biology, chemistry.
    Eight of the required semester-hours must be in a two-semester sequence requiring laboratory work. The remaining three semester-hours may be met by the completion of a course in another science or in mathematics.

IV. Non-Western Culture ........................................... 6
    Six credits must be earned in courses devoted to non-Western culture. This requirement is waived for a student who has attended for more than four years an indigenous school in a non-

*Geography 101, 103, 301, 302
western country. For the present the following courses are designated as meeting this requirement:

a. Anthropology 102: Social Anthropology
b. Art 321 or 322: History of Ancient Art
c. English 393: Selections from the Literatures of the Indian Continent
   English 394: Japanese Literature in Translation
   English 395: Chinese Literature in Translation
d. Russian 151-152: Elementary Russian
   Russian 251: Intermediate Russian
   Russian 252: Russian Conversation and Composition
   Russian 253: Russian Civilization
   Russian 254: Readings in Russian Literature
e. History 241, 242: A Survey of East Asian Civilization
   History 261, 262: Survey of African Civilization
   History 281, 282: Survey of Middle Eastern Civilization
   History 328: Rise of Russia
   History 329: Modern Russia and The Soviet Union
   History 361: Latin-American History: The Colonial Era
   History 463: The Early History of the Indo-Pakistan Subcontinent (3)
   History 464: Modern India and Pakistan
   History 471: Modern China
   History 473: Modern Japan
f. Music 203: Folk and Traditional Music of the World
   Music 231: Survey of World Music Literature
   Music 335: Historical, Theoretical, and Analytical Study of Music I
g. Religion 211: Religions of the Near East
   Religion 212: Religions of the Orient
   Religion 334: Religion in the Theatre of Asia
   The courses meeting this requirement may also be presented in partial fulfillment of requirements stated in Sections I and II.

V. Major .................................................................................................................30-42

See appropriate departmental sections of the catalog for required credits. At least twelve hours of work in the major field at the 300 and 400 level must be completed at George Mason University.

VI. Total minimum semester-hours .........................................................120
Bachelor of Science

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

II. At least 12 semester-hours of course work outside the area of specialization as follows:

(a) If the degree is in the behavioral sciences, 12 hours outside those fields.
(b) If the degree is in the natural sciences or mathematics, 12 hours outside those fields.
(c) If the degree is in the social sciences, 12 hours outside those fields.

III. At least 12 semester-hours of English.

IV. Total minimum semester-hours, 120.

Certification for Secondary School Teaching

Students who wish to become secondary school teachers should consult with the Department of Education for a list of recommended courses in the major area.
George Mason University offers a two-year engineering program designed to meet most of the basic requirements of the first two years of the standard engineering curriculum. A student completing this course of study may expect to complete the Bachelor of Science degree in any of the specialized areas offered at the University of Virginia or other schools of engineering. Although the engineering programs at the University of Virginia are formally designed for completion in four years, it is not unusual for a resident student there to spend five years completing the degree.

All entering freshmen in engineering are required to take a proficiency examination in elementary algebra and trigonometry. The test will be given on the following designated dates, before the beginning of the summer, fall, and spring semesters: Saturday, May 18, 1974; Thursday, August 22, 1974, and Thursday, January 9, 1975.

Any student who fails the examination will be required either to take Mathematics 101 or to retake and pass the examination in August prior to fall registration.

Sample Schedule for the Engineering Program

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 113</td>
<td>Physics 114</td>
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<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Math 113</td>
<td>Math 114</td>
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<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Chem 111</td>
<td>Chem 112</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Engl 101</td>
<td>Engl 102</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Engr 191</td>
<td>Engr 104</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td><strong>16</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 213</td>
<td>Physics 214</td>
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<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physics 215</td>
<td>Physics 216</td>
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<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Math 213</td>
<td>Math 214</td>
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<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Engr 207</td>
<td>Engr 302</td>
</tr>
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<td>3</td>
<td>4</td>
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<tr>
<td>Engr 285</td>
<td>Engr 206 or 208</td>
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<td>3</td>
<td>3</td>
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<td>Engr 205</td>
<td></td>
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<tr>
<td>3</td>
<td><strong>15</strong></td>
</tr>
<tr>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>
Department of Biology

Professor Emsley (Chairman)
Associate Professors Ernst, Stanley, Wall
Assistant Professors Andrykovitch, Bradley, Crawford, Dorigan, Hinton, Joslin, Joyce, Kelso, Metzler (Deceased); Nix, Pike, Prince, Rubinstein, Shaffer, Sinclair, Skog, Wilson
Lecturers Audilet, Dean, Kasschau, McCoy, Sasscer, Sweitzer, Wolfe

Requirements for the Major

**B.S. and B.A. Degree**—All biology majors must demonstrate proficiency in elementary mathematics by either passing Mathematics 101: Algebra and Elementary Functions or passing the mathematics department proficiency test for that course.

**B.A. Degree**—In addition to the general requirements, a minimum of thirty-two semester-hours in biology is required for the B.A. degree with a major in biology. The courses selected must include the core consisting of 113, 114: Biological Science; 283: Cell Biology, 311: General Genetics; and 445: Ecology. Biology credit may be gained in biochemistry. General chemistry is required and organic chemistry, physical chemistry and introductory college physics and calculus are recommended.

**B.S. Degree**—In addition to the general requirements, a B.S. degree with a major in biology requires a minimum of 44 semester-hours in biology. The same core courses, taken in their respective years, are required as for the B.A. degree, but organic chemistry is required in addition to general chemistry. Biology credit may be gained in biochemistry. Physical chemistry, introductory college physics, and calculus are recommended.

Students planning to enter medical, dental or veterinary schools may choose to major in biology. Those desiring medical careers may satisfy the entrance requirements with a B.A. degree but those in pre-dentistry or preveterinary medicine are advised to seek B.S. degrees. In any case they should complete organic chemistry, a year of analytical geometry and calculus and Physics 101-102. Some schools prefer students with more extensive backgrounds in biological or physical sciences, 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 contact schools of choice sometime before application for admission. The State of Virginia provides veterinary medicine educations for its residents through arrangements with the University of Georgia and Ohio State University. Information on this program is available from Dr. D. F. Watson, Department of Veterinary Science, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061.

http://catalog.gmu.edu
**Sample Schedule for Bachelor of Arts with Major in Biology**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English—(Ia)*</td>
<td>English—(Ia)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language—(Id)</td>
<td>Foreign Language—(Id)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry—111 (III)</td>
<td>Chemistry—112 (III)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Biology—113 (III)</td>
<td>Biology—114 (III)</td>
</tr>
<tr>
<td>4</td>
<td></td>
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<tr>
<td></td>
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<td>15</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English—(Ib)</td>
<td>English—(Ib)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Biology 283 or Biology elective</td>
<td>Biology elective</td>
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<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Elective—(IIA)</td>
<td>Elective—(IIA)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Foreign Language—(Id)</td>
<td>Biology elective</td>
</tr>
<tr>
<td>4</td>
<td></td>
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<td></td>
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<td>14</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>Biology 311 or 445</td>
<td>Biology 445 or 311</td>
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<tr>
<td>4</td>
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<tr>
<td>Elective (IIB)</td>
<td>Elective (IIB)</td>
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<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective (Ic)</td>
<td>Elective (Ic)</td>
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<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Biology elective</td>
<td>Elective</td>
</tr>
<tr>
<td>(300 or 400 level)</td>
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<tr>
<td>4</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>14</td>
<td>16</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>Elective (IV?)</td>
<td>Elective (IV?)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3-4</td>
<td>3-4</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3-4</td>
<td>3-4</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td></td>
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</tr>
<tr>
<td>15-17</td>
<td>15-17</td>
</tr>
</tbody>
</table>

*Coding in parentheses refers to degree requirements.*

http://catalog.gmu.edu
Sample Schedule for Bachelor of Science
with Major in Biology*

<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>Biology 113</td>
<td>Biology 114</td>
</tr>
<tr>
<td>Chemistry 111</td>
<td>Chemistry 112</td>
</tr>
<tr>
<td>Non-sci elective¹</td>
<td>Non-sci elective¹</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Lit</td>
<td>English Lit</td>
</tr>
<tr>
<td>Biology 283 or</td>
<td>Biology elective or</td>
</tr>
<tr>
<td>Bio elective</td>
<td>Bio 283</td>
</tr>
<tr>
<td>Chem 213—Lab I</td>
<td>Chemistry 214—Lab II</td>
</tr>
<tr>
<td>Non-sci elective¹</td>
<td>Biology elective</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
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<tr>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 311 or 445</td>
<td>Biology 445 or 311</td>
</tr>
<tr>
<td>Biology elective⁵</td>
<td>Biology elective</td>
</tr>
<tr>
<td>Elective³</td>
<td>Elective³</td>
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<tr>
<td>Elective²</td>
<td>Elective²</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
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<tr>
<td><strong>15-16</strong></td>
<td><strong>14-16</strong></td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>Biology elective</td>
<td>Biology elective</td>
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<td>Biology elective</td>
<td>Biology elective</td>
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<td>Elective</td>
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<td>Elective</td>
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<tr>
<td>Elective⁴</td>
<td>Elective</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>15-16</strong></td>
<td><strong>16-17</strong></td>
</tr>
</tbody>
</table>

Superscripts 1-5:

For students intending to pursue graduate study in Biology
the following are recommended.
1 Foreign Language (German, Russian, or French)
2 Physics 101-102
3 Mathematics 113-114
4 Mathematics 266
5 Biostatistics

*See Introduction to Chapter V.
Biology Courses

Natural Science Requirements—Students not majoring in science or mathematics should fulfill the natural science requirement with the two-semester laboratory sequence 103, 104. If a student has passed 103, or 103 and 104, and subsequently decides to become a biology major the student should consult the chairman of the Department of Biology. If it is deemed necessary for the student to complete the sequence 113, 114, which would normally be the case, then only two semester-hours of credit for each of the completed courses 103, 104 will be permitted to be offered towards the baccalaureate degree; however, these hours may be applied toward the major.

103: MAN AND HIS ENVIRONMENT. [4]
Biology for non-science majors. The course emphasizes biological problems facing modern man. Topics include theories of the origin of earth and life, ecological principles and their application, biotic communities, principles of human anatomy and physiology, the mechanisms of inheritance and evolution, and the evolution of man. Three lecture hours, three laboratory hours. This course may not be combined with 113 or 114 for the fulfillment of the science requirement. Students who have taken Biology 101-120: General Biology or Biology 113-114: Biological Science are not eligible to take this course.

Prerequisite: Biology 103. The sequential semester to Biology 103. Three lecture hours, three laboratory hours. This course may only be combined with Biology 113 for the fulfillment of the science requirement with the written permission of the Chairman of the Department of Biology.

113: BIOLOGICAL SCIENCE. [4]
An introductory course for prospective science majors and pre-professionals in the life sciences. The study of living organisms, their structure, function, metabolism, growth, reproduction, heredity, inter-relations, evolution and diversity, and of ecological principles. Three lecture hours, three laboratory hours. Students who have taken Biology 101-102: General Biology are not eligible to take this course. Students who have previously passed 103, or 103 and 104, should read the section titled Natural Science Requirement above.

114: BIOLOGICAL SCIENCE [Continued]. [4]
Prerequisite: Biology 113. The sequential semester to Biology 113. Three lecture hours, three laboratory hours.

140: PLANTS AND MAN. [4]
An introduction to the relationships between cultivated plants and man. The uses of various plants by man and the role of plants in the history and culture of man, as well as man's impact on the vegetable world, particularly as it relates to present agricultural practices. The laboratory is devoted to familiarization with interesting economic plants and practice in horticulture and gardening. Three lecture hours, three laboratory hours. Not available for credit toward the major in biology.

220: COMPARATIVE CHORDATE ANATOMY. [4]
Prerequisite: Biology 113, 114 or permission of instructor. A comparison of the anatomy and morphology of the major chordate groups. The laboratory will emphasize shark, Necturus, and cat. Two lecture hours, six laboratory hours.
221: VERTEBRATE ZOOLOGY. [4]
Prerequisite: 8 semester-hours of credit in 100 level biology or permission of instructor. The phylogeny and systematics of the major vertebrate groups. Some emphasis will be given to ecological adaptation. The laboratory will include field studies of local fauna. Two lecture hours, six laboratory hours.

224: HUMAN ANATOMY AND PHYSIOLOGY. [4]
Prerequisites: Biology 113, 114 or permission of instructor. The microscopic and gross structure, and integrated function of the major organ systems of the human body. Three lecture hours, three laboratory hours. This course is intended for students in nursing and paramedical programs. Not available for credit toward major in biology.

243: ALGAE AND FUNGI. [4]
Prerequisite: Biology 113, 114 or permission of instructor. An introduction to the biology of the algae and fungi with emphasis on their morphology and life-histories. Also included are physiology, taxonomy, ecology, evolution and importance to man. Three lecture hours, three laboratory hours.

245: PLANT COMMUNITIES. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology or permission of instructor. Plant associations and formations and their successions in North America. Three lecture hours, three laboratory hours.

271: ANIMAL DISTRIBUTIONS. [3]
Prerequisites: Eight semester-hours of credit in 100 level biology or permission of instructor. Relations of the North and South American faunas with other regions in the light of continental drift. Emphasis on vertebrates. Three lecture hours.

281: MICROBIOLOGY. [4]
Prerequisites: Biology 113, 114, and 283, or permission of instructor. Fundamentals of the morphology, physiology, and biochemical characteristics of bacteria, rickettsia, and viruses. Three lecture hours, three laboratory hours.

283: CELL BIOLOGY. [4]
Prerequisites: Biology 113, 114, Chemistry 111, or permission of instructor. The study of cellular structure and function including cellular fine structure, metabolism, growth, active transport, and cellular regulation. Three lecture hours, three laboratory hours.

Prerequisite: Biology 113, 114 or permission of instructor. An introduction to the bacteria, yeasts, molds, viruses, rickettsias and endoparasites with emphasis on organisms important in human health and disease. A discussion of immunity and serologic procedures. The laboratory includes sterile technique and culture methods. Intended for students in nursing and other paramedical programs. Three lecture hours, three laboratory hours. Not available for credit towards the major in biology.

311: GENERAL GENETICS. [4]
Prerequisites: Biology 113, 114, 283, and junior standing, or permission of instructor. A study of the basic principles of heredity and the modern developments in the field. Three lecture hours, three laboratory hours.

312: BIOSTATISTICS. [4]
Prerequisite: Biology 113, 114 and the permission of the instructor. Applied statistical analysis of biological data, including experimental designs, descriptive statistics, parametric and related nonparametric inferential statistics, and correlation-regression techniques. Three lecture hours, three laboratory hours.
322: PATTERNS OF ANIMAL DEVELOPMENT. [4]
Prerequisite: Biology 113, 114, and 283, or permission of instructor. The early development and organogenesis of animals with a discussion of the phenomena of fertilization, induction, growth, metamorphosis, regeneration, and differentiation. The laboratory presents the development patterns of major groups of animals with emphasis on the echinoderm, insect, frog, chicken, and pig. An introduction to some techniques of experimental embryology is included. Two lecture hours, six laboratory hours.

324: INTRODUCTORY ANIMAL BEHAVIOR. [4]
Prerequisite: Biology 113, 114 or permission of instructor. A study of the behavior of animals under natural, semi-natural, and laboratory conditions. Emphasizes function, development, and evolution of behavior. Field investigations and laboratory projects will be conducted. Three lecture hours, three laboratory hours.

331: INVERTEBRATE ZOOLOGY. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology or permission of instructor. Survey of the invertebrate phyla, excluding insects, to show the morphology, phylogeny, and general biology of these groups. Three lecture hours, three laboratory hours.

332: INSECT BIOLOGY. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology or permission of instructor. A survey of the insects including taxonomy, morphology, physiology, behavior, ecology, and economic importance. Three lecture hours, three laboratory hours.

342: PLANT MORPHOLOGY. [4]
Prerequisite: Biology 113, 114 or permission of instructor. Origin and development of organs and tissue systems of plants, with phylogenetic comparisons beginning with mosses and liverworts and continuing with vascular plants. Three lecture hours, three laboratory hours.

344: TAXONOMY OF FLOWERING PLANTS. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology or permission of instructor. A study of the principles of classification and identification of flowering plants (Anthophyta) with emphasis on the local flora. Three lecture hours, three laboratory hours.

362: VERTEBRATE PHYSIOLOGY. [4]
Prerequisite: Biology 113, 114, 283, Chemistry 112, or permission of instructor. A general survey of the functions of the organ systems of vertebrates. Fundamental experiments in the physico-chemical phenomena of nerve and muscle, blood and circulation, respiration, digestion, electrolyte balance, and excretion. Three lecture hours, three laboratory hours.

381: IMMUNOLOGY. [4]
Prerequisite: Biology 113, 114, 283, or permission of the instructor. Introduction to the principles and concepts of immunology. Characteristics of antigens, antibodies, immunological reactions, hypersensitivity, and immune response. Three lecture hours, three laboratory hours.

412: MICROBIAL GENETICS. [4]
Prerequisites: Biology 113, 114, and 281, or permission of instructor. An introduction to the genetic principles and methodology applicable to microorganisms. The chemical nature, fine structure, and function of the gene as revealed by the study of microorganisms. Three lecture hours, three laboratory hours.
413: SELECTED TOPICS IN GENETICS. [3]
Prerequisite: Biology 311 or equivalent or permission of instructor. Different topics in different years. Among topics to be considered are molecular, developmental, physiological and classical genetics with emphasis on current problems and research. Three lecture hours.

441: PLANT ANATOMY. [4]
Prerequisite: 113, 114 or permission of instructor. A detailed study of plant cells and tissues, their derivation and development. Embryological development is included. Three lecture hours, three laboratory hours.

Prerequisites: 113, 114, 283 and one other course in biology and junior standing, or permission of instructor. The physical environment, energy flow, populations as units of structure and function, the dynamics of communities and succession. The laboratory work will include a study of some ecosystems in the Northern Virginia area. Three lecture hours, three laboratory hours.

446: PHYSIOLOGICAL VERTEBRATE ECOLOGY. [3]
Prerequisite: Biology 113, 114 or permission of instructor. The influences of environmental factors on the physiological responses of organisms. Topics to be examined will include biological rhythms, changes in physiology during acclimation or adaptation to new environments, and the effects of temperature, moisture, altitude and environmental quality upon organisms. Three lecture hours.

447: MICROBIAL ECOLOGY. [4]
Prerequisites: Biology 113, 114, 283, 281 or permission of instructor. An introduction, in detail, to the principles and methods of microbial ecology. A study of the relationships between microorganisms and their natural environment, and the methodology for observing their biochemical activities in those environments. Three lecture hours, three laboratory hours.

448: SYMBIOLOGY. [4]
Prerequisite: Biology 113, 114 and 331, or permission of instructor. An introduction to concepts of symbiology and evolution of these relationships from structural, physiological, and behavioral standpoints. Three lecture hours, three laboratory hours.

462: ADVANCED CELLULAR PHYSIOLOGY. [4]
Prerequisites: Biology 113, 114, 283, 8 semester-hours of inorganic chemistry and 4 semester-hours of organic chemistry, or permission of instructor. A study of the fundamental physiological properties and correlated anatomy of cells. Three lecture hours, three laboratory hours.

464: PLANT PHYSIOLOGY. [4]
Prerequisites: Biology 113, 114, 283, or permission of instructor. The physiology of plant cells and plant organ systems covering such topics as structure and function of cell organelles, photosynthesis, mineral and water nutrition, plant development and its regulation, and tropic responses to environmental stimuli. Three lecture hours, three laboratory hours.

Prerequisite: Biology 113, 114 or permission of instructor. A study of the microscopic structure of the tissues and organs of animals with emphasis on the vertebrates. Three lecture hours, three laboratory hours.
471: EVOLUTION. [3]
Prerequisites: Biology 113, 114, and Biology 311, or permission of instructor. A study of the process of evolution with emphasis on the role of genetics, the properties of populations, and upon population differentiations. Three lecture hours.

473: FIELD STUDIES IN BIOLOGY. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology or permission of instructor. A course for the biology teacher, or the natural historian, on the identification and biology of plants and animals in the Northern Virginia area. Two lecture hours, six laboratory hours. Not available for credit toward the major in Biology.

481: SELECTED TOPICS IN VERTEBRATE ZOOLOGY. [4]
Prerequisite: Eight semester-hours of credit in 100 level biology. Emphasis in any one semester will be one or more present day or extinct taxa. The groups emphasized will vary from semester to semester. Two lecture hours, six laboratory hours.

490: TROPICAL FIELD STUDIES. [3]
Prerequisite: biology major with senior standing and permission of instructor. A biological survey of a tropical environment. Total class time: 15 lecture hours, 90 laboratory hours.

497-498: SPECIAL PROBLEMS IN BIOLOGY. [2-2]
Prerequisite: Enrollment is restricted to senior majors in biology with permission of the instructor. A laboratory or field investigation under the guidance of a member of the faculty.
Department of Chemistry

Professors Walter (Chairman), Krug
Associate Professors Cozzens, Feinstein, Mushrush
Assistant Professors Berry, Greer, Keeler, Stalick, Yonuschot
Instructor Eassa
Lecturer Ali

Requirements for the Major

**B.A. Degree**—In addition to general degree requirements, a minimum of 32 semester-hours in chemistry is required for a B.A. degree with a major in chemistry. These must include Chemistry 111-112, 213-214, 215, 218, 220, 321, 332, 336, and 337. Additional minimum requirements include Mathematics 113, 114, 213 and Physics 101-102.

**Sample Schedule for B.A. in Chemistry**

<table>
<thead>
<tr>
<th>First Semester</th>
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*See Introduction to Chapter V.
### Seventh Semester

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### Eighth Semester

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**B.S. in Chemistry**—Minimum course requirements are:

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<tr>
<td>Mathematics</td>
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<tr>
<td>Physics</td>
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<tr>
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Required courses in chemistry must include those indicated for the B.A. degree plus Chemistry 422, 441, and 445.

### Sample Schedule for B.S. in Chemistry*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<td>Math 114</td>
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<td>Physics 113</td>
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<td>English 101</td>
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<td>Math 213</td>
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<td>Elective</td>
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<td>Chemistry 222</td>
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<tr>
<td>Total</td>
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</table>

*See Introduction to Chapter V.

http://catalog.gmu.edu
Chemistry Courses

103-104: CHEMICAL SCIENCE IN A MODERN SOCIETY. [4-4]

A terminal course in chemistry for non-science majors. A survey of the principles and application of chemistry with emphasis on pertinent topics such as environmental pollution, medicine, synthetics, earth and marine science. Three lecture hours, three laboratory hours.

105: MAN'S CHEMICAL WORLD. [3]

A study of the chemical nature of the world in which we live. Emphasis will be given to the nature and importance of the chemical pollutants of our environment, the chemistry of the natural world (geochemistry, atmospheric chemistry, etc.) as well as industrial and agricultural chemistry.

111-112: 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 and uses of the more important elements and their compounds. Students majoring in science, engineering, or mathematics, should choose this course. Three lecture hours, three laboratory hours.

213-214: ORGANIC CHEMISTRY. [3-3]

Prerequisite: Chemistry 111-112; corequisite for 213: Chemistry 215. Corequisite for 214: Chemistry 218 or 220. 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, Chemistry 215. In the second semester students may choose either of two accompanying laboratory courses, Chemistry 218 or 220. Those majoring in chemistry are required to take both, and others may do so. Three lecture hours.

215: ORGANIC CHEMISTRY LABORATORY I. [1]

Corequisite: Chemistry 213. Elementary laboratory techniques and reactions arranged to accompany Chemistry 213. Three laboratory hours.
218: ORGANIC CHEMISTRY LABORATORY II. [1]
Corequisite: Chemistry 214. Continuation of Chemistry 215 with emphasis on specialized techniques and preparations. This course is arranged to accompany Chemistry 214. Three laboratory hours.

220: ORGANIC CHEMISTRY LABORATORY II. [1]
Corequisite: Chemistry 214. Continuation of Chemistry 215 with emphasis on separation and identification of organic compounds using both classical and instrumental methods. This course is arranged to accompany Chemistry 214. Three laboratory hours.

222: CHEMICAL EQUILIBRIUM. [2]
Prerequisite: Chemistry 111-112. Study of equilibrium in ionic and biochemical solutions and of related homogeneous and heterogeneous separations. Topics will include polyfunctional acids and bases, complex ion formation, chromatography, and ion exchange.

321: ELEMENTARY QUANTITATIVE ANALYSIS. [4]
Prerequisite: Chemistry 111-112. Chemical principles with particular emphasis on ionic equilibria. The laboratory work consists of gravimetric, volumetric and instrumental methods illustrating the principal types of quantitative determinations. Where possible, work is assigned according to a student's major interest. Two lecture hours. Six laboratory hours.

331: PHYSICAL CHEMISTRY I. [3]
Prerequisite: Chemistry 111-112, Mathematics 113, 114. Prerequisite or corequisite: Physics 101-102. This course and Chemistry 332 constitute a year-long survey of physical chemistry covering topics such as thermodynamics, equilibria, kinetics, solution properties, elementary quantum theory, electrochemistry, atomic and molecular structure, and nuclear chemistry. Three lecture hours.

332: PHYSICAL CHEMISTRY II. [3]
Prerequisite: Chemistry 331. Continuation of Chemistry 331. Three lecture hours.

335: PHYSICAL CHEMISTRY FOR THE LIFE SCIENCES. [3]
Prerequisite: Chemistry 111-112. This course will deal with the classical topics of physical chemistry with an emphasis on their application to biology and the health sciences. Rigorous mathematical approaches to the theory of physio-chemical processes will be avoided. Emphasis will be made on applications and interpretation of results. Topics covered will 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 will be used. Not open to students who have passed Chemistry 331. Credit is not allowed towards a major in chemistry.

336: PHYSICAL CHEMISTRY LABORATORY I. [1]
Prerequisite or corequisite: Chemistry 331. Quantitative experimental study of physical chemical principles. This course and Chemistry 337 constitute a year-long introduction to laboratory practices and theories of experimental physical chemistry. Three laboratory hours.

337: PHYSICAL CHEMISTRY LABORATORY II. [1]
Prerequisite or corequisite: Chemistry 331. Continuation of Chemistry 336. Three laboratory hours.
413: SPECIAL TOPICS IN ORGANIC CHEMISTRY. [3]
Prerequisite: Chemistry 213-214. 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, will be examined.

422: INSTRUMENTAL ANALYSIS. [4]
Prerequisite: Chemistry 321; prerequisite or corequisite: Chemistry 331 or permission of instructor. A study of the application of physiochemical methods to analytical chemistry, i.e., the quantitative 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 absorption spectroscopy; electrical methods of analysis; gas chromatography; nonaqueous studies; and ion exchange. Two lecture hours, six laboratory hours.

432: ATOMIC AND MOLECULAR STRUCTURE. [3]
Prerequisite: Chemistry 321, 332. An introduction to modern theories of the nature of the 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: INORGANIC CHEMISTRY. [3]
Prerequisite: Chemistry 213-214. 321. Descriptive chemistry of inorganic elements and compounds is used to demonstrate principles and periodic relationships. Emphasis is on structure and bonding as related to properties. Three lecture hours.

445: INORGANIC PREPARATIONS AND TECHNIQUES. [3]
Prerequisite: Chemistry 321. Application of the techniques of inorganic chemistry to the preparation and purification of selected substances. One lecture hour, six laboratory hours.

451, 452: SPECIAL PROJECTS IN CHEMISTRY. [2, 2]
Prerequisite: Senior standing in chemistry and permission of the departmental research committee. An introduction to chemical research or development. Will include literature search, conferences, and laboratory. Written and oral technical reports are required. Six hours weekly.

461, 462: BIOCHEMISTRY. [3, 3]
Prerequisite: Chemistry 213-214. Chemistry 461 is a prerequisite for Chemistry 462. Chemistry of biologically important compounds, viz. proteins, carbohydrates, lipids, and nucleic acids, and their interrelations.
Requirements for the Major

**B.A. Program**—Students majoring in economics must satisfy the area requirements set for the Bachelor of Arts degree at George Mason University. In addition they must present thirty-three hours of work in economics, to include Economics 306 and 311. Six hours of statistics must be completed in addition to the thirty-three hours of economics mentioned above.

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

**B.S. Program**—In addition to the general degree requirements, the B.S. with a major in economics requires 39 hours of credit in economics to include Economics 306, 311 and 345. In addition to the 39 hours of credit in economics, students must also complete Business Administration 101 and 261-262; Mathematics 113, 114, and 261 or 266; 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 Mathematics 114.

Economics Courses

**103: CONTEMPORARY ECONOMIC PRINCIPLES AND ISSUES I.** [3]

An introduction to microeconomics in the context of current problems. The course explores how the market mechanism allocates scarce resources among competing uses. It utilizes the basic tools of supply and demand, and production and distribution theory, to analyze problems as diverse as public education, environmental quality, poverty and discrimination, the negative income tax, energy, price controls, and illegal activities. **May not be taken for credit by students who have passed Economics 102.**

**104: CONTEMPORARY ECONOMIC PRINCIPLES AND ISSUES II.** [3]

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. **May not be taken for credit by students who have passed Economics 101.**
Sample Program, B.A. in Economics*

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<td>Foreign Language</td>
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<td>Science</td>
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*See Introduction to Chapter V.
### Sample Program, B.S. with a Major in Economics*

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* See Introduction to Chapter V.
150: THE URBAN ECONOMY. [3]
A study of metropolitan economic activity. A problems oriented course, designed to develop a general understanding of the nature and applicability of economic analysis. Topics to be covered will 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: Economics 103, 104. An examination of basic factors of price and distribution theory, including analysis of demand, costs of production, and supply relationships, and price and output determination under various market structures. May not be taken for credit by students who have passed Economics 202.

309: ECONOMIC PROBLEMS AND PUBLIC POLICIES. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. A detailed study of important economic problems in light of current and proposed public policies. May not be taken for credit by students who passed Economics 406.

310: MONEY AND BANKING. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. An examination of monetary and of commercial and central banking systems in the economic system with particular emphasis upon their relationship with American governmental programs, fiscal policies, and controls. May not be taken for credit by students who have passed Economics 301.

311: INTERMEDIATE MACROECONOMICS. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. The study of aggregate economic accounts, including the measurement of national income, determinants of levels of income and output, and causes and solutions for problems of unemployment, inflation, and economic growth. May not be taken for credit by students who have passed Economics 201.

316: ECONOMIC GROWTH AND BUSINESS CYCLES. [3]
Prerequisite: Economics 310 or 311 or permission of instructor. An examination of the factors contributing to sustained economic growth with additional emphasis on business fluctuations and their measurement. May not be taken for credit by students who have passed Economics 303.

320: LABOR PROBLEMS. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. A study of the operation of American labor unions and of their effect upon our society. Causes of and proposed solutions to selected problems will be considered. May not be taken for credit by students who have passed Economics 300.

321: ECONOMICS OF LABOR. [3]
Prerequisite: Economics 306. A course analyzing economic factors that determine levels of wages and employment and their economic consequences. Attention is directed to recent developments in unionism, collective bargaining, and industrial technology. May not be taken for credit by students who have passed Economics 420.

330: PUBLIC FINANCE. [3]
Prerequisite: Economics 306 and 310 or 311, or permission of instructor. An examination of intergovernmental financial relationships, types, incidences and consequences of taxation, other sources of governmental income, governmental expenditures and their effects, public economic enterprises, public
borrowing, debt management and its economic effects. May not be taken for credit by students who have passed Economics 302.

340: INTRODUCTION TO MATHEMATICAL ECONOMICS. [3]
Prerequisite: Economics 306 and 311, and Mathematics 113 and 114, or permission of instructor. Among the topics to be covered are mathematical treatment of the theory of firm and household behavior, stabilization policy, growth theory, input-output analysis, and linear programming.

345: INTRODUCTION TO ECONOMETRICS. [3]
Prerequisite: Economics 306 and 311, and Business Administration 261 and 262. An examination of modern statistical techniques in estimating economic relations. May not be taken for credit by students who have passed Economics 412.

350: REGIONAL ECONOMICS. [3]
Prerequisite: Economics 306 or permission of instructor. Discusses the economics of urban structure, regional development, industrial location, land utilization, and other locational factors affecting spatial preferences and patterns. May not be taken for credit by students who have passed Economics 305.

360: ECONOMICS OF DEVELOPING AREAS. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. An analysis of major aspects of economic growth characteristic of developing countries. Recent theories of economic development; obstacles to development; policies and planning for development. May not be taken for credit by students who have passed Economics 307.

361: ECONOMIC DEVELOPMENT OF LATIN AMERICA. [3]
Prerequisite: Economics 104 or permission of instructor. An examination of the economic development, institutions and problems of Latin America. May not be taken for credit by students who have passed Economics 308.

370: ECONOMICS OF INDUSTRIAL ORGANIZATION. [3]
Prerequisite: Economics 306 or permission of instructor. An analysis of economic factors influencing industrial structure and of the conduct and performance of industry associated with different market structures. May not be taken for credit by students who have passed Economics 304.

375: ECONOMICS OF TRANSPORTATION. [3]
Prerequisite: Economics 103, 104. This course is designed to provide insight into the workings of the transportation industry in the United States. It discusses the differing economic structures of air, motor, rail and water transport and introduces decision rules for choosing the appropriate mode of transportation for any particular transportation requirement. Students will explore regulation of prices charged for service, services provided by each mode, and economic problems besetting each of the competing types of carriage.

380: COMPARATIVE ECONOMIC SYSTEMS. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. An examination of the theory, programs and practices of selected major contemporary economic systems, including capitalism, socialism, and fascism. Special attention is given to the role of planning in various countries. May not be taken for credit by students who have passed Economics 401.
390: INTERNATIONAL ECONOMICS. [3]
Prerequisite: Economics 306 or permission of instructor. A survey of the foreign exchange market, of the balance of payments, of foreign trade policies, and of the Classical, Neoclassical, and modern theories of international trade. May not be taken for credit by students who have passed Economics 404.

481: SEMINAR IN THE DEVELOPMENT OF ECONOMIC THOUGHT. [3]
Prerequisite: Economics 306 and 311 or permission of instructor. An examination of the main developments in economic thought from 1500 to the present with emphasis upon their historical origins, their impact on contemporary economics, and their theoretical validity. May not be taken for credit by students who have passed Economics 403.

498: SEMINAR IN ECONOMICS. [3]
Prerequisite: Economics 306 and 311 and permission of instructor. A course in which the more important current economic problems will be studied and discussed in seminar form. May not be taken for credit by students who have passed Economics 430.
Requirements for the Major

In addition to the area requirements for B.A. degrees, students who wish to graduate with an English major must complete thirty hours of course work beyond sophomore English, with the following distribution:

1. One three-semester hour course from the following: English 391, General Linguistics; English 392, History of the English Language; and English 341, Chaucer.

2. One three-semester hour course from English 351, 352, Shakespeare.

3. Two courses in English literature prior to 1800 A.D. These comprise the courses in this catalog numbered from English 341, Chaucer, through 358, The Age of Johnson. One of these two courses should be in the literature of a period; these are English 342, 345, 354, 357, and 358. (English 341, Chaucer, should not be used for both this requirement and requirement 1 above.)

4. One three-semester hour course from offerings in American literature; these are English 381, 382, 384, through 390, and may include English 442, 444, and 446 when these are organized on American literature subjects.

Prospective Secondary School Teachers

English majors who may wish Virginia State Certification should consult the list of requirements provided by the Department of Education. The Department of Education recommends that such students consider electing English 309, English 386, English 391, English 396, English 397, and Library Science 401.
# Sample Schedule for English Majors*

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<td><strong>Social or behavioral sci.</strong></td>
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<td><strong>Engl 251 (or 203 or 205)</strong></td>
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*See Introduction to Chapter V.*
English Courses

101-102: COMPOSITION AND INTRODUCTION TO LITERATURE. [3-3]

Expository writing, ranging from paragraphs to essays of some length and complexity. Study of the logical, rhetorical, and linguistic structure of expository prose. The methods and conventions of preparing research papers, and introduction to analysis and appreciation of major literary types.

203, 204: WESTERN LITERARY MASTERWORKS. [3, 3]

Prerequisite: English 101-102. Study in translation of some of the great works of Western civilization by such writers as Homer, Sophocles, Euripides, Dante, Cervantes, Flaubert, Dostoievski, Tolstoy, Mann, Camus, Malraux, Ionesco, and Beckett.

205, 206: READINGS IN ENGLISH AND AMERICAN LITERATURE. [3, 3]

Prerequisite: English 101-102. Study of English and American literature by types. English 205 is a study of selected English and American poetry and drama; such dramatists as Marlowe, Shakespeare, Shaw, O'Neill, and Albee are read, and such poets as Donne, Keats, Whitman, Frost, Eliot and Auden. English 206 provides study of selected English and American novels, short stories, and essays. Such fiction writers as Lawrence, Hemingway, Faulkner, Melville, Crane, E. Bronte, Fitzgerald and Barth are studied, and some writers of non-fiction.

251, 252: SURVEY OF ENGLISH LITERATURE. [3, 3]

Prerequisite: English 101-102. Study of the important literary movements and works of English literature, from beginnings to the present. Particularly recommended for prospective English majors.

English 101-102 and two three-hour courses from 200-level English courses are prerequisites for all English 300 and 400 courses.

The English Department offers English 301-309 to encourage the study of literature, film, and writing by students not interested primarily in becoming English majors. These courses may be taken more than once for credit with the permission of the department. English majors may take up to six hours in the sequence for credit towards the major only with the permission of their advisers.

301: 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 AUTHORS. [3]

One or two major authors, such as Shakespeare, Dickens and Hardy, or Tolkein and C. S. Lewis, as announced.

307, 308: SPECIAL TOPICS IN LITERATURE. [3, 3]

A study of literature by topics, such as women in literature, literature of the frontier, literature and psychology, science fiction, and literature of the avant garde. The topic will change each time the course is offered.
309: INDEPENDENT WRITING. [3]
Practice in analyzing and writing such expository forms as the essay, memo, article, and technical and scientific reports, depending upon the needs of the individual student. *Not a remedial course.*

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 will be studied as well as literature consciously or unconsciously influenced by mythic structures. Some myth theory will be included.

330: AMERICAN FOLKLORE. [3]
A study of folklore with emphasis on verbal and non-verbal forms in their distinctively American configuration. Consideration will be given to the use of folk elements in American literature by such authors as Twain and Faulkner.

341: CHAUCER. [3]
The major works of Chaucer, with emphasis on The Canterbury Tales.

342: LITERATURE OF THE MIDDLE AGES. [3]
Selected English narrative, dramatic, and homiletic literature written between 1300 and 1500 A.D., exclusive of Chaucer.

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 a major portion of the poetry of Edmund Spenser, with central emphasis upon The Faerie Queene.

351, 352: SHAKESPEARE. [3, 3]
Twenty selected plays. First semester emphasizes histories and comedies; second semester, tragedies and romances.

353: ENGLISH RENAISSANCE DRAMA. [3]
Major dramas and dramatists of the English Renaissance, exclusive of Shakespeare.

English poetry and prose from 1603 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, neo-classical tragedy, and bourgeois tragedy. Some emphasis on theories of drama, on staging, and on parallel developments in opera. Such writers as Wycherley, Farquhar, Etheredge, Congreve, Dryden, Addison, Gay, Fielding, Goldsmith, and Sheridan are studied.
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 pre-Romantics.

361: ENGLISH POETRY OF THE ROMANTIC PERIOD. [3]

362: ENGLISH POETRY OF THE VICTORIAN PERIOD. [3]
Works of Tennyson, Browning, Arnold, Hopkins, Swinburne, and the Pre-Raphaelites.

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, Thomas, and Hughes. A work of fiction which employs poetic techniques, such as Joyce's Ulysses, may also be studied.

The history of the English novel with intensive critical reading of representative works. English 371 concerns the English novel from its beginnings through the mid-nineteenth century and deals with such writers as Fielding, Sterne, Austen, Emily Bronte, Thackeray, and Dickens. English 372 concerns the English novel from the mid-nineteenth century to the present and deals with such authors as Hardy, Conrad, Bennett, Forster, Lawrence, Joyce, Woolf, Huxley, Greene, Cary, Powell and Golding.

373: LITERARY MODES. [3]
The theory and practice of such modes as tragedy, comedy, tragicomedy, romance, and satire, considered in separate semesters and drawn from a variety of periods ranging from Biblical times to the present, with examples from drama, poetry, and fiction.

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 will be 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, 3]

Selected European novels in translation. English 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, Turgenev, Flaubert, Dostoievsky, Tolstoy, and Galdos. English 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, Cela, Moravia, and Grass. Attention will be given to the influence of this literature on the novel in English. (Offered in cooperation with the Department of Foreign Languages.)

381: COLONIAL AND FEDERALIST AMERICAN LITERATURE. [3]

The works of the first 200 years of American literature, including Edwards, Franklin, Irving, Cooper, and Bryant.

382: LITERATURE OF THE AMERICAN RENAISSANCE. [3]

The major writers of the American Renaissance (1830-1865), with emphasis on the works of Emerson, Thoreau, Hawthorne, Melville, Whitman, and Poe.


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, Styron, and O'Connor.

385: AMERICAN POETRY OF THE TWENTIETH CENTURY. [3]

Major American poets of this century, with emphasis on the work of Robinson, Frost, Stevens, 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 will be 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 others.

388: DEVELOPMENT OF THE AMERICAN NOVEL SINCE 1914. [3]

The American novel from the end of World War I to the present; the course includes the work of such authors as Fitzgerald, Hemingway, Faulkner, Dos Passos, Wolfe, Bellow, and Nabokov.

389: AMERICAN DRAMA OF THE TWENTIETH CENTURY. [3]

American drama of the twentieth century, with special attention to the plays of Eugene O'Neill, Thornton Wilder, Arthur Miller, Tennessee Williams, and Edward Albee.
390: RECENT AMERICAN POETRY. [3]
Major American poets from World War II to the present, with emphasis on the work of such poets as Roethke, Wilbur, Dickey, Lowell, Merwin, Kinnell, and Ammons.

391: GENERAL LINGUISTICS. [3]
Introduction to general linguistics: phonics, phonemics, morphology, and syntax.

Introduction on historical principles to the development of the English language, including study of the Indo-European family of languages, Old English, Middle English, foreign influences on English, and the American dialect.

393: SELECTIONS FROM THE LITERATURES OF THE INDIAN CONTINENT. [3]
Selected literary masterpieces in translation from the ancient and modern literatures of the Indian continent, including romances, plays, and poetry from Sanskrit, Hindi, Tamil, Urdu, and other literatures. (Course credit accepted for the BA non-Western proviso but not in the English major.)

394: JAPANESE 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, noh and Bunraku plays, haiku poetry, and modern fiction. Review of the genres and traditions represented by those masterpieces. (Course credit accepted for the BA non-Western proviso but not in the English major.)

395: CHINESE LITERATURE IN TRANSLATION. [3]
Selected masterpieces of Chinese literature in translation, including the Confucian Classics, ancient songs and poems, T'ang and Sung poetry and prose, Yuan and Ming plays, novels and short stories. (Course credit accepted for the BA non-Western proviso but not in the English major.)

396: INTRODUCTION TO CREATIVE WRITING. [3]
Introduction to the theory and practice of writing fiction, poetry, and drama.

397: SEMINAR IN CREATIVE WRITING. [3]
Prerequisite: Permission of instructor. Intensive study of the theory and practice of creative writing. 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 may not, however, be counted toward the requirements for the English major.)

442: STUDIES IN ENGLISH AND AMERICAN LITERARY TOPICS, PERIODS OR GENRES. [3]
Study in depth of a selected literary topic, period, or genre, as announced.

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.

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.
451: INTRODUCTION TO LITERARY CRITICISM. [3]
This course is intended primarily for English majors in their senior year. Others may be admitted with permission of the instructor. Study of the major critical theories and techniques of the twentieth century. Exercises in critical analysis.

470: INDEPENDENT STUDY. [3, 3]
Prerequisite: permission of department and instructor. Open only to English majors with senior standing and fifteen credit hours in 300 and 400 level English courses.
Intensive study of 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 will produce at least one major piece of written work during the semester on the findings of his research. A student may not present more than six hours of independent study for graduation credit.

Journalism Courses

201: INTRODUCTION TO JOURNALISM. [3]
Principles of and practice in news writing, editing, and layout. Includes a review of the history of American journalism.

202: INTRODUCTION TO NEWS EDITING. [3]
Prerequisite: Journalism 201. Techniques of copy editing, including copy preparation, headline writing, news judging, and newspaper makeup. Designed to introduce students to working on newspaper copy desks, but has applications for anyone preparing copy for publication.

210: YEARBOOK LABORATORY. [1]
Prerequisite or corequisite: Journalism 201. Practical experience at writing and editing for the student yearbook, coordinated with the instruction in Journalism 201. May be taken three semesters for a total of three credit hours.

211: NEWSPAPER LABORATORY. [1]
Prerequisite or corequisite: Journalism 201. Practical experience at writing and editing for the student newspaper, coordinated with the instruction in Journalism 201. May be taken three semesters for a total of three credit hours.

Speech Courses

151: PRINCIPLES OF EFFECTIVE SPEAKING. [3]
An introduction to the techniques of effective oral presentation, emphasizing impromptu and extemporaneous speaking.

152: PUBLIC SPEAKING. [3]
Prerequisite: Speech 151. Principles and types of public address, with emphasis on expository and persuasive speaking. Intensive practice in composition and delivery.

251: INTRODUCTION TO GROUP CONFERENCE. [3]
Introduction to group conference, with development of participant and leadership skills. Preliminary study of group dynamics. Participation in practice conferences.
FUNDAMENTALS OF ORAL INTERPRETATION. [3]
Prerequisite: Speech 151 or permission of instructor. Principles involved in the oral communication of the written word in its intellectual, emotional and aesthetic entirety. Practice in the oral communication of prose and poetry.

ARGUMENTATION AND DEBATE. [3]
Prerequisite: Speech 151 or permission of instructor. The principles and techniques of argumentative speaking: analysis of debate propositions, research, evidence, forms of argument, fallacies, refutation and rebuttal. Lecture, discussion and classroom debate.

Theatre Courses

PLAY PRODUCTION. [4]
An introduction to the techniques of theatrical production: scenic design, construction, painting, properties, costumes, and publicity. Three hours of lecture, three hours of laboratory per week.

HISTORY OF THEATRICAL PRODUCTION. [3, 3]
A history of theatrical production from ancient Greece to the present day; a study of staging, production techniques, acting conventions, and audiences.
Requirements for the Major in Art

The major program in art prepares students for graduate study in studio art and art history, as well as for research and professional work in art.

In addition to the general requirements for the Bachelor of Arts degree, art majors must complete a minimum of 42 hours in art. The integrated studio art history curriculum includes completion of 18 hours for a minor in studio or art history and a 24-hour completion for a major in studio or art history.

Required courses in art are as follows:

- Drawing .......................................................... 6
- Design ......................................................... 3
- Painting or Sculpture ......................................... 12
- Survey of Western Art ....................................... 6
- Modern Art .................................................... 6
- Ancient, Medieval Renaissance or Introduction to Comparative Arts ............................................. 6
- Advanced Art Studio or Independent Study Art History .................................................. 3

Total 42

Sample Schedule for Art Majors

FRESHMAN

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>English</td>
<td>English</td>
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<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>2-D Design</td>
<td>Math or Science</td>
</tr>
<tr>
<td>Drawing I</td>
<td>Drawing II</td>
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<tr>
<td>Survey of Western Art</td>
<td>Survey of Western Art</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
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16 16
### SOPHOMORE

<table>
<thead>
<tr>
<th>Third Semester</th>
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<tbody>
<tr>
<td>Literature</td>
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<tr>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>Modern Art</td>
<td>Modern Art</td>
</tr>
<tr>
<td>Painting I or</td>
<td>Painting II or</td>
</tr>
<tr>
<td>Sculpture I</td>
<td>Sculpture II</td>
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### JUNIOR

<table>
<thead>
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<tr>
<td>Elective</td>
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<tr>
<td>Social and Behavioral</td>
<td>Social and Behavioral</td>
</tr>
<tr>
<td>Ancient Art; Medieval-Ren. Art; or Introduction to Comparative Arts</td>
<td>Ancient Art; Medieval-Ren. Art; or Introduction to Comparative Arts</td>
</tr>
<tr>
<td>Paintin g I or</td>
<td>Painting II or</td>
</tr>
<tr>
<td>Sculpture I</td>
<td>Sculpture II</td>
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### SENIOR

<table>
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<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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</thead>
<tbody>
<tr>
<td>Advanced Art Studio or Independent Study in Art History</td>
<td>Social and Behavioral</td>
</tr>
<tr>
<td>Social and Behavioral Science</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
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<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Art Courses

101: **ART APPRECIATION.** [3]

A general introduction to the principles of aesthetics in art by means of a study in painting, sculpture and architecture; chronological, prehistoric times to the present, or ideational approach varying with the instructor.

103, 104: **DRAWING.** [3, 3]

Elementary 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, 106: BASIC DESIGN I AND II [2- AND 3-DIMENSIONAL DESIGN]. [3, 3]
Prerequisite: Art 104 or permission of instructor. An introduction to two- and three-dimensional design. The first semester includes basic problems in two-dimensional design. The second semester includes construction experiments solving problems of three-dimensional design. **Six hours per week.**

201, 202: PAINTING. [3, 3]
A basic course in the fundamentals of painting. Structural approach in medias of oil, acrylic and tempera. **Six hours per week.**

205, 206: SURVEY OF WESTERN ART. [3, 3]
A survey of western art as expressed through architecture, sculpture and painting. First semester, prehistoric to Renaissance; second semester, Renaissance to the present.

207: INTRODUCTION TO COMPARATIVE ARTS. [3]
An interdisciplinary approach to various themes within the history of western art.

208: PROBLEMS IN COMPARATIVE ARTS. [3]
Prerequisite: Art 205, 207 or permission of instructor. Important aesthetic questions concerning the nature of subject matter, formal analysis and modes of operation within works of art and music are discussed.

215, 216: BEGINNING SCULPTURE. [3]
Prerequisite: Art 103 and 104, or permission of instructor. A basic course in the fundamentals of creating three-dimensional forms using water-base clay. **Six hours per week.**

321, 322: HISTORY OF ANCIENT ART. [3]
A broad, generic course in the aesthetics and art history of ancient cultures, including nonwestern cultures.

325, 326: MEDIEVAL AND EARLY RENAISSANCE ART. [3, 3]
Prerequisite: Junior or senior standing. Architecture, sculpture and painting from the Middle Ages, Romanesque, Gothic and Early Renaissance period.

331, 332: HISTORY OF MODERN ART. [3, 3]
An examination of the nineteenth century art styles, followed by an in-depth study of the aesthetics and history of art since 1900. Such styles as Expressionism, Cubism, Dadaism, Surrealism, Modern Primitivism and others will be covered.

491, 492: ADVANCED STUDIO PROBLEMS. [2-4, 2-4]
Prerequisite: Junior or senior level in art, or permission of instructor. This course provides the opportunity for the individual student to develop advanced skills in drawing, painting, sculpture, and other media. **Six to eight hours per week, to be arranged.**

493, 494: INDEPENDENT STUDY IN ART HISTORY. [3, 3]
Prerequisite: Junior or senior standing, permission of department and instructor, plus 9 hours in art history, including Art 205, 206. Intensive study of a particular artist, period, or theoretical problem in art history or archaeology, to be conducted by an individual student in close consultation with an instructor.
Requirements for the Major in Music

The major program in music prepares students for graduate study in music and music literature, and for research and professional work in musical activities. Entrance to the program is by audition only.

In addition to the general requirements for the Bachelor of Arts degree, music majors must complete a minimum of 42 hours in music. Required courses in music are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Harmony</td>
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<tr>
<td>Sight Singing and Ear Training</td>
<td>4</td>
</tr>
<tr>
<td>Historical, Theoretical, and Analytical Study of Music</td>
<td>9*</td>
</tr>
<tr>
<td>Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>Major Instrument or Voice (Private Music Instruction)</td>
<td>8</td>
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<tr>
<td>Ensemble</td>
<td>7</td>
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<td><strong>Total</strong></td>
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Sample Schedule for Music Majors*

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<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>English 101</td>
<td>English 102</td>
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<tr>
<td>Foreign Language 151</td>
<td>Foreign Language 152</td>
</tr>
<tr>
<td>Harmony I</td>
<td>Harmony II</td>
</tr>
<tr>
<td>Sight Singing &amp; Ear Training I</td>
<td>Sight Singing &amp; Ear Training II</td>
</tr>
<tr>
<td>Class Piano I</td>
<td>Class Piano II</td>
</tr>
<tr>
<td>Ensemble</td>
<td>Ensemble</td>
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<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
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<th>Third Semester</th>
<th>Fourth Semester</th>
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<tr>
<td>English Lit</td>
<td>English Lit</td>
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<td>Foreign Language 251</td>
<td>Natural Science</td>
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<td>Natural Science</td>
<td>Survey of World Music</td>
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<tr>
<td>Harmony III</td>
<td>Harmony IV</td>
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<td>Major Instrument (Pvt. Music Instruc.)</td>
<td>Keyboard Harmony</td>
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<td>Ensemble</td>
<td>Major Instrument (Pvt. Music Instruc.)</td>
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<td></td>
<td>Ensemble</td>
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<td>16</td>
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*See Introduction to Chapter V.
<table>
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<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tr>
<td>Behavioral Science</td>
<td>Behavioral Science</td>
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<tr>
<td>Math or Science</td>
<td>Social Science</td>
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<tr>
<td>Elective</td>
<td>Humanities Elective</td>
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<tr>
<td>Humanities Elective</td>
<td>Historical, Theoretical, &amp; Analytical Study of Music I</td>
</tr>
<tr>
<td>Historical, Theoretical, &amp; Analytical Study of Music I</td>
<td>Major Instrument (Pvt. Music Instruc.)</td>
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<td>Major Instrument (Pvt. Music Instruc.)</td>
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<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
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</tr>
<tr>
<td>Social Science</td>
<td>Historical, Theoretical, &amp; Analytical Study of Music IV</td>
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<tr>
<td>Historical, Theoretical, &amp; Analytical Study of Music III</td>
<td>Major Instrument (Pvt. Music Instruc.)</td>
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<td>Major Instrument (Pvt. Music Instruc.)</td>
<td>Electives</td>
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<td>Ensemble</td>
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<tr>
<td>Electives</td>
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</tbody>
</table>

Music Courses

101: **MUSIC APPRECIATION I.** [3]

An introduction to music appreciation through formal and aesthetic principles. The elements of music are examined separately and as combined in various musical forms. A brief survey of Medieval and Renaissance music leads into a more intensive study of music from the eighteenth century to the present, culminating in the discrimination of contrasting styles of music. **For non-music majors only.**

102: **MUSIC APPRECIATION II.** [3]

Prerequisite: Music 101 or permission of instructor. A study of the development of the concerto, symphony, chamber music, suite, song, opera and other large vocal forms. This development will be traced through the stylistic periods of music. **For non-music majors only.**

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 will be taught to

*The first three hours in this sequence (Music 335) may be applied toward the non-Western Proviso under General Requirements. Music 231 (Survey of World Music Literature) also meets the non-Western requirement. See Introduction to Chapter V.*

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sing a line of music without the accompaniment of an instrument. Matching tones, major and minor scales, key signatures, intervals, rhythm. Treble, bass, alto and tenor clefs. Rhythmic and melodic dictation. *Three hours per week.*

114: SIGHT SINGING AND EAR TRAINING II. [2]

*Prerequisite:* Music 113 or permission of 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:* Student must be able to read music and must have some proficiency on a musical instrument or in voice. Music notation, scales, key signatures, intervals, chords, cadences, figured bass. Harmonizing soprano and bass lines in the eighteenth century chorale style.

116: HARMONY II. [3]

*Prerequisite:* Music 115 or permission of instructor. First- and second-inversion chords, modulation, nonharmonic tones, figured bass, seventh chords. Analysis of Bach chorales; composition of four-part chorales in eighteenth century style.

171: CLASS PIANO I. [1]

The study of the piano keyboard as it is related to various clefs in music. Emphasis will be placed on the solution of basic problems of a stylistic and technical nature. *For music majors only.*

172: CLASS PIANO II. [1]

*Prerequisite:* Music 171 or permission of instructor. The study of the piano keyboard as it is related to intermediate song and combined in various musical forms. *For music majors only.*

173, 174, 273, 274, 373, 374, 473, 474: PRIVATE MUSIC INSTRUCTION. [1, 1, 1, 1, 1, 1, 1]

175, 176, 275, 276, 375, 376, 475, 476: PRIVATE MUSIC INSTRUCTION. [2, 2, 2, 2, 2, 2, 2, 2]

*Prerequisite:* All students must pass an audition before registering for private music instruction. To earn one credit per semester, a student takes 15 one-half hour private music lessons; to earn two credits per semester, a student takes 15 one-hour private music lessons. Each student will be graded on his progress during the semester and on his performing ability. For each credit hour, one hour of practice per day is expected. Instruction is offered on the following:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Flute</th>
<th>Trombone</th>
<th>Percussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oboe</td>
<td>Baritone horn</td>
<td>Piano</td>
<td></td>
</tr>
<tr>
<td>Clarinet</td>
<td>Tuba</td>
<td>Organ</td>
<td></td>
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<tr>
<td>Bassoon</td>
<td>Violin</td>
<td>Harp</td>
<td></td>
</tr>
<tr>
<td>Saxophone</td>
<td>Viola</td>
<td>Classic guitar</td>
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</tr>
<tr>
<td>French Horn</td>
<td>Cello</td>
<td>Voice</td>
<td></td>
</tr>
<tr>
<td>Trumpet</td>
<td>String bass</td>
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</tbody>
</table>

*The Private Instruction Fee applies. Students who are registering for private music instruction for the first time should register for Music 173 or 175 and then continue with the numerical sequence.*

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181, 182, 281, 282, 381, 382, 481, 482: UNIVERSITY CHORUS. [1, 1, 1, 1, 1, 1, 1, 1]

Performance of works from the choral repertoire. Public concerts will be given. Regardless of class standing (freshman, sophomore, etc.), students who are registered for University Chorus for the first time should register for Music 181 and then continue with the numerical sequence. Three hours per week.

183, 184, 283, 284, 383, 384, 483, 484: CONCERT BAND. [1, 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 band repertoire. Public concerts will be given. Regardless of class standing (freshman, sophomore, etc.), students who are registering for Concert Band for the first time should register for Music 183 and then continue with the numerical sequence. Three hours per week.

187, 188, 287, 288, 387, 388, 487, 488: CHAMBER ORCHESTRA. [1, 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 symphonic repertoire. Public concerts will be given. Regardless of class standing (freshman, sophomore, etc.), students who are registering for Chamber Orchestra for the first time should register for Music 187 and then continue with the numerical sequence. Three hours per week.

203: FOLK AND TRADITIONAL MUSIC OF THE WORLD. [3]

A study of the musical structure and cultural setting of folk music among diverse peoples, with an introduction to the traditional art music of oriental countries. For non-music majors only.

204: INTRODUCTION TO TWENTIETH-CENTURY MUSIC. [3]

Prerequisite: One course in music or permission of instructor. A survey of the various styles found in twentieth century music. Tonal, atonal, serial and experimental music, as well as the representative schools of jazz will be studied. For non-music majors only.

205: MUSIC IN THE UNITED STATES. [3]

A study of music in the United States from Colonial times to the present. Through interaction with actual musical examples, the student will trace significant African and European influences on the emerging musical style and artistic activity in the United States. For non-music majors only.

206: LATIN AMERICAN MUSIC. [3]

A survey of folk, popular, and artistic music of Latin American countries in a historical setting. Influences of other cultures on the musical life of representative countries will be viewed. For non-music majors only.

207: THE DEVELOPMENT OF JAZZ. [3]

Prerequisite: One course in music or permission of instructor. 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 features, the course of their development and an acquaintance with important artists in the field. Attention is also given to important hybrid trends resulting from the synthesis of jazz with other musical idioms.
215: HARMONY III. [3]
Prerequisite: Music 116 or permission of instructor. A study of chromatic chords. Four-part chromatic writing and analysis of nineteenth century compositions.

216: HARMONY IV. [2]
Prerequisite: Music 215 or permission of instructor. A continuation of the study of chromatic harmony as it applies to the classical forms.

218: KEYBOARD HARMONY. [1]
Prerequisite: Music 172 and 215. A study of techniques of harmonization at the piano keyboard. Two hours per week. For music majors only.

231: SURVEY OF WORLD MUSIC LITERATURE. [3]
Prerequisite: Music 115 or permission of 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.

261: INTRODUCTION TO MUSIC EDUCATION. [3]
Prerequisite: Open to music majors or others by permission of instructor. Basic tenets of aesthetic education and their application to teaching-learning processes in music. Organization of music education in public and private elementary and secondary schools, higher education, the community, and the private studio. Includes resources and materials in music education.

277: CLASS VOICE I. [1]
A study of the human voice in artistic singing. Practical application of basic principles will be emphasized. Two hours per week.

278: CLASS VOICE II. [1]
A continuation of voice study begun in Music 277, with emphasis on artistic singing in several styles. Two hours per week.

319: CLASS COMPOSITION I. [3]
Prerequisite: Music 116 or permission of instructor. Students will compose original compositions using the smaller forms of music. Compositional techniques will be studied through the analysis of works by major composers. A highly individualized course due to the creative process.

320: CLASS COMPOSITION II. [3]
Prerequisite: Music 319 or permission of instructor. A continuation of Class Composition I. Emphasis is placed on the larger forms of music, on larger ensembles, and on twentieth-century techniques.

335: HISTORICAL, THEORETICAL, AND ANALYTICAL STUDY OF MUSIC I. [3]
Prerequisite: Music 231 or permission of instructor. A survey of the development of music from the ancient times of the Mesopotamians, the Assyrians, and the Egyptians. The influences of these systems and their instruments are studied in the music of the early churches: the Hebrew music in the temples and the spread to the Eastern churches including Byzantine, Coptic, Abyssinian, and Armenian music. These roots are traced to the Greek and Roman cultures through the Middle Ages with emphasis upon historical, theoretical, and analytical aspects.
336: HISTORICAL, THEORETICAL, AND ANALYTICAL STUDY OF MUSIC II. [3]
Prerequisite: Music 231 or permission of instructor. A study of the development of music in Western civilization from the early Renaissance through the early Baroque periods, with emphasis upon historical, theoretical, and analytical aspects.

385, 386, 485, 486: COLLEGIUM MUSICUM. [1, 1, 1, 1]
Prerequisite: Successful completion of an audition before the instructor. The discovery, interpretation and performance of vocal, choral and instrumental music from the historical repertoire. Emphasis will be placed on bringing to the university community those musical compositions which are not readily accessible in the regular concert repertoire. Three hours per week. Students entering for the first time should register for Music 385 and then continue with the numerical sequence.

391: CONDUCTING I. [2]
Prerequisites: Music 172, 216 and 218 or permission of instructor. A study of basic techniques of conducting a musical ensemble. Three hours per week.

435: HISTORICAL, THEORETICAL, AND ANALYTICAL STUDY OF MUSIC III. [3]
Prerequisite: Music 231 or permission of instructor. A study of the development of music in Western civilization from the late Baroque through early Romanticism, with emphasis upon historical, theoretical, and analytical aspects.

436: HISTORICAL, THEORETICAL, AND ANALYTICAL STUDY OF MUSIC IV. [3]
Prerequisite: Music 231 or permission of instructor. A study of the development of styles of music in Western civilization from the works of the late Romantic composers through the present day avant-garde compositions, with emphasis upon historical, theoretical, and analytical aspects.

445: BIBLIOGRAPHY AND RESEARCH TECHNIQUES. [3]
Prerequisite: Music 335, 336, or permission of instructor. A study of basic reference materials in music, as well as the investigation and application of various research principles.

495: WORKSHOP IN ITALIAN VOCAL MUSIC [APPLIED MUSIC]. [3]
Prerequisite: Audition. The study and practice of Italian vocal music with stress on enunciation and inflection as is basic to Italian Chamber Music and Opera. The development of the sensitivity to the genre through the acquired knowledge of background source material. Private and ensemble coaching.

497, 498: INDEPENDENT STUDY. [3]
Prerequisite: Open only to music majors with senior standing and at least two of the following courses: Music 335, 336, 435, 436. Individual research and study of a selected subject in close consultation with an instructor. A student may choose from the musicological, ethnomusicological, theoretical, compositional, or educational areas of music, and is to produce at least one major written work based on the findings of his research.
Department of Foreign Languages

Professor Willis
Associate Professors Aguera, Cordero, Elstun (Chairman), Font, Garcia, Tedder
Assistant Professors Brooks, Bufill, Evans, Hazera, Hobson, LePage, Meyer, Sehrt
Instructors Hecht, Wekerle
Lecturers Jansen, Powers, Urso

General Aims and Guidelines

Courses in the Department of Foreign Languages are designed to meet the needs of several categories of students:

(1) 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; those who plan to undertake graduate study in these fields and those who intend to become foreign language teachers, professional translators, interpreters, and foreign correspondents.

(2) 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 combined with other professional interests in business and industry will enhance employment opportunities and advancement. These elective courses are French 252 through 257, German 252 through 255, Russian 252 through 254, Spanish 252 through 258 and French, German and Spanish 325. Proficiency in the foreign language is not required for Russian 253 and French, German and Spanish 325, since these courses are taught in translation.

(3) Elementary and intermediate courses are offered in French, German, Latin, Portuguese, Russian and Spanish, which may be used to fulfill the university's foreign language area requirement for the B.A. degree. These courses are also designed to broaden the student's general educational background and strengthen his 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.
Requirements for the Major in French

The degree program in French prepares students for teaching French at the secondary level, for graduate study in French, or for positions in government or private enterprise that require a knowledge of French.

To major in French, a student should have at least a "C" average in his previous French courses. Twenty-seven hours of work in French courses at the 300 and 400-levels are required for completion of the major. It is recommended that the student also take related courses in history, philosophy, humanities and linguistics.

Sample Schedule for French Majors*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>French 151</td>
<td>French 152</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>English Composition</td>
<td>English Composition</td>
</tr>
<tr>
<td>Social or Behavioral Science</td>
<td>Social or Behavioral Science</td>
</tr>
<tr>
<td></td>
<td>Music 101 or 203 or Art 101</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>French 251</td>
<td>Any course in 252-series</td>
</tr>
<tr>
<td>English Literature</td>
<td>except 257</td>
</tr>
<tr>
<td>Mathematics or a Science</td>
<td>English Literature</td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>Non-Western Culture</td>
</tr>
<tr>
<td>Social or Behavioral Science</td>
<td>Social or Behavioral Science</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>French 351 or 353</td>
<td>French 354</td>
</tr>
<tr>
<td>French 361 or 375</td>
<td>French 362 or 376</td>
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<tr>
<td>French 377</td>
<td>French 378</td>
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<tr>
<td>English 391</td>
<td>English 392</td>
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<tr>
<td>Music or Philosophy</td>
<td>Philosophy</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art, or English 397, 399, 431,</td>
<td>Art or English 398 or 430</td>
</tr>
<tr>
<td>451 or</td>
<td></td>
</tr>
<tr>
<td>History (European or French)</td>
<td>French 412 or 416</td>
</tr>
<tr>
<td>French 411 or 415</td>
<td>French 419 or 423</td>
</tr>
<tr>
<td>French 419 or 423</td>
<td>French 434</td>
</tr>
<tr>
<td>French 427 or 433</td>
<td></td>
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</tbody>
</table>

*See Introduction to Chapter V.
French Courses

151, 152: ELEMENTARY FRENCH. [4, 4]
Intensive introduction to French, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of French-speaking countries through selected readings, and programs in the language laboratory. Four classroom hours, two laboratory hours per week. 151 and 152 must be taken in sequence.

Intensive review of elementary French designed for students who have had two years of secondary school French but whose level of proficiency does not qualify them for French 251. Introduction to the life and culture of French-speaking countries through selected readings, and programs in the language laboratory. Students may not receive credit for both French 151, 152 and 153. Four classroom hours, two laboratory hours per week.

251: INTERMEDIATE FRENCH. [4]
Prerequisite: French 151, 152 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and of aural and oral skills; continued study of the life and culture of French-speaking countries. Four classroom hours, two laboratory hours per week.

252 to 257. Application and expansion of the language skills acquired in French 151 through 251 in one or more of the following subject areas. These courses may be taken singly, concurrently, or in any order.

252: FRENCH CONVERSATION. [3]
Prerequisite: French 251 or equivalent. Development of oral proficiency in French. Twelve selected topics that touch on various practical aspects of everyday life.

253: FRENCH CULTURE. [3]
Prerequisite: French 251 or equivalent. An introduction to the background of French life and culture.

254: READING AND TRANSLATION OF FRENCH TEXTS. [3]
Prerequisite: French 251 or equivalent. Reading and translation of selected texts in various fields, including the natural and social sciences; introduction of general scientific terminology. Recommended also for non-major students preparing for a graduate reading examination in French.

255: FRENCH LITERARY MASTERPIECES. [3]
Prerequisite: French 251 or equivalent. Reading and discussion of selected works of French literature.

256: FRENCH PRONUNCIATION. [3]
Prerequisite: French 251 or equivalent. Analytical description of French speech and pronunciation practice with emphasis on exercises designed specifically for the Anglo-American student. Three classroom hours, two laboratory sessions per week.

257: READINGS IN FRENCH LITERATURE. [3]
Prerequisite: French 251 or permission of instructor. Readings of French literary works in the original language with all lectures, discussions, and examinations in English. Designed for non-major students.
325: MAJOR FRENCH WRITERS. [3]
May not be taken in fulfillment of requirements for the major in French. Study of the works of a major French writer (e.g., Camus, Sartre, Beckett) in translation, with all course work in English. The writer to be studied will vary and will be announced in each semester's Schedule of Classes.

351: ADVANCED FRENCH GRAMMAR. [3]
Prerequisite: French 251 or permission of instructor. Offered every year. A study of the phonology, syntax and morphology of modern standard French.

353, 354: ADVANCED CONVERSATION AND COMPOSITION. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered every year. Written and oral reports and conversation on political, literary and artistic topics and current events.

361, 362: APPLIED FRENCH LINGUISTICS. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of the instructor. Offered in alternate years. A course in phonetics, phonemics, morphemics and syntax of modern standard French. Three classroom hours per week, laboratory session at the discretion of the instructor.

375, 376: FRENCH CULTURE AND CIVILIZATION. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. A study of the outstanding contributions of France to world civilization from medieval times to the present, with emphasis on the development of her ideas, arts, sciences, and institutions.

377, 378: SURVEY OF FRENCH LITERATURE. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. A survey of French literature from the Chanson de Roland to the present, with close readings of works of representative major writers through the centuries.

411, 412: FRENCH LITERATURE OF THE TWENTIETH CENTURY. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. Principal literary trends and genres in French literature since 1900. French 411 studies such authors as Proust, Gide, Claudel and Valery. French 412 deals with Existentialism, the "Nouveau Roman," and the "Nouveau Theatre." Representative authors such as Sartre, Camus, Robbe-Grillet, Butor, Ionesco and Beckett are studied.

415, 416: FRENCH LITERATURE OF THE NINETEENTH CENTURY. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. The poetry, theatre, and novel of the romantic, realist, and symbolist periods; authors to be studied in the first semester include Lamartine, Hugo, Stendhal, Balzac; in the second semester, Flaubert, Baudelaire, Rimbaud, Mallarme, Verlaine, Zola.

419, 420: FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. [3, 3]
Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. The study of Voltaire, Montesquieu, Rousseau and Diderot, whose major writings reflect the political, philosophical, social and artistic ideas of "l'age des Lumières."

http://catalog.gmu.edu
423, 424: FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. [3, 3]

Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. A study of the Classical period. Reading and class discussion of the principal masterpieces of the century, with emphasis on Descartes, Pascal, Corneille, Racine, Molière and LaFontaine. Other significant works are studied in the light of their relation to literary, ideological and social currents in France from the Age of the Baroque to the Querelle des Anciens et des Modernes.

427: FRENCH LITERATURE OF THE RENAISSANCE. [3]

Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. Renaissance and Humanism in France in the sixteenth century. A survey in historical sequence of the major trends of French prose and poetry from Marot to the Pleiade, from Rabelais to Montaigne.

433: FRENCH STYLISTICS. [3]

Prerequisite: Fifteen semester-hours of French or permission of instructor. Offered in alternate years. Methods and terminology for critical analysis of French style; reading of appropriate texts and writing of exercises.

434: PROSEMINAR. [3]

Prerequisite: three years of college French or equivalent. Intended mainly for French majors. Conducted as a discussion group with emphasis on selected topics and individual problems.

497, 498: SENIOR HONORS TUTORIAL. [3, 3]

Prerequisite: senior standing as a major in French, with an overall grade point average of 3.0 and 3.0 in the major field. Students who meet these requirements will be 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 French faculty. In the second semester, independent research and completion of an honors essay under the supervision of a member of the French faculty.

Requirements for the 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.

To major in German a student should have at least a "C" average in previous German courses. German 254 is a prerequisite for all courses in the major program. Twenty-seven hours of work in German courses at the 300 and 400 levels are required for completion of the major. Students are urged to include Philosophy 231, 232, History 314 and English 391 among their electives.

http://catalog.gmu.edu
# Sample Schedule for German Majors*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>German 151</td>
<td>German 152</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Natural Science</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
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<tr>
<td>Social or Behavioral Science</td>
<td>Social or Behavioral Science</td>
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**Third Semester**

<table>
<thead>
<tr>
<th>German 251</th>
<th>Mathematics</th>
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<tbody>
<tr>
<td>English Lit</td>
<td>Non-Western Culture</td>
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<td>Humanities</td>
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**Fourth Semester**

<table>
<thead>
<tr>
<th>German 254</th>
<th>German 252</th>
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</thead>
<tbody>
<tr>
<td>English Lit</td>
<td>Non-Western Culture</td>
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<tr>
<td>Humanities</td>
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**Fifth Semester**

<table>
<thead>
<tr>
<th>German 311</th>
<th>German 351 or 361</th>
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<tbody>
<tr>
<td>Elective</td>
<td>Elective</td>
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<td>Elective</td>
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**Sixth Semester**

<table>
<thead>
<tr>
<th>German 312</th>
<th>German 352 or 362</th>
</tr>
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<tbody>
<tr>
<td>Elective</td>
<td>Elective</td>
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<td>Elective</td>
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**Seventh Semester**

<table>
<thead>
<tr>
<th>German 313</th>
<th>German 405, 409 or 411</th>
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<tbody>
<tr>
<td>Elective</td>
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<tr>
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**Eighth Semester**

<table>
<thead>
<tr>
<th>German 314 or 420</th>
<th>German 406</th>
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</thead>
<tbody>
<tr>
<td>German 412</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
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</tbody>
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### German Courses

151, 152: **ELEMENTARY GERMAN. [4, 4]**

Intensive introduction to German, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of German-speaking countries through selected readings, and 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 GERMAN. [4]**

An intensive review of elementary German designed for students who have had two years of secondary school German but whose level of proficiency does not qualify them for German 251. Introduction to the life and culture of German-speaking countries through selected readings, and programs in the language laboratory. **Four classroom hours two laboratory hours per week. Students may not receive credit for both 151, 152 and 153.**

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*See Introduction to Chapter V.*
251: INTERMEDIATE GERMAN. [4]

Prerequisite: German 151, 152 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and of aural and oral skills; continued study of the life and culture of German-speaking countries. Four classroom hours, two laboratory hours per week.

252 to 255: Application and expansion of the language skills acquired in German 151 through 251, in one or more of the following subject areas. These courses may be taken singly, concurrently, or in any order.

252: GERMAN CONVERSATION AND COMPOSITION. [3]

Prerequisite: German 251 or equivalent. Development of oral proficiency and writing skills through discussions, reports and compositions on contemporary German events and culture.

253: SCIENTIFIC GERMAN. [3]

Prerequisite: German 251 or equivalent. The student becomes acquainted with specific terminology and structure of scientific texts through supervised readings and translation of materials from the scientific fields.

254: READINGS IN GERMAN LITERATURE. [3]

Prerequisite: German 251 or equivalent. Introduction to German literature through a study of poetry, prose and dramas by major authors of the modern era (e.g., Brecht, Böll, Hesse, Mann). Preparation for the analysis of literature in German, including familiarization with the tools of German literary criticism. Prerequisite for all German courses in the major program.

255: MASTERPIECES OF GERMAN LITERATURE. [3]

Prerequisite: German 251 or equivalent. A course for non-majors, providing study of selected literary works from 1800 to the present (Goethe, Heine, Kafka, Mann, Brecht, Dürrenmatt). Works will be read in the original and discussed in English.

311: ADVANCED GERMAN GRAMMAR. [3]

Prerequisite: German 254 or permission of instructor. A systematic approach to the grammar of modern German. The theoretical knowledge will be applied in closely guided and supervised written and oral exercises.

312: PRACTICAL STYLISTICS. [3]

Prerequisite: German 254 or permission of instructor. Presentation of the main stylistic and idiomatic features of German. Practice of these features (synonyms, idiomatic expressions, different levels of style, etc.) in closely guided and supervised exercises.

313, 314: ADVANCED CONVERSATION AND COMPOSITION. [3, 3]

Prerequisite: German 254 or permission of instructor. Development of verbal skills and proficiency in composition beyond the 252-level; frequent oral and written reports based on topical and cultural materials.

325: MAJOR GERMAN WRITERS. [3]

Study of the works of a major German writer (e.g., Hesse, Kafka, Grass, Frisch) in translation, with all course work in English. The writer to be studied will vary and will be announced in each semester's Schedule of Classes. May not be taken in fulfillment of requirements for the major in German.
351, 352: GERMAN LITERATURE FROM ITS BEGINNINGS TO 1750. [3, 3]
Prerequisite: German 254 or permission of instructor. German 351: early German literature from the heroic saga to the decline of the Middle Ages, with emphasis on the courtly epics and the lyrics of Walther von der Vogelweide. German 352: literature of the Renaissance and Reformation, Baroque and the advent of the Enlightenment.

361, 362: GERMAN LITERATURE OF THE ROMANTIC ERA. [3, 3]
Prerequisite: German 254 or permission of instructor. German 361 consists of works by Jean Paul, Kleist, the theoretical and literary writings of the earlier Romantic poets Schlegel, Tieck, Novalis, and of the philosophers Schelling and Schleiermacher. German 362 studies the younger Romantic writers Arnim, Brentano, Eichendorff and E.T.A. Hoffmann, as well as their collections of folk songs and tales.

Prerequisite: German 254 or permission of instructor. The work of Goethe, his predecessors and contemporaries will be studied in its historical setting and in the context of its current revival. 405: Lessing, Lenz, Schiller, Klopstock and Hölderlin. 406: Goethe.

409: GERMAN LITERATURE FROM THE END OF ROMANTICISM TO 1880. [3]
Prerequisite: German 254 or permission of instructor. Study of the literature of Young Germany, Biedermeier and Poetic Realism; the prose, drama, and lyric poetry of Heine, Hebbel, Buchner, Stifter, Storm, Keller, Meyer, and Fontane will be read and discussed.

411, 412: GERMAN LITERATURE SINCE 1880. [3, 3]
Prerequisite: German 254 or permission of instructor. Study of the major literary movements since 1880. German 411 examines Naturalism, Impressionism, the works of the fin de siecle writers, and Expressionism. German 412 presents the literary trends since 1925, including the work of Thomas Mann, Brecht, Hesse, Boll, Celan, Eich, Grass, Frisch and Durrenmatt.

420: LINGUISTICS OF MODERN GERMAN. [3]
Prerequisite: German 254 or permission of instructor. Study of the German language introducing the principles of modern linguistics. Analysis of German phonology, morphology and syntax. Particularly valuable to the student who intends to teach or undertake graduate study in German.

425, 426: INDEPENDENT STUDY. [3, 3]
Prerequisite: senior standing as a major in German and permission of the department chairman. 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 German, with an overall grade point average of 3.0 and 3.0 in the major field. Students who meet these requirements will be 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, independent research and completion of an honors essay under the supervision of a member of the German faculty.

Latin Courses

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, 202: INTERMEDIATE LATIN. [3, 3]
Prerequisite: Latin 101, 102 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency; study of the political and cultural background of Latin authors. Three classroom hours and one laboratory hour per week. 201 and 202 must be taken in sequence.

Portuguese Courses

151, 152: ELEMENTARY PORTUGUESE. [4, 4]
Intensive introduction to Portuguese, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of Portuguese-speaking countries through selected readings, and programs in the language laboratory. Four classroom hours, two laboratory hours per week. 151 and 152 must be taken in sequence.

251: INTERMEDIATE PORTUGUESE. [4]
Prerequisite: Portuguese 151, 152 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and of aural and oral skills; continued study of the life and culture of Portuguese-speaking countries. Four classroom hours, two laboratory hours per week.

Russian Courses

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 programs in the language laboratory. 151 and 152 must be taken in sequence.

251: INTERMEDIATE RUSSIAN. [4]
Prerequisite: Russian 151, 152 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and oral skills; continued study of the life and culture of Russia. Four classroom hours, two laboratory hours per week.

252: RUSSIAN CONVERSATION AND COMPOSITION. [3]
Prerequisite: Russian 251 or permission of instructor. Development of the student's ability to express himself orally on topics of current interest and everyday situations; compositions will provide practice in more difficult forms of expression.
253: RUSSIAN CIVILIZATION. [3]
Prerequisite: Permission of instructor. Introduction to the civilization and culture of Russia and the Soviet Union. In addition to reading and lectures the course will include films, slides and music. All lectures, classroom discussions and reading assignments will be in English.

254: READINGS IN RUSSIAN LITERATURE. [3]
Prerequisite: Russian 251 or permission of instructor. Readings of Russian literary works in the original language with all lectures, discussions and examinations in English.

Requirements for the Major in Spanish

The degree program in Spanish prepares the major to teach Spanish on the secondary school level, to undertake graduate study in Spanish, or to qualify for positions in government and industry that require a knowledge of Spanish.

Twenty-seven hours of work in Spanish courses beyond the 258-level are required for the Spanish major. The student who majors in Spanish will also find it useful to complete some or all of these related courses: English 203, 204 (Western Literary Masterpieces), English 391 (General Linguistics), History 361, 362 (Latin-American History), and History 443 (History of Spain and Portugal).

Sample Schedule for Spanish Majors*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Spanish 151</td>
<td>Spanish 152</td>
</tr>
<tr>
<td>English 101</td>
<td>English 102</td>
</tr>
<tr>
<td>Behavioral Science</td>
<td>Behavioral Science</td>
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<tr>
<td>Natural Science</td>
<td>Natural Science</td>
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<tr>
<td></td>
<td>Music 101 or University</td>
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<td></td>
<td>Chorus or Band</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Lit</td>
<td>English Lit</td>
</tr>
<tr>
<td>Spanish 251</td>
<td>Spanish 252</td>
</tr>
<tr>
<td>Social Science</td>
<td>Social Science</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Spanish 254</td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>History 362</td>
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<td>(History 361)</td>
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</table>

*See Introduction to Chapter V.
Spanish Courses

151, 152: ELEMENTARY SPANISH. [4, 4]
Intensive introduction to Spanish, including basic grammar, aural training, the development of oral skills and reading proficiency. Introduction to the life and culture of Spanish-speaking countries through selected readings, and programs in the language laboratory. Four classroom hours, two laboratory hours per week. 151 and 152 must be taken in sequence.

An intensive review of elementary Spanish designed for students who have had two years of secondary school Spanish but whose level of proficiency does not qualify them for Spanish 251. Introduction to the life and culture of Spanish-speaking countries through selected readings, and programs in the language laboratory. Students may not receive credit for both Spanish 151, 152 and 153. Four classroom hours, two laboratory hours per week.

251: INTERMEDIATE SPANISH. [4]
Prerequisite: Spanish 151, 152 or equivalent. Intensive review of basic grammar; introduction to more difficult grammatical constructions and patterns of usage; continued development of reading proficiency and of aural and oral skills; continued study of the life and culture of Spanish-speaking countries. Four classroom hours, two laboratory hours per week.

252 to 258. Application and expansion of language skills acquired in Spanish 151 through 251, in one or more of the following areas. These courses may be taken singly, concurrently or in any order.

252: SPANISH CONVERSATION AND COMPOSITION. [3]
Prerequisite: Spanish 251 or equivalent. Development of the student's ability to express himself orally on topics of current interest and everyday situations; compositions will provide practice in more difficult forms of expression.
253: COMMERCIAL SPANISH. [3]
Prerequisite: Spanish 251 or equivalent. Introduction to the terminology and usage of Spanish in business transactions; practice in the composition of business reports and letters is stressed.

254: SPANISH CIVILIZATION. [3]
Prerequisite: Spanish 251 or equivalent. An introduction to the civilization and culture of Spain; in addition to reading, the course will include slides, music, and field trips, to increase the student's direct appreciation of Spain's distinctive heritage.

255: LATIN AMERICAN CIVILIZATION. [3]
Prerequisite: Spanish 251 or equivalent. Introductory study of Latin American civilization, with emphasis upon its cultural, historical, and artistic aspects. Films, music, and field trips will supplement the readings.

256: READINGS IN SPANISH LITERATURE. [3]
Prerequisite: Spanish 251 or equivalent. Masterpieces of Spanish literature providing insight into the essential ideas and culture of Spain; the readings will include one novel, one drama, and a carefully selected sampling of short stories and poetry.

257: READINGS IN LATIN AMERICAN LITERATURE. [3]
Prerequisite: Spanish 251 or equivalent. An introduction to the literature of Hispanic America through the reading and discussion of short stories, a novel, a play, and selected poetry of its major literary figures.

258: MASTERPIECES OF SPANISH LITERATURE. [3]
Prerequisite: Spanish 251 or equivalent. Selected Spanish masterpieces which focus on those literary currents (e.g., themes, works, authors) which have enriched the body of world literature. Primarily intended for non-majors. Readings in Spanish with class discussion, tests and examinations in English.

300: SPANISH CIVILIZATION AND CULTURE. [3]
Prerequisite: fifteen semester-hours of Spanish or permission of instructor. A survey of Spanish culture and civilization from the Pre-Roman era to the twentieth century. Primarily for Spanish majors.

301: ADVANCED GRAMMAR AND SYNTAX. [3]
Prerequisite: fifteen semester-hours of Spanish or permission of 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 interference which exist between English and Spanish.

303, 304: ADVANCED CONVERSATION AND COMPOSITION. [3, 3]
Prerequisite: Spanish 252 or permission of instructor. These courses are structured to emphasize development of the skills required both to speak and to write Spanish correctly. They are required courses in the Spanish major program. They may be taken concurrently with Spanish 300, 305, 306, 307, 308 and 315, but must precede all other courses in the major program.
305, 306: SURVEY OF SPANISH LITERATURE. [3, 3]
Prerequisite: Fifteen semester-hours of Spanish or permission of instructor. A survey of Spanish peninsular literature. During the first semester important authors and major movements from medieval times through the eighteenth century will be studied; the second semester will include authors and movements of the nineteenth and twentieth centuries. Collateral readings and reports on some authors are required. These courses are taught entirely in Spanish.

307, 308: LATIN AMERICAN LITERATURE. [3, 3]
Prerequisite: Fifteen semester-hours of Spanish or permission of instructor. A survey of the development of the poetry, novel, drama, essay and short story in Spanish America from the colonial period to the present. Spanish 307 studies the literature of Spanish American countries from colonial times to the twentieth century; Spanish 308 is a study of twentieth century literature. Collateral readings. Recommended for Spanish majors.

309, 310: LITERATURE OF THE GOLDEN AGE. [3, 3]
Prerequisite: Spanish 303, 304 or permission of instructor. Advanced study of major 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.

313, 314: SPANISH LITERATURE OF THE NINETEENTH CENTURY. [3, 3]
Prerequisite: Spanish 303, 304 or permission of instructor. A study of the major works of nineteenth-century Spanish literature. The first semester covers works of such authors as Duque de Rivas, Zorrilla, Alarcon and Galdos; the second semester studies the works of such figures as Becquer, Clarin, Blasco Ibanez and Ruben Dario.

315: LATIN AMERICAN CIVILIZATION AND CULTURE. [3]
Prerequisite: Fifteen semester-hours of Spanish or permission of instructor. Introductory study of Latin American civilization and culture, with supporting study of the history of the continent. The course is conducted in Spanish.

320: LINGUISTICS OF THE SPANISH LANGUAGE. [3]
Prerequisite: 303, 304, and at least twelve hours in the literature of the Spanish language. A general introduction to linguistics; a brief study of the evolution of Spanish from its Latin origins to contemporary speech, and a brief review of morphology, syntax and phonology, with emphasis on the latter. This course is invaluable to Spanish majors planning to teach Spanish or contemplating graduate work.

325: MAJOR HISPANIC WRITERS. [3]
Designed for the non-major student, the course provides study of the works of major Hispanic writers (e.g., Garcia Lorca, Cela, Unamuno, Borges) in translation, with all course work in English. The writers to be studied will vary and will be announced in each semester's Schedule of Classes. May not be taken in fulfillment of requirements for the major in Spanish.

400: STYLISTICS. [3]
Prerequisites: Spanish 303, 304 and at least twelve hours in the literature of the Spanish language. A study of genres and literary styles; application of the material studied, through creative and translational written exercises. Recommended for senior majors in Spanish.
401: LATIN AMERICAN POETRY. [3]
Prerequisite: Spanish 303, 304 and 307, 308 or permission of instructor.
Study of the most representative lyric poets of Latin America from the colonial period to the present. Special attention will be given to the poetry of Marti, Dario, Lugnoes, Vallejo, Huidobro, Neruda, Mistral, Vilaurrutia, and Paz.

403, 404: CONTEMPORARY SPANISH LITERATURE [3, 3]
Prerequisites: 303, 304 and 305, 306, or permission of instructor. The first semester examines in depth the main authors of the “generation of '98” including: Unamuno, Valle-Inclan, Baroja, Azorin, Benavente, and Antonio Machado. The second semester includes an analysis of contemporary post-Civil War authors: Cela, Laforet, Delibes, Buero Vallejo, Sastre, Sanchez Ferlosio, Garcia Lorca, Jimenez, Guillen Aleixandre, and Salinas. The various genres are studied in the works of these leading writers.

407, 408: LATIN AMERICAN NOVEL AND SHORT STORY. [3, 3]
Prerequisite: Spanish 303, 304 and 307, 308 or permission of instructor. The evolution and development of the novel and short story in Latin America, from colonial times to the present. A panoramic study, including the most representative works, will be completed. Collateral readings will be required.

410: CERVANTES. [3]
Prerequisite: Spanish 303, 304, 305, 306 or permission of instructor. A study of the major works of Cervantes, with emphasis on Don Quixote.

412: SPECIAL STUDIES IN LITERATURE. [3]
Prerequisite: Spanish 303, 304 or permission of instructor. Special studies in drama, essay, or other genres of Spanish or Latin American literature. The specific topic in a given semester may be obtained from the Department of Foreign Languages in advance.

415: READINGS IN MEDIEVAL SPANISH LITERATURE. [3]
Prerequisite: Spanish 303, 304 and 305, 306 or permission of instructor. A study of the major works of medieval Spanish literature, especially of El Cid, and the works of Berceo, Ruiz, Manuel, Santillana, Manrique, and Rojas.

425, 426: INDEPENDENT STUDY. [3, 3]
Prerequisite: senior standing as a major in Spanish and permission of the department chairman. 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 Spanish, with an overall grade point average of 3.0 and 3.0 in the major field. Students who meet these requirements will be 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 Spanish faculty. In the second semester, independent research and completion of an honors essay under the supervision of a member of the Spanish faculty.
Requirements for the Major

Candidates for Bachelor of Arts degree in history shall present, 33 hours of history and must include at least three hours of historiography or senior seminar. At least 18 hours of the total presented for the degree must consist of work in the 300 and 400 series. Not 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. The history major should plan a diversified program of varied historical fields (e.g., U.S., Europe, Latin America, Asia). Students seeking Virginia certification in secondary education should refer to the catalog section on the Department of Education for requirements.

Sample Program B.A. in History*

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### History Courses

101, 102: **HISTORY OF WESTERN CIVILIZATION.** [3, 3]

The historical development of western institutions, ideas, and cultures from antiquity to modern times.

121: **FORMATION OF THE AMERICAN REPUBLIC.** [3]

The social, political, economic, and intellectual growth of American institutions from colonization through the Civil War. 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]

History of the United States from 1865 to the present. Territorial expansion; Reconstruction and reaction; imperialism; industrialism, individualism, and opportunity; the time of social protest; the era of war and prosperity; economic collapse and the New Deal; the end of isolation; the sources and problems of world leadership and power.

241, 242: **A SURVEY OF EAST ASIAN CIVILIZATION.** [3, 3]

A survey of the history of China, Japan, Korea, and Vietnam from the pre-historic period to the present.

261, 262: **SURVEY OF AFRICAN CIVILIZATION.** [3, 3]

A survey of the history and cultural development of Africa and the African peoples from earliest times to the emergence of new African states from colonial domination. Particular attention is paid to Africa south of the Sahara, its unique and diverse cultural traditions, its relations with and effects on the rest of the world, as well as the contribution of the African heritage to the United States.
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.

301: HISTORY OF THE ANCIENT WORLD. [3]
Prerequisite: Six hours of history. A survey of the history of classical Greece and Rome, with particular attention to their cultural traditions, spiritual values, intellectual development, and political structures; early Christianity, its roots in Judaism and Greek thought, and growth within the context of the Roman Empire; the decay of the Western Empire; the early history of the Byzantine State.

302: EARLY MEDIEVAL EUROPE. [3]
Prerequisite: Six hours of history. European history from the fourth to the twelfth centuries: The decay of Roman authority and the emergence of Germanic power in the West; the role of the Church in early medieval society, the patristic tradition, the growth of the Papacy; the influence of Islam and the Byzantine Empire; the Carolingians and the "New Europe"; development of feudalism; Empire and Papacy. Emphasis on papal and imperial ideologies.

303: THE HIGH MIDDLE AGES. [3]
Prerequisite: Six hours of history. The High Middle Ages through the fifteenth century: The "Gothic World" of the twelfth and thirteenth centuries; the Crusades and the expansion of Europe; the triumph of the Papacy; growth of the secular state; doubt, plague, war, and the breakdown of the medieval consensus. Emphasis on cultural, social, and intellectual history and the development of political institutions.

306: RENAISSANCE AND REFORMATION. [3]
Prerequisite: Six hours of history. The history of late medieval and Renaissance Italy with particular attention to literature, art and philosophy. Europe in the late fifteenth and sixteenth centuries; humanist reformation, Protestant Reformation, and Counter-Reformation.

307: EUROPE FROM LOUIS XIV TO THE CONGRESS OF VIENNA. [3]
Prerequisite: Six hours of history. The history of western Europe from 1648 to 1815: transition of political, economic, and social institutions to their modern forms; secularized products of religious revolt; expansion of European influence; scientific and philosophical revolutions; the Enlightenment; the French Revolution and Napoleonic Wars.

308: NINETEENTH CENTURY EUROPE. [3]
Prerequisite: Six hours of history. The history of Europe from the Congress of Vienna to the outbreak of World War I: political and diplomatic developments; social and economic change; growth of liberalism, nationalism, and revolutionary ideologies; industrialization, technology, and materialism; cultural norms; unification movements and Irridentism; Imperialism; the failure of diplomacy and the collapse of the European state system.

309: HISTORY OF EUROPE SINCE 1914. [3]
Prerequisite: Six hours of history. A survey of major political changes in Europe since 1914 with emphasis upon broad patterns of ideological conflict.
314: HISTORY OF GERMANY. [3]
Prerequisite: Six hours of history. History of the political, diplomatic, economic, social and cultural development of Germany from the dissolution of the Holy Roman Empire to the present.

323: ENGLAND THROUGH THE REVOLUTION OF 1688. [3]
Prerequisite: Six hours of history. The development of modern England from the time of the Roman invasion through the Revolution of 1688. Roman Britain; Anglo-Saxon England; the Norman Conquest; the Angevin empire; town and country life; constitutional development; social, economic, and religious growth; Catholicism versus Protestantism; King against Parliament; Civil War and Interregnum; Restoration and Revolution.

324: ENGLAND FROM THE REVOLUTION OF 1688. [3]
Prerequisite: Six hours of history. History of England from 1688 to the present. Stuart England; political leadership; the Napoleonic era; growth of industrialization and its social and economic consequences; the period of reform; foreign affairs and imperialism, 1865-1905; the transition from Empire to Commonwealth; the role of Britain in the mid-twentieth century.

325: TUDOR AND STUART ENGLAND. [3]
Prerequisite: Six hours of history. A history of England from the Battle of Bosworth Field to the accession of George I.

328: RISE OF RUSSIA. [3]
Prerequisite: Six hours of history. An examination of political, social, and cultural experience of Russia from the appearance of the Kievian state to the age of Pushkin.

329: MODERN RUSSIAN AND THE SOVIET UNION. [3]
Prerequisite: Six hours of history. 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. The history of the exploration, settlement, and expansion of the frontier, with emphasis on its influence upon cultural and political institutions.

343, 344: DIPLOMATIC HISTORY OF THE UNITED STATES. [3, 3]
Prerequisite: Six hours of history. A survey of American diplomatic history from 1781 to the present. Emphasis is placed upon the domestic and external forces that have shaped American diplomacy and its conduct. The second semester deals with the twentieth century.

348: AMERICAN ECONOMIC HISTORY. [3]
Prerequisite: Six hours of history. A general survey of the history of American economic thought and development from colonial times to the present with stress upon 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. 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 emergence of economic, political, social, agricultural and intellectual institutions.
352: THE SOUTH SINCE 1865. [3]
Prerequisite: Six hours of history. 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 South’s twentieth century struggle to rejoin the mainstream of American life.

Prerequisite: Six hours of history. Latin-American history to 1825, with emphasis upon indigenous Indian civilizations, transplantation 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.

Prerequisite: Six hours of history. The development of an independent Latin America since 1825. Emphasis is on the interactions between the United States and Latin America.

363: THE HISTORY OF ARGENTINA, BRAZIL, AND CHILE. [3]
Prerequisite: History 361 or permission of instructor. An intensive study of the evolution of Argentina, Brazil, and Chile from the Colonial Period to the present with an emphasis upon the changing social, political, and economic conditions.

370: THE DIPLOMATIC HISTORY OF LATIN AMERICA. [3]
Prerequisite: History 362 or permission of instructor. A careful treatment of political, social and cultural relations of Latin American states with each other, the United States, Europe and the papacy from independence to the present. Emphasis will be placed upon the operation of a system of international power politics in Latin America.

401: COLONIAL AMERICA. [3]
Prerequisite: Six hours of history. An intensive study of colonial American history from its European origins through the Revolutionary War.

406: CIVIL WAR AND RECONSTRUCTION. [3]
Prerequisite: Six hours of history. An inquiry into the course, conduct and consequences of the American Civil War and its aftermath. Emphasis is placed on the interconnectedness of political, military and economic affairs.

411: CULTURAL AND INTELLECTUAL HISTORY OF THE UNITED STATES: 1600-1865. [3]
Prerequisite: Six hours of history. An inquiry into the cultural and intellectual currents in America to 1865. The Puritan mind and its legacy; the Enlightenment in America; American nationalism; the rise of social democracy; development of American liberalism and conservatism; revivalism and other religious developments; industrialism, liberal capitalism, and the idea of progress.
412: CULTURAL AND INTELLECTUAL HISTORY OF THE UNITED STATES SINCE 1865. [3]

Prerequisite: Six hours of history. American thought and society from 1865 to the present. The effects of industrialization upon basic American institutions; development of a business “credo”; the growth of radical thought in economics, politics and religion; changes in the social structure; the increasing power and influence of the state.

421: INTELLECTUAL AND CULTURAL HISTORY OF EUROPE, 1715-1848. [3]

Prerequisite: Six hours of history. The Enlightenment in Europe and its debt to seventeenth-century scientific thought. The reaction to the Enlightenment during and following the French Revolution, the Sturm und Drang literary movement in Germany, and Romanticism in England, France, and Germany. Parallel developments in political thought, science, philosophy, and the arts.

422: INTELLECTUAL AND CULTURAL HISTORY OF EUROPE, 1848 TO THE PRESENT. [3]

Prerequisite: Six hours of history. The artistic, literary, political reaction to the revolutions of 1848. The development of Scientific Socialism and the evolutionary theories in science. A discussion of irrationalist philosophies, sociology, psychology, and anthropology. Relativism. Fin-de-siècle Europe and the rise of Expressionism, Cubism, and non-objective painting. Twentieth-century Existentialism.

433: THE UNITED STATES IN THE TWENTIETH CENTURY. [3]

Prerequisite: Six hours of history or permission of instructor. An intensive study of the United States and its role in world affairs since World War I: post-war adjustment, false prosperity of the twenties, the great crash and depression, the New Deal, farm and labor problems; isolation and neutrality, World War II, the Cold War and containment, Korean War and problems associated with the Vietnam conflict.

438: SPANISH BORDERLANDS. [3]

Prerequisite: Six hours of history. 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 settlement; political, cultural, and social developments; foreign encroachment; incorporation of the area into the United States; and origins of the present Mexican-American minority.

441: FRANCE SINCE THE REVOLUTION. [3]

Prerequisite: Six hours of history. 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. Development of Spain and Portugal from prehistoric to modern times, noting particularly factors related to their former empires in America.

453: HISTORY OF MEXICO. [3]

Prerequisite: Six hours of history or permission of instructor. Intensive study of Mexican history from the pre-Columbian era to the present, with emphasis upon the national period.

Prerequisite: Six hours of history. 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. The political history of the Indo-Pakistan subcontinent from mid-eighteenth century to the present. Background of the earlier cultures of the Hindus and the Muslims will be presented as prelude to developments in the modern period.

471: MODERN CHINA. [3]

Prerequisite: History 241 or 242, or permission of instructor. China during the Ch'ing dynasty and the Republican era as the Confucian tradition broke down under the impact of Western penetration, giving rise to a struggle among various formulae (of which the Marxist-Leninist was ultimately successful) for China's salvation.

473: MODERN JAPAN. [3]

Prerequisite: History 241 or 242, or permission of instructor. Japan from the Meiji restoration in 1868 to the Second World War, with particular emphasis on Japan's uniquely successful modernization in the face of the challenge posed by the West following the opening of the country by Commodore Perry.

491, 492: SENIOR SEMINAR IN HISTORY. [3, 3]

Prerequisite: Open only to senior majors in history with consent of 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 will be determined by the instructor conducting the section, and may be obtained from him in advance.

493, 494: DIRECTED READINGS IN HISTORY. [3, 3]

Prerequisite: Open only to senior majors in history with consent of instructor. A student may not present more than six hours of directed readings for graduation credit. A rigorous examination of the literature on a specialized topic in history, to be conducted on an individual basis in consultation with the instructor.

497: AMERICAN HISTORIOGRAPHY. [3]

Prerequisite: Open only to senior majors in history with consent of instructor. An examination of the methods used in the study and writing of history. Research techniques. Reading of works of major American historians from the Colonial Period to the present.

498: EUROPEAN HISTORIOGRAPHY. [3]

Prerequisite: Open only to senior majors in history with consent of instructor. An examination of the methods used in the study and writing of history. Research techniques. Reading of the works of major European historians from Herodotus to the present.
Department of Mathematics

Associate Professors Oppelt (Chairman), Cabell, Draper, Kiley, Papp, Turner
Assistant Professors, Berman, Bolstein, Chambers, Childress, Dorey, Fischer, Saperstone, Seidman, Sennott, Shaw
Lecturer Cragg

Requirements for the Major

B.A. Program—In addition to general degree requirements for a B.A. degree the following courses are required: Mathematics 115, 116, 215, 216, plus 18 more hours of which at least fifteen must be numbered above 300 for a total of 34 semester hours in mathematics. Those students pursuing certification for secondary school teaching are advised to take Math 200, 221, 232, 266, 268 and 322. A sample schedule including certification requirements is available in the department.

Sample Schedule for B.A. Mathematics Majors*

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*See Introduction to Chapter V.
B.S. Program—In addition to general degree requirements for the B.S. degree the following courses are required: Mathematics 115, 116, 215, 216, 315, 316, 321, 322, plus eighteen more hours of which at least twelve must be numbered above 300 for a total of 46 semester hours in Mathematics.

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

Physics 113, 114, 213, 214, 215, 216;
Chemistry: four semesters excluding Chemistry 103, and 104, and 105;
Biology: four semesters excluding Biology 103, 104, and 140;
Chemistry 111-112 and Biology 113, 114.

The Department of Mathematics strongly recommends that a two-year proficiency in either French, German or Russian be demonstrated by each student pursuing a Bachelor of Science in Mathematics.

Sample Schedule for B.S. Mathematics Majors*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Natural Science</td>
<td>2-4</td>
</tr>
<tr>
<td>Math 115</td>
<td>4</td>
</tr>
<tr>
<td>English 101</td>
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<td>3</td>
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<tr>
<td></td>
<td>16-18</td>
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<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Natural Science</td>
<td>4-5</td>
</tr>
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<td>Math 215</td>
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<td>English Lit</td>
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<td>Language 251</td>
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*See Introduction to Chapter V.
<table>
<thead>
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<th>Mathematics Courses</th>
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**MATHEMATICS/117**

**Fifth Semester**

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>Math 315</td>
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<tr>
<td>Math 321</td>
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**Sixth Semester**

<table>
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<tbody>
<tr>
<td>Math 316</td>
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</tr>
<tr>
<td>Math 322</td>
<td>3</td>
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<tr>
<td>Elective (non-science)</td>
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<td>Electives</td>
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<tr>
<td><strong>Total</strong></td>
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**Seventh Semester**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Math 351</td>
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<tr>
<td>Math 400 level</td>
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<td>Electives</td>
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**Eighth Semester**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Math 352 or 382</td>
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<tr>
<td>Math 400 level</td>
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</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

Mathematics 113, 114, 213, 214 are not recommended for mathematics majors. Mathematics 103, 104, 106, 107, 108 and 261 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 Mathematics 266, 268, 313, 314, 351, 352, 382, 443, 444, 446, 447. An arts major to take either Mathematics 106 or the sequence 103, 104, and possibly 261. Students in the natural sciences who plan to do graduate work are advised to add to their basic calculus sequence from Mathematics 266, 268, 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, 261, 268.

**Mathematics Courses**

In exceptional cases the prerequisite for a course above the calculus sequence may be waived at the discretion of the instructor.

101: **ALGEBRA AND ELEMENTARY FUNCTIONS.**

*Meets 3 hours per week. No college credit is given. Basic algebraic manipulations. Linear equations and graphing. A study of the properties of polynomial, logarithmic, exponential, trigonometric functions.*

103, 104: **FINITE MATHEMATICS. [3, 3]**

Elementary set theory and probability, Matrix algebra, linear programming, Markov Chains and Game theory. Applications.

106: **CONCEPTS OF MATHEMATICS. [3]**

Important ideas in mathematics and their development.

http://catalog.gmu.edu
107, 108: MATHEMATICS OF MANAGEMENT. [3, 3]
Linear inequalities and programming, polynomial, exponential and log functions, graphing, probability, matrix algebra, elementary differential and integral calculus, least square approximations.

Must be taken in sequence. Functions, limits, the derivative, maximum and minimum problems, the integral, transcendental functions, applications. Techniques of integration, vectors and analytic geometry, differentiation of functions of several variables. Linear algebra and applications, vector differential calculus, multiple integrals and infinite series. Differential equations.

Must be taken in sequence. Analytic geometry, functions, differentiation and integration in several dimensions, infinite series, differential equations.

200: FOUNDATIONS OF MATHEMATICS. [3]
Prerequisite: Mathematics 116. Real numbers, axiom systems, naive set theory, cardinal and ordinal numbers.

221: NUMBER THEORY. [3]
Prerequisite: Mathematics 116. Prime numbers, factorization, congruences, Diophantine equations.

232: GEOMETRY. [3]
Prerequisite: Six semester-hours in mathematics. Fundamental concepts of incidence. Axioms of Euclidean geometry and the resulting theory, axioms and development of non-Euclidean and projective geometry.

261: INTRODUCTION TO COMPUTERS. [2]
Prerequisite: Three semester hours in mathematics. An introduction to the use of a computer, discussion of the basic underlying concepts, the study of computer languages and social scientific applications of computing.

266: INTRODUCTION TO COMPUTER SCIENCE. [2]
Prerequisite: Mathematics 114 or 116. Study of a computer system and its logic. Flow charts. A study of Fortran language, basic programming and its application to various problems in mathematics and the physical sciences.

268: COMPUTATIONAL MODELS AND PROBLEM SOLVING. [3]
Prerequisite: A knowledge of a scientific programming language. An introduction to various computer applications involving numerical analysis, operation research and data processing. The construction and interpretation of models drawn from the Biological, Behavioral and Physical sciences.

313, 314: INTRODUCTION TO APPLIED MATHEMATICS. [3, 3]
Prerequisite: Mathematics 214 or 216. Euclidean spaces. Fourier and orthogonal series, special functions, boundary-value problems, partial differential equations, special functions.

315, 316: ADVANCED CALCULUS. [3, 3]
Prerequisite: Mathematics 216. Elementary topology, metric spaces, limits, continuity, differentiation, integration, and series.
321: ABSTRACT ALGEBRA. [3]
Prerequisite: Mathematics 215. Theory of groups, rings, fields.

322: LINEAR ALGEBRA. [3]
Prerequisite: Mathematics 215. Vector spaces, linear independence, bases, linear transformations, matrix algebra, inner product, special topics.

351: PROBABILITY. [3]
Prerequisite: Mathematics 215. Random variables, probability functions, special distributions, limit theorems.

352: STATISTICS. [3]
Prerequisite: Mathematics 351. Estimation, decision theory, testing hypothesis, correlation, linear models and design.

382: INTRODUCTION TO STOCHASTIC PROCESSES. [3]
Prerequisite: Mathematics 315 or Mathematics 313 and Mathematics 351. General notion of stochastic processes, finite and infinite Markov chains, discrete and continuous Markov processes, stationary processes, random walk problems, birth and death processes, waiting line and serving problems, Brownian motion.

391, 392: READING AND PROBLEMS. [1-3, 1-3]
Enrollment restricted to mathematics majors. Independent study in mathematics. Must be arranged with instructor previous to registration.

411: FUNCTIONS OF A COMPLEX VARIABLE. [3]
Prerequisite: Mathematics 316. Analytic functions, contour integration, residues, and applications to such topics as integral transforms, generalized functions and boundary value problems.

431: TOPOLOGY. [3]
Prerequisites: Mathematics 216 and six hours of mathematics at or above the 300 level. Metric spaces, topological spaces, compactness, connectedness.

443, 444: DETERMINISTIC MODELS IN OPERATIONS RESEARCH. [3, 3]
Prerequisite: Mathematics 322, or permission of instructor. Linear programming, network models, and simulation, introduction to nonlinear and dynamic programming, game theory. Applications to economics, transportation and distribution problems, personnel or machine assignment and scheduling, blending problems, management of national resources.

446, 447: NUMERICAL ANALYSIS AND DIGITAL COMPUTATION. [3, 3]
Prerequisite: Mathematics 216 and a knowledge of a scientific programming language. Numerical solutions of ordinary and partial differential equations, numerical differentiation and integration, significant figures, errors. Formulation of numerical problems for solution on digital computers.
Department of Philosophy and Religion

Professors McFarlane (Chairman), Dykstra
Associate Professors Houlgate, Kreilkamp, McDermott
Assistant Professors Bergoffen, Fletcher, Holman, Pielke, Swann, Yance
Lecturers Badr, Sinks

Requirements for the 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 the general requirements for the Bachelor of Arts degree, philosophy majors must complete at least 30 semester hours in philosophy (exclusive of Phil. 100—Introduction to 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).

Sample Schedule for Philosophy Majors*

<table>
<thead>
<tr>
<th>First Semester</th>
<th></th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Natural Science</td>
<td>4</td>
<td>Natural Science</td>
<td>4</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
<td>Foreign Language</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy 173 or 211</td>
<td>3</td>
<td>Philosophy 251 or 373 or 374</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Mathematics or Natural Science</td>
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*See Introduction to Chapter V.
### Third Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Literature</td>
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</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>3</td>
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<tr>
<td>(Group A or B)</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Philosophy 231</td>
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<td>Philosophy Elective</td>
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### Fourth Semester

<table>
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<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
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</tr>
<tr>
<td>(Group A or B)</td>
<td></td>
</tr>
<tr>
<td>Non-Western Culture</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 232</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy Elective</td>
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### Fifth Semester

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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>(Group A or B)</td>
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</tr>
<tr>
<td>Non-Western Culture</td>
<td>3</td>
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<tr>
<td>Philosophy 332</td>
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</tr>
<tr>
<td>Philosophy Electives</td>
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### Sixth Semester

<table>
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<tbody>
<tr>
<td>Social &amp; Behavioral Sciences</td>
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<td>(Group A or B)</td>
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</tr>
<tr>
<td>Philosophy 333</td>
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<td>Philosophy Electives</td>
<td>6</td>
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<td>Non-Philosophy Elective</td>
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### Seventh Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Philosophy 421 (423)</td>
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<tr>
<td>Electives</td>
<td>12</td>
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### Eighth Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Philosophy 422 (424) or 425</td>
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<td>Electives</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

### Philosophy Courses

**100: INTRODUCTION TO PHILOSOPHY. [3]**

An introduction to the nature of philosophical reasoning and to some of the main problems of philosophy. *May not be counted towards the major in philosophy.*

**173: LOGIC. [3]**

A study of basic concepts and techniques of deduction, emphasizing the modern treatment of such topics as quantification and rules of inference, but with some study of the classical treatment as well. Also studied are basic principles of induction, the informal fallacies, and the uses of logic in everyday life.

**211: SOCIAL AND POLITICAL PHILOSOPHY. [3]**

An examination of the philosophical foundations of some of the major concepts and institutions in social and political thought such as society, the family, education, religion, economics, the state, human rights, freedom, morality, law, authority and civil disobedience. An effort will be made to show how these concepts and institutions reflect various assumptions concerning the nature of man, and how they relate to contemporary social and ideological movements.
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 Philosophy 413.*

231, 232: HISTORY OF WESTERN PHILOSOPHY. [3, 3]

A survey of leading thinkers from early Greek philosophy to the twentieth century. First semester: the Pre-Socratics, Plato, Aristotle, Augustine, Aquinas, and others. Second semester: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Hegel, Bergson, Whitehead, the Pragmatists, and others.

251: ETHICS. [3]

A consideration of some of the perennial issues in ethical theory with a view toward 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 Philosophy 151.*

254: CONTEMPORARY ETHICAL PROBLEMS. [3]

*Prerequisite: Philosophy 251.* An examination of some contemporary ethical problems, e.g., Homosexuality, Abortion, Drugs, Civil Disobedience, Capital Punishment, the Rights of the Individual vs. the Rights of Society, from the point of view of the dominant systems of ethics in use today, e.g., Utilitarianism, Deontology, Self-realization ethics, Situationism.

273: INTRODUCTION TO SYMBOLIC LOGIC. [3]

A study of predicate calculi by means of a step-by-step construction of artificial languages. Topics to be covered include procedures for constructing a calculus, proof techniques, significant properties of predicate calculi (e.g., completeness and consistency), and procedures for recognizing phrases (parsing algorithms).

311: PHILOSOPHY OF LAW. [3]

*Prerequisite: 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, e.g., What is the nature of law? What is a legal system? What is a valid law? What is a good reason for a judicial decision?

313: PHILOSOPHY OF RELIGION. [3]

*Prerequisite: Three credits in philosophy.* A study of classical appeals to philosophy in support of belief in God's existence (Philo, Augustine, Anselm, Aquinas, Descartes); the fideism of Hume and the metaphysical agnosticism of Kant; the concept of religious experience in the philosophies of Hegel, Schleiermacher, and Kierkegaard; the problem of religious language in contemporary empirical philosophy. *This course may not be taken by students who have already taken Philosophy 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 will be 1) to distinguish the historical from the unhistorical attitude of human consciousness; and 2) to investigate the various forms of historical consciousness by studying the Greek, Biblical and Secular interpretations of history. *This course may not be taken by students who have already taken Philosophy 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, Peirce, 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 Philosophy 173 or 232 or 273 or 372. An examination of twentieth-century analytic philosophy. Figures and movements covered will include Moore, Russell, Wittgenstein, logical positivism, and ordinary language philosophy.

333: CONTEMPORARY CONTINENTAL THOUGHT: EXISTENTIALISM AND PHENOMENOLOGY. [3]

Prerequisite: Three credits in philosophy. Philosophy 232 is recommended. A study of phenomenological and existential thought which clarifies phenomenology as the method of existentialism and which shows existential thought to be rebelling against, though rooted in, traditional philosophical thought.

334: LATIN AMERICAN THOUGHT. [3]

Prerequisite: Three credits in philosophy. Historical sources and present range of Latin American thought. Metaphysical, ethical and aesthetic themes from colonial-period scholasticism to modern personal and national philosophies. Distinguished philosophers of recent times such as Korn and Romero (Argentina), Farias Brito (Brazil), Varona (Cuba), Caso and Vasconcelos (Mexico), Deustua (Peru), and Vaz Ferreira (Uruguay). The broad spectrum of contemporary thought touching religious, social and political topics.


Prerequisite: Three credits in philosophy. One course in ethics is recommended. Intensive examination of contemporary political thought from the perspective of ethical theory. The course will be offered in alternate semesters in the following sequence: democracy, communism, third world political thought and radical political thought. Need not be taken in sequence.

355: MODERN ETHICS. [3]

Prerequisite: Three credits in philosophy. Philosophy 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 problem of freedom of the will. This course may not be taken by students who have already taken Philosophy 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 are: Can 'art' be defined? What is the nature of an aesthetic experience? What is the role of art in society? Can one justify critical evaluations of works of art?

357: PHILOSOPHY OF THE SOCIAL SCIENCES. [3]

Prerequisite: Three credits in philosophy. An inquiry into philosophical aspects of the scope, methods, and uses of the behavioral and social sciences, with special emphasis on the issues of freedom and values.
371: PHILOSOPHY OF NATURAL SCIENCE. [3]  
Prerequisite: Three credits in philosophy. One semester of logic recommended. A study of the aims and methodology of science. Among the questions of concern are what is a theory, what constitutes a good scientific explanation, how are new theoretical terms introduced into the language of science, what grounds are used for comparing rival theories, and is there a special method of scientific discovery.

372: PHILOSOPHICAL METHODS. [3]  
Prerequisite: Three credits in philosophy. A consideration of the question, "What is philosophy?" by examining various philosophical methods. The course will have a two-fold emphasis: (1) to study the internal relationship between a philosopher's method, doctrines and concept of philosophy, and (2) to examine the inter-relationship between philosophers, i.e., to indicate how philosophers' criticisms of each other have affected the philosophical enterprise per se. 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 perception, to belief, and to language. This course may not be taken by students who have already taken Philosophy 171.

374: PHILOSOPHY OF MIND. [3]  
Prerequisite: Three credits in philosophy. An investigation of such theories as dualism, behaviorism, materialism, and double-aspect as they pertain to some of the central philosophical questions about mind, e.g., What is 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 others. This course may not be taken by students who have already taken Philosophy 271.

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 concentration may be admitted if the topic is sufficiently close to their fields of study. Topics will vary from semester to semester.

425, 426: INDEPENDENT STUDY. [3, 3]  
Prerequisite: Open only to 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 to produce at least one major piece of written work during the semester.
Religion Courses

Courses are listed below in numerical sequence; areas of study may be identified by the second digit of the course numbers as follows:

1: History of Religions
3: Religion and Culture
5: Religious Literature
7: Religious Thought

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 will be explored as expressed in contemporary anthropology, sociology, psychology, philosophy and literature. Students who have taken Religion 236 may not take this course.

211: RELIGIONS OF THE NEAR EAST. [3]

212: RELIGIONS OF THE ORIENT. [3]

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 interrelationship of religion and the political-social-economic life, and consideration of the modern scene.

237: RELIGIOUS DIMENSIONS OF CONTEMPORARY DRAMATIC LITERATURE. [3]
An examination of contemporary religious thinking through the study of selected 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.

238: BLACK RELIGION. [3]
An examination of the interrelationship between black religion and culture. The history and interpretation of the black religious experience will be understood as it finds expression through literature and the arts, as well as through contemporary social and political movements. Students who have taken Religion 376 may not take this course.

A survey of the development of the Old Testament and intertestamental literature, with attention given to the literary, historical, and theological aspects.

The Graeco-Roman World, Hellenistic and Palestinian Judaism, Dead Sea Scrolls, New Testament origins and teachings, the early Christian Community and its faith.
271: CONTEMPORARY RELIGIOUS ETHICS. [3]
Prerequisite: Sophomore standing or higher, or permission of instructor. A philosophical examination of some of the major theoretical and practical issues in contemporary Judeo-Christian morality. Among the issues to be studied are the following: the relationship between religious and nonreligious ethics, deontological and teleological ethical reasoning, situation ethics, and religious ethical judgments made in such areas as politics, economics, medicine, and sex. Students who have taken Philosophy 253 may not take this course.

332: AMERICAN RELIGION IN SOCIAL THOUGHT AND ACTION. [3]
Prerequisite: Rel. 231 or permission of instructor. An in-depth study of the churches' involvement in social thought and action. Areas of analysis include: church, state, and freedom; the churches and the nation's wars; slavery, segregation, and racial problems; nineteenth century moral crusades; social sources of denominationalism and church unity; views of radical sects and cults; the economic order and the "social gospel"; social issues in modern America.

334: RELIGION IN THE THEATRE OF ASIA. [3]
Prerequisite: Religion 212, or permission of instructor. A study of certain Indian and Japanese theatre genres and their dramatic literature in their relation to the great religions of India and Japan.

372: DEATH OF GOD THEOLOGY. [3]
Prerequisite: Junior standing and six hours of religion or philosophy, or permission of instructor. An intensive examination of the "Death of God" movement, conducted in a seminar format. The writings of major participants will be critically studied, including those of Gabriel Vahanian, William Hamilton, Thomas J. J. Altizer, Richard Rubenstein, and Paul van Buren. The reactions and replies to this movement will also be carefully considered.

374: PROCESS THEOLOGY. [3]
Prerequisite: Junior standing and six hours of religion or philosophy, or permission of instructor. An intensive examination of the philosophical background and the major exponents of Process Theology. The writings of Alfred N. Whitehead, Charles Hartshorne, John Cobb, Henry Wieman, Daniel D. Williams, Norman Pittenger, Schubert Ogden and Pierre Teilhard de Chardin will be included and studied in a seminar format.
Department of Physics

Professors Johnston (Chairman), Mielczarek
Associate Professors Lankford, Papaconstantopoulos
Assistant Professors Black, Lieb, Welanetz
Lecturers Flinn, Klein, McKinley

Requirements for the Major

All entering freshmen in physics are required to take a proficiency examination in elementary algebra and trigonometry. The test will be given on the following designated dates, before the beginning of the summer, fall, and spring semesters: Saturday, May 18, 1974; Thursday, August 22, 1974; and Thursday, January 9, 1975.

A summer school student who fails the examination will be required either to take Mathematics 101 or to retake and pass the examination in August prior to fall registration.

In addition to the general degree requirements, the B.S. 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 B.S. degree: Physics 113, 114, 213, 214, 215, 216, 303, 305, 306, 402, 403, 405, 407. The remaining nine credits are to be elected from Physics 408, 410, 414, 302, 207, and 411, with at least five credit hours from the first three courses. In addition to the two year calculus sequence the following courses are required for the B.S. degree: Physics 311 or Mathematics 313, Physics 312 or Mathematics 314, plus one course in mathematics at the 300 or 400 level.

The courses labeled Problems in Physics are intended for the outstanding student who can proceed beyond the standard requirements of the other courses in the physics program.

The student electing the Bachelor of Science program in physics will be required to demonstrate a proficiency in computer programming by examination. This examination must be attempted before entering the senior year.

In addition to the general degree requirements, the B.A. in physics requires the completion of 31 semester-hours in the major and 17 semester-hours of mathematics. The following physics courses are required: Physics 113, 114, 213, 214, 215, 216, 303, 305, 306, 402 and either 407 or 302.

The physics faculty will offer a comprehensive examination each spring which shall be optional for senior physics majors. An outstanding performance on this examination will entitle the student to the following statement on his or her transcript: “Senior Comprehensive Examination in Physics Passed with Distinction, (date)...................”
Sample Schedule for the B.S. Degree in Physics*

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<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>Physics 113</td>
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<tr>
<td>Math 113</td>
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<td>Chem 111 or Biology 113</td>
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<td>Eng 101</td>
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<td>Elective</td>
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<tr>
<td>Third Semester</td>
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<td>Physics 213</td>
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<td>Physics 215</td>
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<td>Math 213</td>
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<td>Eng Lit</td>
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<tr>
<td>Fifth Semester</td>
<td>Sixth Semester</td>
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<tr>
<td>Physics 303</td>
<td>3</td>
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<tr>
<td>Physics 305</td>
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<tr>
<td>Physics 311 or Math 313</td>
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<tr>
<td>Math Elective</td>
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<td>Elective</td>
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<tr>
<td>Seventh Semester</td>
<td>Eighth Semester</td>
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<tr>
<td>Physics 403</td>
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<td>Physics 405</td>
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<td>Physics 407</td>
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<td>Math Elective</td>
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<td>Elective</td>
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*See Introduction to Chapter V.
Physics Courses

101-102: INTRODUCTORY COLLEGE PHYSICS. [4-4]
A sound background of high school algebra, geometry and trigonometry is essential. A terminal course in physics intended to fulfill the natural science requirements of the college. The principles of mechanics, heat, electricity and magnetism, optics, atomic and nuclear physics. Three hours lecture, three hours laboratory or supervised work.

*113: GENERAL PHYSICS I. [2]
Corequisite: Mathematics 113. Mechanics. Two hours lecture, one hour recitation.

114: GENERAL PHYSICS II. [2]
Prerequisite: Physics 113 and Mathematics 113. Corequisite: Mathematics 114. Mechanics, heat, properties of matter. Two hours lecture, one hour recitation.

126: PROBLEMS IN PHYSICS I. [1]
Prerequisite: Physics 113 and Mathematics 113 with 4.0 average. Individual study of physics problems of current interest.

201: ENERGY AND ENVIRONMENT. [3] [Offered second semester only]
No prerequisite. A study of the basic ideas of science and technology with emphasis on their interaction with our contemporary culture. The course is designed for the science and non-science major who has an interest in our current concerns of energy and environment, and will deal with the origin, forms, uses and distribution of energy and resulting environmental effects. Students who have taken Physics 201 under the old title will be excluded from this course. The course may not be included for credit by physics majors within the 44 hours of physics courses required for the B.S., or within the 31 hours of physics courses required for the B.A. degree. Three hours lecture.

203: INTRODUCTION TO ELECTRONIC INSTRUMENTS. [2]
Prerequisite: Physics 101-102. A course designed for biology and chemistry majors to cover basic theory and operation of various electronic instruments and devices. One hour lecture, three hours laboratory. This course may not be applied toward a degree in physics.

207: THERMODYNAMICS. [3] [Same as Engineering 207]
Prerequisite: Physics 114 and Mathematics 114. Classical concepts of energy and temperature, basic definitions, first and second laws and their application to engineering systems, properties of pure substances, equations of state, analysis of thermodynamics processes. Three hours lecture.

213: GENERAL PHYSICS III. [3]
Prerequisite: Physics 114 and Mathematics 114. Corequisite: Physics 215 and Mathematics 213. Electricity and magnetism. Three hours lecture, one hour recitation.

The four-semester sequence, Physics 113, 114, 213, 214, 215, 216 is a calculus-based course in general physics to be taken by physics, chemistry, engineering and those mathematics and science students who require a more intensive course than Physics 101 and 102.
215: GENERAL PHYSICS III. [Laboratory] [2]
Prerequisite: Physics 114 or Physics 102. Corequisite: Physics 213 or permission of instructor. Emphasis is given on the use of the oscilloscope. Three laboratory hours.

214: GENERAL PHYSICS IV. [3]

216: GENERAL PHYSICS IV. [Laboratory] [2]
Prerequisite: Physics 114 or Physics 102. Corequisite: Physics 214 or permission of instructor. Experiments on optics and modern physics. Three laboratory hours.

225: PROBLEMS IN PHYSICS II. [1]
Prerequisites: Physics 114 and Mathematics 114 with 4.0 average. Individual study of physics problems of current interest.

226: PROBLEMS IN PHYSICS III. [1]
Prerequisite: 3.75 average through Physics 213, 215 and Mathematics 213. Individual study of physics problems of current interest.

302: ELECTRONICS. [4] [Same as Engineering 302]
Prerequisite: Physics 213, 215 or permission of instructor. A lecture and laboratory course in electronics, design and operational characteristics of power supplies, amplifiers, oscillators, servomechanisms, and digital counting circuits. Six laboratory hours, two hours lecture.

303: CLASSICAL MECHANICS. [3]
Prerequisite: 214, 216 and Mathematics 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]

306: WAVE MOTION AND ELECTROMAGNETIC RADIATION. [3]
Prerequisite: Physics 305. Vibrating string, plane waves, interference, diffraction, polarization, electromagnetic waves, dispersion, relativity. Three hours lecture.

311, 312: METHODS IN THEORETICAL PHYSICS. [3, 3]
Prerequisite: Physics 214 and Mathematics 214 or 216. Physics 311 or Mathematics 313 is prerequisite for 312. A study of mathematical techniques as applied in classical and modern physics. Ordinary and partial differential equations, special functions, Fourier series, Laplace transforms, integral equations, matrices and tensors. Three hours lecture.

325: PROBLEMS IN PHYSICS IV. [1]
Prerequisite: 3.75 average through Physics 214, 216 and Mathematics 214. Individual study of physics problems of current interest.
326: PROBLEMS IN PHYSICS V. [1]

Prerequisite: Junior status; 3.50 average in physics and mathematics. Individual study of physics problems of current interest.

402, 403: INTRODUCTION TO QUANTUM MECHANICS AND ATOM PHYSICS. [3, 3]

Prerequisite: Physics 303, or permission of instructor. Physics 402 is prerequisite to Physics 403. The experimental basis of quantum mechanics, the wave function, systems in one, two and three dimensions, perturbation theory, the variation principle, Hermitian operators and angular momentum, the theory of scattering. Three hours lecture.

405: STATISTICAL MECHANICS AND THERMODYNAMICS. [3]

Prerequisite: Physics 402. Statistical methods, systems of particles, thermodynamics, macroscopic parameters, the ideal gas, kinetic theory, quantum statistics, and transport processes. Three hours lecture.

407: SENIOR LABORATORY IN MODERN PHYSICS. [3]

Prerequisite: Senior status. Experiments in modern physics involving advanced techniques in electronics, optics, nuclear physics and solid state. Typical experiments: the Franck Hertz Experiment, Hall Effect, electron paramagnetic resonance, Mossbauer Effect. Nine laboratory hours.

408: SENIOR RESEARCH. [2 or 3]

Prerequisite: Senior Status. The student will work under the guidance of a staff member on a research project in experimental or theoretical physics. The hours of credit (2 or 3) will be agreed upon in advance by the student and staff member.

410: SOLID STATE PHYSICS. [3]

Prerequisite: Physics 402. Crystal structures, binding, lattice vibrations, the free electron model, metals, semiconductors, superconductivity, magnetism. Three hours lecture.

412: COMPUTATIONAL PHYSICS. [3]

Prerequisites: Physics 311 or equivalent and Mathematics 266 or permission of instructor. Solutions to current problems in physics using digital computers. Three hours lecture.

414: INTRODUCTORY NUCLEAR PHYSICS. [3]

Prerequisite: Physics 402. Alpha, Beta and Gamma emission and internal conversion; interactions of charged particles and Gamma rays with matter; neutrons; nuclear models and reactions; elementary theory of nuclear forces; subnuclear particles. Three hours lecture.

425: PROBLEMS IN PHYSICS VI. [1]

Prerequisites: Senior status; 3.25 average in physics and mathematics. Individual study of physics problems of current interest.

Astronomy Course

103: ASTRONOMY. [3]

No prerequisite: A descriptive introduction to the principles and topics of modern astronomy. The solar system, the galaxies, quasars, and the nature of space radiation are discussed. The contemporary theories of the origin of the universe including the pertinent ideas of the general theory of relativity are also considered. Three hours lecture.
Engineering Courses
(Two Years Only)

104: INTRODUCTION TO ENGINEERING. [3]
Introduction to the technological problems encountered in the profession of engineering and the role of the engineer in society. Approaches and methods used in problem solving, including computer techniques. Three hours lecture.

191: ENGINEERING GRAPHICS. [3]
Fundamentals of engineering drawing, descriptive geometry, graphical analysis and design. Specific topics include geometrical construction, multiview drawing, pictorial drawing, sectioning, dimensioning and assembly drawing. Two hours lecture, three hours laboratory.

205: ENGINEERING MECHANICS: STATICS [3]
Prerequisite: Mathematics 114. Resolution and composition of forces by analytical methods. Analysis of forces in structures and machine members. Centroids, equilibrium, friction, moments of inertia. Three hours lecture.

206: DYNAMICS. [3]

207: THERMODYNAMICS. [3] [Same as Physics 207]
Prerequisite: Mathematics 114 and Physics 114. Classical concepts of energy and temperature, basic definitions, first and second laws and their application to engineering systems, properties of pure substances, equation of state, analysis of thermodynamic processes. Three hours lecture.

208: MECHANICS OF MATERIALS. [3]
Prerequisite: Engineering 205 and Physics 114 or permission of instructor. Concepts of stress, 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]

302: ELECTRONICS. [4] [Same as Physics 302]
Prerequisite: Physics 213, 215 or permission of instructor. A lecture and laboratory course in electronics, design and operational characteristics of power supplies, amplifiers, oscillators, servomechanisms, switching, timing and digital counting circuits. Six laboratory hours, two hours lecture.
Department of Psychology

Assistant Professor Mellinger (Acting Chairman)
Professors Jordan, Mandes
Associate Professors Altman, Cooper, Moretz
Assistant Professors Buffardi, Cohen, Gessner, McKeithen, Pasnak, Peng, Sanford, Tyer
Acting Assistant Professors Gurkanayk, Madero, Walters
Lecturers Bruml, Collins, Crowe, Granada, Ladkin, Meister, Mendelsohn, Van Den Heuval

Requirements for the Major

While fulfilling the general degree requirements for a Bachelor of Arts degree, students majoring in psychology must accumulate 30 hours in psychology. These hours must include Psychology 100, Psychology 200, either Psychology 260 or 360 and one of the following: Psychology 304, Psychology 305, Psychology 309, Psychology 311, or Psychology 316. Hours earned in psychology may be applied to both the general degree requirement and the psychology major.

Areas in psychology may be located by the last two digits of each course number (experimental 00, developmental 10, clinical 20, industrial-social 30, and general, 60). It is recommended that students with a serious interest in psychology distribute courses over as many areas as possible in order to get a comprehensive picture of modern psychology. A student intending to major in psychology should take Psychology 200 as early as possible in the program since it is a prerequisite to several other courses. In addition, it is recommended that the student planning to pursue graduate study in psychology take Psychology 206, Psychology 320, and Psychology 360.
Sample Schedule for Psychology Majors*

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<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>English 101</td>
<td>English 102</td>
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<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
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<tr>
<td>Natural Science</td>
<td>Natural Science</td>
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<tr>
<td>Psychology 100</td>
<td>Psychology 200</td>
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<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tbody>
<tr>
<td>English Literature</td>
<td>Psychology 260 or 360</td>
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<tr>
<td>Foreign Language</td>
<td>Electives</td>
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<tr>
<td>Philosophy 101</td>
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<td>Psychology (any 200 level course)</td>
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<td>Elective</td>
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<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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<tbody>
<tr>
<td>English Literature</td>
<td>Psychology (any 300 level courses for which student has prerequisites)</td>
</tr>
<tr>
<td>Philosophy 102</td>
<td>Electives</td>
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<tr>
<td>Psychology 304, 305, 308, 309, 311</td>
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<tr>
<td>Electives</td>
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<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tr>
<td>Psychology (any 300 or 400 level courses)</td>
<td>Psychology</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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Psychology Courses

100: BASIC CONCEPTS IN PSYCHOLOGY. [3]

Prerequisite to all other courses in psychology. An introduction to psychology as a scientific discipline including an examination of the concepts and methods in learning, motivation, development, personality and measurement. Students who have taken Psychology 101-102 cannot take this course.

*See Introduction to Chapter V.
102: GENERAL PSYCHOLOGY. [3]
Prerequisite: Psychology 101. A continuation of Psychology 101. Students must have had Psychology 101 to earn credit for Psychology 102. Fall term 1974 is the last time Psychology 102 will be offered.

Prerequisite: Psychology 100 or permission of instructor. Descriptive and inferential statistics in design, analysis and interpretation of psychological research with practical application using calculators. Three classroom and two laboratory hours. Students who have taken Psychology 221 cannot take this course.

205: SENIOR PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. Biology desirable but not required. A review of the sensory systems in animals and man including sensory physiology, psychophysics and experimental psychology.

206: PHYSIOLOGICAL PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. Biology desirable but not required. A 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 Psychology 307 cannot take this course.

207: GENERAL EXPERIMENTAL PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. A survey of animal and human learning, perception and motivation.

210: CHILD PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of 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. Students who have taken Psychology 203 cannot take this course.

215: ADOLESCENT PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. A study of the biological and cultural changes accompanying adolescence including the effect of these changes on emotional, intellectual, and social development. Students who have taken Psychology 204 cannot take this course.

220: PERSONALITY THEORY. [3]
Prerequisite: Psychology 100 or permission of instructor. An introduction to classical and contemporary theories of personality and a comparative evaluation of major theories in terms of relevant research studies. Students who have taken Psychology 202 cannot take this course.

230: INDUSTRIAL PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. An examination of the application of psychological principles and methods to problems commonly encountered in business and industry. Students who have taken Psychology 315 cannot take this course.

231: SOCIAL PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. A study of man's development in a social matrix including such topics as socialization, cultural
behavior, group norms and attitude formation. Students who have taken Psychology 201 cannot take this course.

260: HISTORY OF PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of 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 Psychology 211 cannot take this course.

304: PRINCIPLES OF ANIMAL LEARNING. [4]
Prerequisite: Psychology 200 or permission of instructor. Experimental methodology within the context of the basic principles of animal learning including such topics as classical and instrumental conditioning and discrimination learning. Three classroom and two laboratory hours.

305: HUMAN LEARNING AND MEMORY. [4]
Prerequisite: Psychology 200 or permission of instructor. Experimental methodology within the context of discrimination, concept formation, verbal learning, psycholinguistics and memory. Three classroom and two laboratory hours. Students who have taken Psychology 313 cannot take this course.

309: PERCEPTION. [4]
Prerequisite: Psychology 200 or permission of instructor. Experimental methodology within the context of perpetual psychology including such topics as psychophysics, perceptual organization and constancies. Three classroom and two laboratory hours. Students who have taken Psychology 431 cannot take this course.

310: DEVELOPMENTAL PSYCHOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. A review of the major developmental theories of man including perspectives of childhood, adolescence, adulthood and old age. This course will not apply as credit hours in the psychology major if students use 210, 215 or 314 for major credit.

311: COMPARATIVE PSYCHOLOGY. [4]
Prerequisite: Psychology 200 or permission of instructor. Experimental methodology within the context of a study of behavior through the phylogenetic continuum including such topics as species-specific behavior, early experience and learning. Three classroom and two laboratory hours. Students who have taken Psychology 410 cannot take this course.

312: PSYCHOLOGY OF MATURITY. [3]
Prerequisite: Psychology 220 or permission of instructor. An analysis of cognitive and behavioral components of maturity including such topics as positive mental health and its supportive environment.

314: PSYCHOLOGY OF GERONTOLOGY. [3]
Prerequisite: Psychology 100 or permission of instructor. An investigation of the impact of physiological and social factors on the psychology of aged persons.

316: MOTIVATION. [4]
Prerequisite: Psychology 200 or permission of 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: Psychology 200 or permission of instructor. An examination and application of the principles underlying the theory, interpretation and administration of psychological tests including a study of tests of intelligence, achievement and ability. Three classroom and two laboratory hours. Students who have taken Psychology 401 cannot take this course.

321: COUNSELING PSYCHOLOGY. [3]
Prerequisite: Psychology 325 or permission of instructor. A review of the theories and methods in psychological counseling.

Prerequisite: Psychology 200 or permission of instructor. A review and application of some research techniques including interviewing, survey analysis and process analysis. Three classroom and two laboratory hours.

324: APPLIED BEHAVIOR PRINCIPLES. [3]
Prerequisite: Psychology 325 or permission of instructor. A review of the application of various experimental principles to a wide variety of situations including such topics as programmed learning and behavior modification.

325: ABNORMAL PSYCHOLOGY. [3]
Prerequisite: Psychology 220 or permission of instructor. A study of the development of abnormal behavior patterns including such topics as methods of diagnosis and prevention of serious mental disorders such as psychosomatic disorders, psychoses, character disorders and mental retardation. Students who have taken Psychology 301, 302 cannot take this course.

331: ECOLOGICAL PSYCHOLOGY. [3]
Prerequisite: Psychology 200 and one experimental course or permission of instructor. Theory and methods of ecological psychology encompassing man-environment relationships including the assessment of the coercive aspects of the total environment.

360: THEORIES AND SYSTEMS OF PSYCHOLOGY. [3]
Prerequisite: Nine hours of psychology or permission of 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. Students who have taken Psychology 413 cannot take this course.

361: THINKING AND PROBLEM SOLVING. [3]
Prerequisite: Psychology 100 or permission of instructor. A study of the major psychological theories of thinking and problem solving including a critical review of the experimental and empirical evidence relating to them. Students who have taken Psychology 306 cannot take this course.

411: INFANT DEVELOPMENT. [3]
Prerequisite: Psychology 210 or permission of instructor. An examination of current issues, research methods and clinical evaluation techniques in the field of infant development. Students who have had Psychology 403 may not take this course.

412: PERCEPTUAL AND COGNITIVE DEVELOPMENT. [3]
Prerequisite: Psychology 210 or permission of instructor. A review of the
theories of perceptual and cognitive development including the works of Piaget, Gibson, Bruner, Sigel and Hunt. **Students who have had Psychology 303 may not take this course.**

414: BEHAVIOR DISORDERS OF CHILDHOOD. [3]
*Prerequisite: Psychology 210 and 325 or permission of instructor.* A review of the theories, methods, and research dealing with emotional and behavioral disorders of children.

420: CLINICAL METHODS IN PSYCHOLOGY. [3]
*Prerequisite: Psychology 325 or permission of instructor.* The historical and empirical foundations of clinical psychology including a review of current clinical practice. **Students who have had Psychology 416 cannot take this course.**

421, 422: PRACTICUM IN CLINICAL PSYCHOLOGY. [3, 3]
*Prerequisite: Twelve hours of upper division courses in clinical psychology.* Supervised experience in the application of psychological principles requiring work in a non-classroom situation.

423: GROUP PSYCHOTHERAPY TECHNIQUES. [3]
*Prerequisite: Psychology 220 or permission of 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.

430: HUMAN FACTORS ENGINEERING. [3]
*Prerequisite: 230 or permission of instructor.* An investigation of the complex man-machine interactions found in industry today. Extensive empirical research findings will be examined.

432: SEMINAR IN ORGANIZATIONAL PSYCHOLOGY. [3]
*Prerequisite: Psychology 230 or permission of instructor.* A review of the theories and research relating to such topics as job satisfaction and motivation.

460: INDEPENDENT STUDY IN PSYCHOLOGY. [1-3]
*Prerequisite: A required experimental course and a research proposal approved in advance by the instructor and the department chairman. Open to junior and senior majors only.* An investigation of a psychological problem according to individual interest with stress on research methods. **Students who have had Psychology 499 cannot take this course.**

461, 462: SPECIAL TOPICS. [3, 3]
*Prerequisite: Permission of instructor.* Selected topics reflecting interest in specialized areas to be announced in advance. **Students who have had Psychology 480 cannot take this course.**
Department of Public Affairs

Professor Early (Chairman)
Associate Professor Khoury
Assistant Professors Godbold, Knight, Nicholson
Acting Assistant Professor Hegedus
Instructors Andrews, Fonseca
Lecturers Jentsch, Neal

Geography Courses

101: MAJOR WORLD REGIONS. [3]
A geographic analysis of the patterns, problems, and prospects of the world's principal human-geographic regions, including Anglo-America, Europe, Far East, Latin America, and the Soviet Union. Emphasis is upon the causal factors of areal differentiation and the role geographic differences play in the interpretation of the current world scene.

102: PHYSICAL GEOGRAPHY. [3]
Distribution of the world's landform features, climates, vegetation types, soils, and mineral resources; their characteristics, cause, and significance. Interrelationships of the natural environment. Properties of the globe and its representation in the form of maps treated in detail.

103: CULTURAL GEOGRAPHY. [3]
A study of relationships between geography and human population dispersion, cultural patterns, and economic development.

201: GEOGRAPHY OF LATIN AMERICA. [3]
Prerequisite: Geography 102 is desirable but not required as a prerequisite.
A regional survey of physical resources, population, cultural characteristics, and economic activities in Latin America.

206: CLIMATOLOGY. [3]
World distribution of climatic elements; methods of arranging climatic data; climatic classifications and world distributions of climatic types; general climatic circulation, changes, and fluctuations.

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 role played by the natural environment and resource base in the changing political geography of Europe. Their influence upon such representative topics as recent trends toward supranationalism, changing patterns of population distribution, and urbanization will be emphasized.

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-political units and problems created by overlapping units.
302: SUBURBAN GEOGRAPHY. [3]

Prerequisite: Sophomore standing or higher. An analysis of the spatial aspects of man's social, economic and political activities within suburbia. Suburbanization is viewed both as an independent force and as a component of the larger urbanization process. Fairfax County will be utilized as a laboratory for suburban geographical study and student initiated fieldwork projects.

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 will be 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 their spatial context.

Requirements for the Major in Government and Politics

B.A. Program in Government and Politics—To be eligible to graduate with a B.A. in government and politics 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 student who presents 0-8 hours of lower division credit must successfully complete six upper division courses in government and politics; one who presents 9-14 hours of lower division credit must successfully complete five upper division courses in government and politics; one who presents 15-18 hours of lower division courses in government and politics must successfully complete four upper division courses.

However, a student who transfers to the university must earn at this campus at least 12 hours in his major subject by completing courses at the upper division level. Each transfer student, therefore, must successfully complete not fewer than three upper division courses in government and politics.
## Sample Program B.A. in Government and Politics*

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<tr>
<th>First Semester</th>
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<td>Science</td>
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<td>English Composition</td>
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<td>Foreign Language</td>
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<td>Government 103</td>
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<td>Humanities Elective</td>
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<td>Behavioral Science Elective</td>
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<td>Government 204</td>
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*This specimen program is based on 12 hours of three semester-hours work earned in government at George Mason University or brought in on transfer. All required foreign language credit is shown as earned on this campus. See Introduction to Chapter V.
B.S. with a Major in Public Administration—The program of study leading to the degree of B.S. with a major in public administration comprises a core of work in government and politics and quantitative and distributive requirements for appropriate courses in other subjects of the curriculum. To complete this course of study, a student must earn 125 semester-hours of credit and meet general degree requirements set for the B.S. degree by work falling within the following pattern:

Composition and literature 12
Core requirements 39
Government
103, 204, 241, 325, 341, 415, 440, 445, and 1 elective in government from among 310, 330, 425 or 480.
Economics 12
103, 104, and six hours to be elected from 150, 306, 310, 311, 330 and 350.
Business Administration 11-14
201, 212, and 261, 262 or Sociology 221 and at Northern Virginia Community College DAPR 147.
Supporting requirements 9
Communications
Business Administration 232
Speech 251
English 309
Psychology 100 and one course from among 220, 230, and 231.
Sociology 101 and 203 or 332
Open electives 30-27

125
### Sample Program B.S. with a Major in Public Administration*

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<td>Economics 103</td>
<td>Sociology</td>
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<td>Business Administration 201</td>
<td>Economics 104</td>
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<td>Government 341</td>
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*See Introduction to Chapter V.*
Government and Politics Courses

103: INTRODUCTION TO DEMOCRATIC GOVERNMENT. [3]
An analysis and comparison of the American presidential and the British parliamentary forms of democratic governments. Students who have taken Government 101: National Government of the United States are not eligible to take this course.

132: INTRODUCTION TO INTERNATIONAL POLITICS. [3]
An examination of geographic, demographic, economic, ideological, and other factors which influence foreign policies of states; the methods of conflict and institutions of adjustment extant among states; the limitations and functions of power, diplomacy, and international law and organization.

204: AMERICAN STATE AND LOCAL GOVERNMENT. [3]
An introduction to the nature, organization, functions and problems of American state and local governments in their challenging and rapidly changing environment.

241: INTRODUCTION TO PUBLIC ADMINISTRATION. [3]
Prerequisite: Government 103 or permission of instructor. An examination of administrative structure and processes. Includes organization theory, administrative behavior, personnel, decision-making, communications, leadership, management, budgetary processes, and administrative responsibility.

Prerequisite: Junior or senior standing. An introduction to general jurisprudence, and comparative legal systems; analysis of selected aspects of judicial organization and operation, of the role of the judiciary in policy formation, and of selected constitutional principles evolved by the United States Supreme Court.

310: POLITICAL DYNAMICS. [5]
Prerequisite: Junior or senior standing. An introduction to operating factors in political systems: Includes survey of political parties, public opinion, and pressure groups; attitude formation and expression; political participation; voting behavior; minority group politics; political communication.

325: INTRODUCTION TO PUBLIC PLANNING. [5]
Prerequisite: Junior or senior standing. A course designed to identify the framework, subject matter, uses, methods, administration, and future of public planning. Some attention will be given to program implementation. Emphasis will be placed upon the local government level.

330: POLITICAL VALUES. [5]
Prerequisite: Junior or senior standing. An examination of political values concerning the nature of man, the origin and nature of the state, bases of political obligation, problems of consent, concepts of power, and sources of authority as presented in the works of major writers.

341: ADMINISTRATIVE MANAGEMENT AND BEHAVIOR. [5]
Prerequisite: Government 241, junior or senior standing, or permission of instructor. An examination and study of American governmental administration.
Particular attention will be paid to organizational theory and behavior, administrative responsibility, management systems, roles of the bureaucracy, and relationships between the individual and the organization.


Prerequisite: Junior or senior standing. Theories of international relations; organization; law; pacific settlement of disputes; crisis and conflict resolution.


Prerequisite: Junior or senior standing. An examination of the government, politics, and problems of metropolitan centers and surrounding areas.

425: PUBLIC POLICY MAKING. [5]

Prerequisite: Junior or senior standing. An inquiry into practices and processes involved in public policy making: roles of executives, legislatures, courts, interest groups, public agencies, political parties, and public relations in policy making. Case studies on politics of policy making.

440: INTRODUCTION TO ADMINISTRATIVE LAW AND PROCEDURES. [5]

Prerequisite: Junior or senior standing. Introduction to the law of public office in general with some specific attention to Virginia.


Prerequisite: Junior or senior standing. An examination of the concepts, methods and systems employed in the management of money and manpower by governmental administration with primary focus upon that in the United States.

450: CROSS-NATIONAL POLITICAL STUDY. [5]

Prerequisite: Junior or senior standing. A study and analysis of political and governmental institutions, values, conditioning factors, behavior patterns, decisional processes, courses and styles of political change, and problems of nation-building based upon an integrative rather than upon a country-by-country approach.

480: INTERNSHIP. [2-5]

Open to authorized senior majors only. Contact department prior to enrollment. Internships are approved work-study programs established by the department with specific employers. Credit will be fixed to suit each individual situation as determined by the department.

490: SEMINAR. [5]

Prerequisite: A seminar open to senior majors, Department of Public Affairs, and by permission as course enrollment permits to other seniors who have completed not fewer than twelve hours of work in government. May not be repeated. The subject of the seminar will vary from semester to semester according to the specialization of the faculty member in charge. Readings, individual or group projects, and discussions of seminar papers will comprise the content and format.
Department of Sociology

Associate Professors Hughes, Tavani
Assistant Professors MacConkey (Acting Chairman), DuMez, Fries, Kelley, Raskin, Rich, Williams
Acting Assistant Professors Hardwick, Millar
Instructor Ryburn
Lecturers Harris, Hoyer, Wakefield, Wyatt

Requirements for the Major

Students majoring in sociology must satisfy the area requirements set for the Bachelor of Arts degree at George Mason University. In addition, they must present 33 hours of work in sociology, to include Sociology 221, 303 and 411. Students are advised to elect relevant courses in anthropology, biology, philosophy and psychology in addition to these requirements for the major.

Not more than 42 credit hours in sociology may be submitted for the degree requirements. Additional credit hours in sociology may be counted as elective hours on the degree application form.

Sociology Courses

101: INTRODUCTORY SOCIOLOGY. [3]
An introduction to basic sociological concepts. Aspects of human behavior; individual and group interaction; social mobility and stratification; status and class; race relations; urbanism; crime and criminology; social change and reform.

152: MODERN SOCIAL PROBLEMS. [3]
Prerequisite: Sociology 101 or permission of instructor. A sociological analysis of the problems of modern society, including those related to stratification, urbanism, family and kinship, cultural change, and deviant behavior, including such topics as racism and sexism.

201: MARRIAGE AND THE FAMILY. [3]
Prerequisite: Sociology 101 or permission of instructor. A study of marriage and the family in contemporary America. Human sexuality, premarital behavior, marital adjustment, socialization of children, family economics, divorce, and variations in family life. Lectures and discussions.

202: CRIMINOLOGY. [3]
Prerequisite: Sociology 101 or permission of 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.

203: THE SOCIOLOGY OF SMALL GROUPS. [3]
Prerequisite: Sociology 101 or permission of instructor. The study of the characteristics, structure, and processes of small group dynamics; theories and models of group analysis; techniques of observation and research on variables in small groups that produce problems in our national life.
# Sample Schedule for Sociology Majors*

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<tr>
<th>First Semester</th>
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<td>Sociology 101</td>
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<tr>
<td>English 101</td>
<td>English 102</td>
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<td>Foreign Language</td>
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<td>Natural Science</td>
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<td>Sociology 201 or 203</td>
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<td>English Literature</td>
<td>Sociology 221</td>
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<tr>
<td>Foreign Language</td>
<td>English Literature</td>
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<td>Mathematics 106</td>
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*See Introduction to Chapter V.

http://catalog.gmu.edu

Prerequisites: Three hours of sociology. Institutional and personal dimensions of the socialization process analyzed in terms of norms, roles, group processes and stratification. Development of self-concept throughout the life cycle will be examined in terms of major agents of socialization; e.g., family, school, peers, mass media. Focus is on influence of certain ascribed status prescriptions in contemporary society—such as race, age, sex, and the handicapped.

221: STATISTICS FOR THE BEHAVIORAL SCIENCES. [4]

Prerequisite: Sociology 101 or permission of instructor. An introduction to the fundamentals of applied statistics as used in the behavioral sciences to include descriptive statistics, inferential statistics, correlation-regression, analysis of variance, factor analysis, non-parametric statistics, and practical experience with calculators in applying statistical analysis to actual problems of the behavioral sciences. Three class hours and two laboratory hours. (This course is the same as Psychology 200; both may not be taken for credit.)

225: SOCIOLOGY OF WAR AND PEACE. [3]

Prerequisite: Sociology 101 or permission of instructor. Evolution of war and peace as social conflict and conflict resolution in human societies. Theories of causality of war and peace, changing nature of war and peace, and consequences of war and peace at different periods in the sociocultural evolution of human societies.

240: SOCIAL SERVICES IN SOCIETY. [3]

Prerequisite: Sociology 101 or permission of 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.

280: SOCIOLOGY OF LEISURE. [3]

Prerequisite: Three hours in sociology or permission of instructor. A sociological approach to leisure and other non-work with emphasis on the relation of the social meaning of leisure roles to other institutional roles of family, education, work, and community. Issues of resources, legislation, urbanization, and the environment will be explored.

302: SOCIOLOGY OF DELINQUENCY. [3]

Prerequisite: Sociology 202 or permission of instructor. An inquiry into the types, causes, treatment and prevention of delinquent behavior.

303: SOCIOLOGICAL RESEARCH METHODOLOGY. [4]

Prerequisite: Sociology 221 or permission of 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, and research reporting are examined. Three class hours and two laboratory hours.

305: SOCIOLOGY OF DEVIANCE. [3]

Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. The major theoretical approaches to deviant behavior will be explored: functional theory, conflict theory, and symbolic interaction theory. Both the positive and negative aspects of deviant behavior will be examined in relation to their effects upon society.

http://catalog.gmu.edu
306: DEMOGRAPHIC ANALYSIS. [3]
Prerequisite: Sociology 101 or permission of instructor. (It is recommended that students first take Sociology 332). The influence of population structure, distribution, and change in vital rates on ecological, social, economic, and political problems of human society.

307: SOCIOLOGY OF COLLECTIVE BEHAVIOR. [3]
Prerequisite: Six hours in sociology to include Sociology 101 or permission of instructor. An analysis of crowds, mobs, and publics. The structure and function of social movements distinguished from other forms of collective behavior are examined. Includes examination of leadership in various types of collective behavior.

308: SOCIOLOGY OF RACE RELATIONS AND MINORITIES. [3]
Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. An examination of the history of and changes in racial, ethnic, and minority relations in modern society, with particular emphasis on the Negro in American society. Lectures and discussions.

332: SOCIOLOGY OF URBAN COMMUNITIES. [3]
Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. An analysis of the urban community: historical development, demography, and ecology of metropolitan areas; urbanism as a way of life; the emergence of suburbia as a sociological phenomenon.

363: ORGANIZATION OF COMMUNITY RESOURCES. [3]
Prerequisite: Sociology 152 or permission of instructor. An analysis of the community organization as a planning process to meet human needs and to prevent social ills. A view of the role of the professional, the citizen participant and the power structure in community decision-making.

373: THE COMMUNITY. [3]
Prerequisite: Six hours of sociology including Sociology 101 or permission of instructor. An examination of small to moderately-sized communities ranging through the village, rural community, small town, and city sub-community. The latter category includes city localities, ethnic villages, and suburban communities. In addition to community change, various approaches and research methods in community analysis will be stressed while studying several case communities.

382: EDUCATION IN CONTEMPORARY SOCIETY. [3]
Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. The study of education as a social institution. Its function as a socialization agency for social stability and social change, 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 instructor. A sociological analysis of religious phenomena. The personal and institutional dimensions of religious life will be studied within major sociological concepts such as role, status, norms, social aggregates and function. The student will study in depth an aspect of religion which interests him.

390: MEDICAL SOCIOLOGY. [3]
Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. An examination of the social context of disease and medical care,
the positions 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.

392: FORMAL ORGANIZATION. [3]
Prerequisite: Six hours of sociology to include Sociology 101 or permission of instructor. An analysis of types of large, complex organizations in society; a study of the bureaucracy and of the informal group formation which is often a part of the larger structure. Effectiveness of the formal organization and its administration are features of the course.

395: SOCIOCULTURAL CHANGE. [3]
Prerequisite: Three hours of sociology or social anthropology or permission of instructor. The study of the sources, processes and consequences of social and cultural alteration. Anthropological and sociological models are used for case analysis of social movements, culture contact and borrowing, innovation-adoption, and planned change.

401: SOCIAL STRATIFICATION. [3]
Prerequisite: Twelve hours in sociology to include Sociology 101 or permission of instructor. An examination of theories of and research in social stratification. Attention is given to western and nonwestern systems of social differentiation, with emphasis on selected bases of occupational and other social structures, of social mobility, and status relations in society.

402: SOCIOLOGY OF PUNISHMENT AND CORRECTIONS. [3]
Prerequisite: Twelve hours in sociology to include Sociology 302 or permission of instructor. Historical overview and theory of justice; analysis of the treatment of the adult and juvenile offender. Includes discussion of the origin and development of punishment, correction, rehabilitation, residential treatment, and the halfway house. The roles of legal and social agencies in the treatment process are compared and contrasted.

410: SOCIAL SURVEYS AND ATTITUDE AND OPINION MEASUREMENT. [3]
Prerequisite: Twelve hours in sociology to include Sociology 303 or permission of instructor. Survey research methods and techniques used in collecting and analyzing social data and the techniques and methods for measuring social attitudes and opinions will be studied.

411: SOCIOLOGICAL THEORY. [3]
Prerequisite: Twelve hours in sociology to include Sociology 101 or permission of instructor. The sociological tradition will be explored through readings and discussions of ideas drawn from the writings of selected sociological thinkers; such as, Comte, Marx, Weber, Durkheim and others.

413: SEMINAR IN SOCIAL ISSUES. [3]
Prerequisites: Senior standing, Sociology 411, and any other additional nine hours of sociology credit. The Seminar in Social Issues provides an opportunity for advanced students of sociology to apply the theoretical perspectives and methodological skills, learned in prerequisite offerings, to contemporary relevant issues.
480: SEMINAR IN SOCIOLOGY. [2]
Prerequisite: Enrollment is restricted to senior majors in sociology. This course may be taken for credit only once by a student. Topics of contemporary interest in sociology will be offered through individual class reports and group discussion. The topic to be studied will vary from semester to semester.

499: INDEPENDENT STUDY IN SOCIOLOGY. [3]
Prerequisites: Eighteen hours of sociology which includes Sociology 303 and 411, a B average in sociology, senior standing, and a research proposal approved in advance of enrollment by the instructor and chairman of the department. Investigation of a sociological problem according to individual interest with stress on research.

B.S. in Social Welfare

To receive a B.S. degree with a major in social welfare, the student must successfully complete requirements for the Bachelor of Science degree, including: a. A minimum of thirty (30) semester hours in social welfare, to include Social Welfare 251, 352, 357, 453, 454, 463, 464, and either 423 or 425; b, Sociology 101 and 152, Psychology 100, 210, and 215, and either Sociology 203 or Psychology 231; c. Six semester-hours in each of the following: English composition, English literature, the humanities (philosophy/religion/art/music), and the social sciences (history/economics/government); d. Eight semester-hours in biology, and e. Three semester-hours in mathematics. Course work in speech and anthropology and further course work in sociology/psychology (especially Sociology 221/Psychology 200 is recommended). To be admitted to the social welfare program, a student must:

1. Have completed at least 45 credits with an average of 2.000 quality grade points.
3. Have completed application for social welfare major.
4. Have satisfactorily served 3-4 hours per week for one semester as a volunteer in a social agency approved by the Director of Field Placement.

The student’s application for admission to the social welfare major will be reviewed by social welfare faculty member who will then recommend what action is to be taken on it. A personal interview may be required by the faculty reviewer before he reaches a decision. A student may appeal a decision to disapprove his application by submitting a written statement of appeal to the Director of the Social Welfare Program. An appeals committee of faculty will review the application material, the original reviewer’s comments, and the student’s appeal statement in reaching a final decision. This appeals committee will consist of two faculty members to be appointed by the director and one faculty member to be selected by the student.
Sample Schedule for Social Welfare Major*

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<td>Math 106 3</td>
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<td>Psych. 210 3</td>
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*See Introduction of Chapter V.*
Social Welfare Courses

251: INTRODUCTION TO SOCIAL WELFARE. [3]
Prerequisite: Sociology 152 or permission of instructor. An introduction to the field of Social Welfare, its historical development, central concepts and institutional nature, and the human needs which underlie it. Examines the problems that characterize social agency clientele of varied class, racial and ethnic backgrounds, and the formal and informal processes through which social services are organized and extended to individuals, families, groups, neighborhoods and larger communities. Offers volunteer field experience in and analysis of some of the institutions, agencies and programs developed to meet today's complex social needs.

352: THE SOCIAL WORK PROFESSION. [3]
Prerequisite: Social Welfare 251. An introduction to the profession of social work, its historical and philosophical bases, values, norms, functions, and methods, and to the organizational and other systems within which it functions. Explores social work's links to other disciplines and to social action and policy formulation. Studies the basic processes and adaptive roles of the social worker at the various levels of individual client, group and community. Particular emphasis is placed on processes common to professional helpers, such as communication, observation and relationship-development. Social problems and fields of service are used as major foci of learning, both classroom- and field-based. Students use field visits to examine some of the systems which process or serve people with problems.

357: METHODS OF SOCIAL WORK INTERVENTION. [3]
Prerequisite: Social Welfare 352 or permission of instructor. Studies the "holistic" nature of social work practice from a systems prospective. The common knowledge, values, foci, methods and techniques of social work are explored through readings, films, case-records and role-plays. Particular emphasis is placed on identification of specific change objectives and on effective database methods and techniques for achieving them. Primary effort is directed toward developing knowledge and skills in the individual interview and work with groups, as basic instruments of individual, family, group and community change. Various theoretical orientations to practice are articulated, "models" explored, specialized techniques demonstrated, and particular social work roles delineated. Stress is placed on the worker's responsibility for effecting environmental as well as intrapersonal change.

423: SOCIAL WORK WITH ADOLESCENTS. [3]
Prerequisite: Social Welfare 357 or permission of instructor. Examines the major needs of adolescents and their implications for social work practice. Explores how to deal with problems of family and peer group relationships, occupational choice, heterosexual and scholastic adjustment, and special problems of racial and cultural alienation, alcohol and drug abuse, and delinquency. Studies various theoretical orientations and evidence from research. Analyzes both individual and group approaches to counseling and treatment, and gives attention to the use of family and community resources to promote and sustain constructive growth and/or change.

425: PLANNING AND ORGANIZING FOR COMMUNITY CHANGE. [3]
Prerequisite: Social Welfare 357 or permission of instructor. Studies the basic concepts, principles and processes of planning and organizing in social welfare. Explores the varieties in their application within diverse communities and models of local and broader community development, regional planning,
social action and lobbying. Examines the use of different worker roles such as organizer, advocate, enabler, data-manager, proposal-writer, etc., situational criteria for choosing among them, and techniques for their effective implementation. Problems and issues of leadership in a democratic society are weighed in the light of both available research evidence and social work values. Priorities in local, state and national planning are investigated and assessed against evidence of need, deprivation, and inequity, and ways of reordering them explored.

453: PRACTICUM. [6]
Prerequisites: Social Welfare 357, recommendation of adviser, and concomitant enrollment in Social Welfare 463. Open only to majors in social welfare. An intensive field experience course designed to offer an educationally relevant social work experience. Under supervisory instruction provided by field agencies, students are involved two full days per week in learning through participation in the provision of service to individual clients, families, groups and/or communities and in activities sponsored by or involving professional social workers. Discussions of field experiences in social welfare 463 and periodic faculty-agency consultations are employed to give further focus to learning.

454: PRACTICUM. [6]

463: SENIOR SEMINAR. [3]
Prerequisites: Social Welfare 357, and concomitant enrollment in Social Welfare 453. Designed to enable the student to deepen, expand and integrate his knowledge and skill for more effective social work intervention. Emphasis is placed on analysis of change strategies and roles, utilizing data drawn from concurrent student field experiences, literature, and dialogue with social agencies' personnel. Data are also gathered through limited but structured research into systems affecting individuals, families, groups and communities and assessed against the experiences of the students and other personnel, and the findings of published research. Implications for practice are a major learning goal of these studies.

464: SENIOR SEMINAR. [3]

Anthropology Courses

101: HUMAN EVOLUTION AND PREHISTORY. [3]
The origin and evolution of man based upon the fossil record; the status of modern racial groupings; the history of human society from the earliest times to the rise of civilizations in the Old and New Worlds.

102: SOCIAL ANTHROPOLOGY. [3]
The comparative study of culture (including language) and the social institutions of mankind with particular reference to primitive and peasant societies. Certain aspects of Western culture will be considered from this perspective.
Interdisciplinary Programs

American Studies

Aileen S. Walls, Chairman*

American Studies Committee

Kay J. Mussell (Department of English)
Richard A. Gleissner (Department of History)
Norman A. Yance (Department of Philosophy and Religion)

Requirements for the Major

This 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 course work. Participants must satisfy the area 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:

A. Nine semester-hours in interdisciplinary seminars:
American Studies 302: Introduction to American Studies. [3]
American Studies 401: Themes in American Civilization. [3]
American Studies 402: Reading in American Studies. [3]

B. A minimum of nine semester-hours in English selected from the following courses:

English 330: American Folklore. [3]
English 381: Colonial and Federalist American Literature. [3]
English 382: American Renaissance. [3]
English 385: American Poetry of the Twentieth Century. [3]
English 387: Development of the American Novel to 1914. [3]
English 388: Development of the American Novel Since 1914. [3]
English 389: Plays of Twentieth Century American Dramatists. [3]
English 384: Literature of the Modern South: 1920 to the Present. [3]
English 386: Literature of Black America. [3]
English 390: Recent American Poetry. [3]
English 442, 444, 446: Selected Studies and Writers (In semesters when selections deal with American Literature). [3, 3, 3]

C. A minimum of six semester-hours in history selected from the following courses:

History 333: Westward Movement in the United States. [3]

*Inquiries concerning this program should be directed to Dr. Aileen S. Walls, Chairman, American Studies Committee, Department of English, George Mason University, Fairfax, Va. 22030, Telephone (703) 323-2223.
Diplomatic History of the United States. [3, 3]
History 351: History of the Old South or 352, South Since 1865. [3]
History 401: Colonial America. [3]
History 406: Civil War and Reconstruction. [3]
History 411, 412: Cultural and Intellectual History of the United States. [3, 3]
History 433: United States in the Twentieth Century. [3]

D. A minimum of eighteen semester-hours from courses directly related to the American Studies program:

1. A minimum of nine semester-hours must be selected from the courses listed below:

Biology 271: Animal Distributions. [3]
Economics 150: The Urban Economy. [3]
Economics 320: Labor Problems. [3]
Geography 215: Geography of the United States and Canada. [3]
Geography 301: Political Geography. [3]
Geography 302: Suburban Geography. [3]
Geography 304: Geography of Population. [3]
Government 204: American State and Local Government. [3]
Government 241: Introduction to Public Administration. [3]
Government 310: Political Dynamics. [3]
Government 415: Government and Politics of Metropolitan Areas. [3]
Music 205: Music in the United States. [3]
Music 207: Development of Jazz. [3]
Philosophy 331: Philosophy in the United States. [3]
Religion 231: Religion in America. [3]
Religion 238: Black Religion. [3]
Religion 332: American Religion in Social Thought and Action. [3]
Sociology 152: Social Problems. [3]
Sociology 280: Sociology of Leisure. [3]
Sociology 332: Sociology of Urban Communities. [3]
Sociology 308: Sociology of Race Relations and Minorities. [3]

2. An additional nine semester-hours must be selected from courses satisfying requirements (B), (C) or this section (D), or from other related courses to be selected by the student after consultation with his adviser.
# Sample Schedule for a Double Major in American Studies and English*

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*See Introduction of Chapter V.*
### Sample Schedule for a Double Major in American Studies and History*

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*See Introduction to Chapter V.
American Studies Courses

American Studies 302: INTRODUCTION TO AMERICAN STUDIES. [3]

Prerequisite: Open to Junior American Studies majors with consent of the Chairman, American Studies Committee. 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 cultures of the period. Subject will be determined by the instructor conducting the seminar and may be obtained from him in advance.

American Studies 401: THEMES IN AMERICAN CIVILIZATION. [3]

Prerequisite: Open to Senior American Studies majors with consent of the Chairman, American Studies Committee. Intensive study of a significant theme, motif, or idea in American culture. Subject will be determined by the instructor conducting the seminar and may be obtained from him in advance.

American Studies 402: READINGS IN AMERICAN STUDIES. [3]

Prerequisite: Open to Senior American Studies majors with consent of the Chairman, American Studies Committee. Application of American Studies methods to materials drawn from two or more of the participating disciplines, or not examined in traditional disciplines. Subject will be determined by the instructor conducting the seminar and may be obtained from him in advance.
European Studies

Esther N. Elstun, Program Director

European Studies Advisory Committee

Amanda M. Burt (Department of Fine and Performing Arts)
Gerald J. Cavanaugh (Department of History)
Angela J. Khoury (Department of Public Affairs)
S. Eric Molin (Department of English)

Requirements for the Major

This interdisciplinary program leads to the degree, Bachelor of Arts in European studies. The student must present a minimum of 120 semester hours of course work for graduation, including satisfaction of all area requirements for the B.A. degree and the completion of 45 semester-hours of course work in the European studies program as follows:

A. Twelve semester-hours in interdisciplinary seminars:*
   - European Studies 300: Foundations of European Civilization
   - European Studies 350: Classicism and Romanticism
   - European Studies 400: The Fusion of the Arts
   - European Studies 450: Contemporary European Problems and Values

B. Three semester-hours of European Geography:
   - Geography 220: Geography of Europe

C. Thirty 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

*The numbering system is a matter of convenience and does not indicate the order in which these seminars must be taken.
Sample Schedule for a Major in European Studies*  
(Concentration: French and the Fine Arts)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
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<tbody>
<tr>
<td><strong>English 101</strong></td>
<td><strong>English 102</strong></td>
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<td><strong>French 376</strong></td>
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<tr>
<td><strong>Psychology 101</strong></td>
<td><strong>Psychology 102</strong></td>
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<td><strong>Music 101</strong></td>
<td><strong>Music 102</strong></td>
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<td><strong>Non-Western Studies</strong></td>
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<td><strong>French 377</strong></td>
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<td>3</td>
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<td><strong>French 415</strong></td>
<td><strong>French 416</strong></td>
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<tr>
<td>3</td>
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<tr>
<td><strong>History 307</strong></td>
<td><strong>Geography 220</strong></td>
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<tr>
<td>3</td>
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</table>

*See Introduction to Chapter V.
Sample Schedule for a Major in European Studies*  
(Concentration: History and Government)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>English 101</strong></td>
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<tr>
<td><strong>German 151</strong></td>
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<td><strong>History 101</strong></td>
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<td><strong>Art 101</strong></td>
<td><strong>Art 102</strong></td>
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<td><strong>Fourth Semester</strong></td>
</tr>
<tr>
<td><strong>English 203</strong></td>
<td><strong>English 204</strong></td>
</tr>
<tr>
<td><strong>Psychology 101</strong></td>
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<tr>
<td><strong>German 251</strong></td>
<td><strong>Mathematics 106</strong></td>
</tr>
<tr>
<td><strong>Geography 220</strong></td>
<td><strong>Government 132</strong></td>
</tr>
<tr>
<td><strong>History 303</strong></td>
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<tr>
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<td><strong>Sixth Semester</strong></td>
</tr>
<tr>
<td><strong>European Studies Seminar</strong></td>
<td><strong>European Studies Seminar</strong></td>
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<tr>
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<td><strong>Non-Western Studies</strong></td>
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<tr>
<td><strong>Seventh Semester</strong></td>
<td><strong>Eighth Semester</strong></td>
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<td><strong>European Studies Seminar</strong></td>
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<td><strong>History 316</strong></td>
<td><strong>History 443</strong></td>
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<td></td>
<td><strong>14</strong></td>
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</tbody>
</table>

*See Introduction to Chapter V.
European Studies Courses

European Studies 300: FOUNDATIONS OF EUROPEAN CIVILIZATION. [3]

Prerequisite: Junior or senior standing and permission of instructors. An examination of the Greek, Roman and Judeo-Christian origins of Europe's intellectual and cultural traditions, concentrating upon those models of political, social and artistic behavior that deeply influenced European life and thought.

European Studies 350: CLASSICISM AND ROMANTICISM. [3]

Prerequisite: Junior or senior standing and permission of instructors. An examination of the political, philosophical and aesthetic ideas of seventeenth, eighteenth and nineteenth century Europe. Study of the concepts included under the rubrics of classicism and romanticism will give perspectives on the two basic ways in which modern man views himself and his world.

European Studies 400: THE FUSION OF THE ARTS. [3]

Prerequisite: Junior or senior standing and permission of instructors. An examination of contemporary art in the light of the past, and of the aesthetic theories by which the arts 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.

European Studies 450: CONTEMPORARY EUROPEAN PROBLEMS AND VALUES. [3]

Prerequisite: Junior or senior standing and permission of instructor. An examination of the main currents of European life and thought in the Twentieth Century. Study of the principal influences and events of the period, culminating in an assessment of contemporary European problems and values.

European Studies Oriented Courses

In addition, the following departmental courses support the European studies program:

A. Department of Economics
   Economics 380: Comparative Economic Systems
   Economics 390: International Economics
   Economics 481: Development of Economic Thought

B. Department of English
   English 203, 204: Western Literary Masterworks
   English 251, 252: Survey of English Literature
   English 320: Myth and Symbol in Western Literature
   English 341: Chaucer
   English 342: Literature of the Middle Ages
   English 345: English Literature of the 16th Century
   English 346: Spenser
   English 351, 352: Shakespeare
   English 354: Poetry & Prose of the 17th Century
   English 355: Milton
   English 357: The Augustan Age
   English 358: The Age of Johnson
   English 361, 362: Poetry of the 19th Century
   English 365: 20th Century English Poetry and Prose
   English 371, 372: Development of the English Novel
English 373: Literary Modes
English 375, 376: Contemporary Drama
English 377, 378: Selected Continental Novels in Translation
English 392: History of the English Language
English 451: Introduction to Literary Criticism

C. Department of Fine and Performing Arts
Art 101: Art Appreciation
Art 205, 206: Survey of Western Art
Art 207, 208: Comparative Art
Art 325, 326: Medieval and Early Renaissance Art
Art 331: Nineteenth Century Art
Art 332: Twentieth Century Art

Music 101, 102: Music Appreciation
Music 204: Introduction to Twentieth Century Music
Music 336: Historical, Theoretical and Analytical Study of Music II
Music 435: Historical, Theoretical and Analytical Study of Music III
Music 436: Historical, Theoretical and Analytical Study of Music IV
Music 445: Bibliography and Research Techniques

D. Department of Foreign Languages
French 151, 152: Elementary French
French 153: Review of Elementary French
French 251: Intermediate French
French 252: French Conversation
French 253: French Culture
French 255: French Literary Masterpieces
French 325: Major French Writers [in English translation]
French 353, 354: Advanced Conversation and Composition
French 375, 376: French Culture and Civilization
French 377, 378: Survey of French Literature
French 411, 412: Literature of the 20th Century
French 415, 416: Literature of the 19th Century
French 419, 420: Literature of the 18th Century
French 423, 424: Literature of the 17th Century
French 427: Literature of the Renaissance

German 151, 152: Elementary German
German 153: Review of Elementary German
German 251: Intermediate German
German 252: German Composition and Conversation
German 254: Readings in German Literature
German 325: Major German Writers [in English translation]
German 351, 352: German Literature from its Beginnings to 1750
German 361, 362: German Literature of the Romantic Era
German 405, 406: The Age of Goethe
German 409: German Literature from 1830 to 1880
German 411, 412: German Literature Since 1880

Latin 101, 102: Elementary Latin
Latin 201, 202: Intermediate Latin

Portuguese 151, 152: Elementary Portuguese
Portuguese 251: Intermediate Portuguese
EUROPEAN STUDIES/167

Russian 151, 152: Elementary Russian  
Russian 251: Intermediate Russian  
Russian 252: Russian Conversation and Composition  
Russian 253: Russian Civilization [offered in English]  
Russian 254: Readings in Russian Literature  

Spanish 151, 152: Elementary Spanish  
Spanish 153: Review of Elementary Spanish  
Spanish 251: Intermediate Spanish  
Spanish 252: Spanish Conversation and Composition  
Spanish 254: Spanish Civilization  
Spanish 256: Readings in Spanish Literature  
Spanish 300: Spanish Civilization and Culture  
Spanish 303, 304: Advanced Conversation and Composition  
Spanish 305, 306: Survey of Spanish Literature  
Spanish 309, 310: Literature of the Golden Age  
Spanish 313, 314: Spanish Literature of the 19th Century  
Spanish 325: Major Hispanic Writers [in English translation]  
Spanish 403, 404: Contemporary Spanish Literature  
Spanish 410: Cervantes  
Spanish 415: Readings in Medieval Spanish Literature  

E. Department of History  
History 101, 102: Western Civilization  
History 301: Ancient History  
History 302: Early Medieval Europe  
History 303: The High Middle Ages  
History 306: Renaissance and Reformation  
History 307: Europe from Louis XIV to the Congress of Vienna  
History 308: Nineteenth-Century Europe  
History 309: History of Europe Since 1914  
History 314: History of Germany  
History 323: England through the Revolution of 1688  
History 324: England from the Revolution of 1688  
History 325: Tudor and Stuart England  
History 328: Rise of Russia  
History 329: Modern Russia and the Soviet Union  
History 421: Intellectual and Cultural History of Europe, 1715-1848  
History 422: Intellectual and Cultural History of Europe, 1848 to the present  
History 441: France Since the Revolution  
History 443: History of Spain and Portugal  

F. Department of Philosophy and Religion  
Philosophy 213: Philosophy of Religion  
Philosophy 231, 232: History of Western Philosophy  
Philosophy 271: Metaphysics  
Philosophy 332: Twentieth Century Analytic Philosophy  
Philosophy 333: Contemporary Continental Thought: Existentialism and Phenomenology  
Philosophy 356: Philosophy of Art  

G. Department of Public Affairs  
Geography 220: Geography of Europe  
Government 132: Introduction to International Politics  
Government 330: Political Values  
Government 350: International Relations: Theories and Processes  
Government 450: Cross-National Political Study  

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

This interdisciplinary program culminates in the conferral of the degree of Bachelor of Arts with a major in Latin American studies and requires a minimum of 120 semester-hours of course work. Participants must satisfy the area requirements for the Bachelor of Arts degree at George Mason University. In addition, they must present 36 semester-hours of course work in Latin American studies divided to include (a) 18 semester-hours, upper division courses (300-400 level) in a core discipline, 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. A comprehensive examination, to be administered at the end of the senior year, must be satisfactorily passed.

Latin American Oriented Courses

The following courses may be presented to meet requirement (b) above. Students are advised to check with the departments concerned as to prerequisites for these courses.

Department of Biology:
Biology 271: Animal Distributions. [3]

Department of Economics:
Economics 360: Economics of Developing Areas. [3]
Economics 361: Economic Development of Latin America. [3]
Economics 390: International Economics. [3]
Economics 481: Seminar in the Development of Economic Thought. [3]

Department of Fine and Performing Arts:
Music 206: Latin American Music. [3]

Department of Foreign Languages:
Spanish 252: Spanish Conversation and Composition. [3]
Spanish 253: Commercial Spanish. [3]
Spanish 254: Spanish Civilization. [3]

(Continued on Page 170)
Sample Schedule for Latin American Studies Major*

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td><strong>English 101</strong>: Composition</td>
<td><strong>English 102</strong>: Composition</td>
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<td>Art, music, philosophy, religion</td>
</tr>
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<td>English 203</td>
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<td>History 362: Latin American History</td>
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<td>Core discipline (3—)</td>
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<td>Science or mathematics</td>
<td>Non-Western choice</td>
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<td>LAS 491: Contemporary Latin America</td>
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<tr>
<td>Spanish 256</td>
<td>Readings in Spanish Literature.</td>
<td>[3]</td>
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<tr>
<td>Spanish 257</td>
<td>Readings in Latin American Literature.</td>
<td>[3]</td>
</tr>
<tr>
<td>Spanish 300</td>
<td>Spanish Civilization and Culture.</td>
<td>[3]</td>
</tr>
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<td>Spanish 303, 304</td>
<td>Advanced Conversation and Composition.</td>
<td>[3, 3]</td>
</tr>
<tr>
<td>Spanish 305, 306</td>
<td>Survey of Spanish Literature.</td>
<td>[3, 3]</td>
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<td>Spanish 307, 308</td>
<td>Latin American Literature.</td>
<td>[3, 3]</td>
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<td>Spanish 309, 310</td>
<td>Literature of the Golden Age.</td>
<td>[3, 3]</td>
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<tr>
<td>Spanish 313, 314</td>
<td>Spanish Literature of the Nineteenth Century.</td>
<td>[3, 3]</td>
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<tr>
<td>Spanish 315</td>
<td>Latin American Civilization and Culture.</td>
<td>[3]</td>
</tr>
<tr>
<td>Spanish 320</td>
<td>Linguistics of the Spanish Language.</td>
<td>[3]</td>
</tr>
<tr>
<td>Spanish 325</td>
<td>Major Spanish Writers.</td>
<td>[3]</td>
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<tr>
<td>Spanish 401</td>
<td>Latin American Poetry.</td>
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<tr>
<td>Spanish 403, 404</td>
<td>Contemporary Spanish Literature.</td>
<td>[3, 3]</td>
</tr>
<tr>
<td>Spanish 407, 408</td>
<td>Latin American Novel and Short Story.</td>
<td>[3, 3]</td>
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<tr>
<td>Spanish 410</td>
<td>Cervantes.</td>
<td>[3]</td>
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<tr>
<td>Spanish 412</td>
<td>Special Studies in Latin American Literature.</td>
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**Department of General Studies:**

**LAC 151:** Latin America. [3]

**Department of History:**

**History 343, 344:** Diplomatic History of the United States. [3, 3]
**History 361:** Latin American History: The Colonial Era. [3]
**History 362:** Latin American History: The Modern Era. [3]
**History 363:** The History of Argentina, Brazil, and Chile. [3]
**History 370:** The Diplomatic History of Latin America. [3]
**History 438:** The Spanish Borderlands. [3]
**History 443:** History of Spain and Portugal. [3]
**History 453:** History of Mexico. [3]
**History 491, 492:** Senior Seminar in History. [3, 3]
**History 493, 494:** Directed Readings in History. [3, 3]
**History 497:** American Historiography. [3]

**Department of Philosophy and Religion:**

**Philosophy 231, 232:** History of Western Philosophy. [3, 3]
**Philosophy 334:** Latin American Thought. [3]

**Department of Public Affairs:**

**Geography 201:** Geography of Latin America. [3]
**Government 132:** Introduction to International Politics. [3]
**Government 350:** International Relations—Theories and Processes. [5]
**Government 450:** Cross-National Political Study. [5]

**Department of Sociology:**

**Sociology 307:** Sociology of Collective Behavior. [3]
**Sociology 308:** Sociology of Race Relations and Minorities. [3]
**Sociology 332:** Sociology of Urban Communities. [3]
**Sociology 385:** Sociology of Religion. [3]
**Sociology 392:** Formal Organization. [3]

**Latin American Studies Course**

**LAS 491:** CONTEMPORARY LATIN AMERICA. [3]

*Prerequisite: Required of senior majors in the Latin American program.*

*Open to other students by permission.* A study of the interrelationship of economic, political and social factors in explaining current Latin American reality.
Law Enforcement

Stephen T. Early, Jr., Chairman*

Law Enforcement Committee

Nehemiah Jordan (Department of Psychology)
Clyde E. Embrey (Northern Virginia Police Academy)
Edgar J. Fredericks (Northern Virginia Community College)

Requirements for the Major

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 hours of course work. 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 training 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. *George Mason University offers no professional training courses in law enforcement, corrections or similar fields. Such work must be taken in an accredited program at another institution and transferred to George Mason University. The transfer of courses and credits to this program will be determined on an individual basis. Credits earned in law enforcement courses will not be transferred to other majors.

A student whose objective is to prepare himself to enter correctional work may make appropriate substitutions for courses in law enforcement. However, professional guidance should be the basis for such substitutions and must be sought prior to entering George Mason University.

The quantitative and distributional requirements which must be fulfilled by candidates for the Bachelor of Science with a major in law enforcement are summarized below. English composition or an equivalent course in the specified amount must be completed prior to entry into the program at George Mason University. Except for the specified hours of professional training courses and English composition, all requirements may be completed at the university.

*Inquiries concerning this program should be directed to Dr. Stephen T. Early, Jr., Chairman, Law Enforcement Program Committee, George Mason University, Fairfax, Virginia 22030.
Minimum Quantitative and Distributional Requirements by Subject

I. General

a. English Composition ............................................. 6
b. Literature ........................................................... 6
c. Art, music, religion and/or philosophy (excluding applied music and studio art courses) ........................................ 6
d. American History or Principles of Economics ........... 6
e. A two-semester sequence in one science
   with a laboratory .................................................... 8
   __________
   32

II. Major requirements

a. Law enforcement .................................................. 22-33
   These courses or their equivalents are required professional preparation for this degree program.
   Introduction to Law Enforcement
   Patrol Administration
   Police Organization and Administration I, II, III
   Special Enforcement Problems
   Law Enforcement and the Community
   Criminal Law, Evidence and Procedure I, II, III
   Criminal Investigation Techniques I, II

b. Directly related
   1. Government ..................................................... 16
      To consist of separate courses in national and in state and local government and, at George Mason University, two courses from among those designated Govt. 301, 330, and 415.
   2. Psychology ..................................................... 12
      To consist of Psychology 100, 215, 231 and 325.
   3. Sociology ....................................................... 18
      To consist of Sociology 101, 152 and four courses selected from among Sociology 202, 302, 305, 307, 308, 332 and 402.

c. Electives ......................................................... 28-17
   __________
   Total 128

Students who attend George Mason University to complete the program leading to the B.S. with a major in law enforcement usually bring with them approximately 65 semester hours of work or its equivalent.
Remaining work may be completed in a schedule similar to the following:

<table>
<thead>
<tr>
<th></th>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td>Sociology Elective</td>
</tr>
<tr>
<td>Government Elective</td>
<td>5</td>
<td>Government Elective</td>
</tr>
<tr>
<td>Sociology Elective</td>
<td>3</td>
<td>Psychology 231</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Electives</td>
</tr>
<tr>
<td>Psychology 215</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology Elective</td>
<td>3</td>
<td>Sociology Elective</td>
</tr>
<tr>
<td>Psychology 325</td>
<td>3</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
<td>Humanities Elective</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

It is suggested that introductory courses in psychology and sociology be taken prior to entry at George Mason University but that other courses in these subjects be taken after transfer. Any course begun in a quarter system should be completed in that system.

Of the 128 hours required by this program one-fourth must be earned at George Mason University and at least 12 hours of that one-fourth must be in courses designated by numbers in the 300 and 400 series.

It is the responsibility of every prospective student to familiarize himself with the academic regulations of George Mason University and to identify and abide by the rules and procedures which are applicable to himself.
College of Professional Studies

Programs

Introduction—The College of Professional Studies at George Mason University enrolls students preparing for specific professions. All business administration, elementary education, and health and physical education majors enroll in the College of Professional Studies. The Department of Education is responsible for the professional sequence of courses and special standards as well as the certification recommendation for College of Arts and Science majors desiring to complete requirements for the Virginia Collegiate Professional Teaching Certificate.

Early Childhood Education Program—Students preparing to teach in the elementary school may specialize for the early childhood level which includes nursery school, kindergarten and grades one through three. The elementary education program provides specialization for grades four through seven.

Nursing Program—On April 2, 1974 the State Council of Higher Education approved the proposed baccalaureate program in Nursing. The curriculum has been designed for registered nurses who wish to earn the B.S. degree and for qualified students who wish to prepare for licensure as professional nurses. Enrollment in some nursing courses may be limited due to lack of space. Additional information may be obtained from the Director, Nursing Program.

Medical Technology Program—This program will begin in the Fall of 1974 if approval by State Council of Higher Education is granted. The proposed curriculum has been developed and it will be possible for students early in their college programs to make adaptations for transferring into this new professional program. Guidelines may be obtained from the Department of General Studies.

Requirements

Academic Requirements in Teacher Education—The George Mason University requirements specified in the opening part of Chapter IV, “Academic Programs,” apply to students in the College of Professional Studies. Under “Academic Achievement,” however, education students (both elementary and secondary) should be aware of the 2.300 cumulative average required for admission to teacher education and to student teaching. Students seeking to transfer from other departments, schools, colleges, and universities, with cumulative averages lower than 2.300 are discouraged from doing so because they cannot
complete the professional sequence of courses required for graduation without sufficient improvement to meet the standard. Further information on special requirements for preparing to teach appears under Courses of Instruction: Department of Education.

1974-1975 Degree Requirements for the College of Professional Studies are described in detail under Courses of Instruction: Department of Business Administration and Department of Education.
Department of Business Administration

Associate Professors Tangren, Zieg
Assistant Professors Birrer, Hudson, Marchione, Seely (Acting Chairman), Sood, Steinhauer
Acting Assistant Professors Cocke, Czarsty, Gomolka, Mass, Murty, Siff
Instructors Padbury, Quitmeyer
Lecturers Amery, Bartlett, Fox, Gibbons, Goretsky, Hamberger, Harvey, Hurta, Larson, Lipton, Marrella, Mathis, Miller, Pettit, Pohlig, Rans, Tuttle, Ward

Requirements for the Major

**Bachelor of Science Degree:** The major program in business administration offered by George Mason University culminates in a Bachelor of Science degree and requires a minimum of 122 hours of course work. Students who have previously enrolled in another degree program in business administration must be enrolled in this degree program at George Mason University for at least 30 semester hours including at least 12 semester hours of credit in upper-level business courses beyond the core requirements in order to receive the degree of Bachelor of Science with a major in business administration.

Specific requirements for the degree of Bachelor of Science with a major in business administration are as follows:

1. **Business Core Courses:**
   
   **Business Administration**
   
   Accounting .................................................. 6 hours
   Statistics .................................................. 6 hours
   Principles of Management ................................. 3 hours
   Business Communication ................................. 3 hours
   Marketing .................................................. 3 hours
   Finance .................................................... 3 hours
   *Business Law .................................................. 6 hours
   *Strategy and Policy ...................................... 3 hours
   Business Electives (see Note) .......................... 12 hours

   **45 hours**

   *Must be taken at George Mason University.

   **NOTE:** Of the 12 hours of business electives, six must be taken in a specialized field of the student's choosing. For a current listing of specialty fields, and courses that may be used to fulfill them, a faculty adviser should be consulted.

http://catalog.gmu.edu
II. Language Arts and Culture ........................................ 21 hours
   A. English Composition (6)
   B. Speech (3)
   C. Literature (6)
   D. Humanities (6)
       (Art, Music, Philosophy or Religion)

III. Social Sciences ................................................... 21 hours
   A. Principles of Economics (6)
   B. Economics (including 306 or 310) (6)
   C. History or Government (3)
   D. Psychology or Sociology (6)

IV. General and Health Sciences .................................... 14 hours
   A. Mathematics (6)
   B. Laboratory Sciences (8)

V. Open Electives ..................................................... 21 hours

TOTAL HOURS .................................................................. 122

Sample Program for Bachelor of Science with Major in Business Administration

NOTE: Course numbers are shown where applicable. Otherwise, students should consult the appropriate catalog section.

FRESHMAN YEAR
Econ 103 & 104 Principles of Economics 6 hours
Eng 101 & 102 English Composition 6 hours
Math 107 & 108 Mathematics of Management 6 hours
Laboratory Science (Biology, Chemistry or Physics) 8 hours

Either of the following:
   Humanities (Art, Music, Religion or Philosophy), and/or Psychology or Sociology 6 hours

Total Freshman Year 32 hours

SOPHOMORE YEAR
BA 201 Financial Accounting 3 hours
BA 202 Managerial Accounting 3 hours
BA 261 & 262 Statistics 6 hours
Eng 203/204 or 205/206 English Literature 6 hours
BA 232 Business Communication 3 hours
BA 234 Principles of Management 3 hours

Either of the following:
   Psychology, Sociology or Humanities (Whichever not taken first year) 6 hours

Total Sophomore Year 30 hours

http://catalog.gmu.edu
### Junior Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 311</td>
<td>Principles of Marketing</td>
<td>3 hours</td>
</tr>
<tr>
<td>BA 341</td>
<td>Introduction to Business Finance</td>
<td>3 hours</td>
</tr>
<tr>
<td>Econ 310 or 306</td>
<td>Money &amp; Banking or Price Theory</td>
<td>3 hours</td>
</tr>
<tr>
<td>Speech</td>
<td>(251 Recommended)</td>
<td>3 hours</td>
</tr>
<tr>
<td>BA</td>
<td>Business Administration Electives</td>
<td>6 hours</td>
</tr>
<tr>
<td>History or Government</td>
<td></td>
<td>3 hours</td>
</tr>
<tr>
<td>General Electives (Arts, Sciences, or Bus. Ad.)</td>
<td>9 hours</td>
<td></td>
</tr>
</tbody>
</table>

**Total Junior Year** 30 hours

### Senior Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 421 &amp; 422</td>
<td>Business Law</td>
<td>6 hours</td>
</tr>
<tr>
<td>BA 434</td>
<td>Business Strategy and Policy</td>
<td>3 hours</td>
</tr>
<tr>
<td>ECON</td>
<td>Elective Economics Courses</td>
<td>3 hours</td>
</tr>
<tr>
<td>BA</td>
<td>Business Administration Electives</td>
<td>6 hours</td>
</tr>
<tr>
<td>General Electives (Arts, Sciences or Bus. Ad.)</td>
<td>12 hours</td>
<td></td>
</tr>
</tbody>
</table>

**Total Senior Year** 30 hours

**Total Hours** 122 hours

### Business Administration Courses

**201: FINANCIAL ACCOUNTING. [3]**
A conceptual approach to the study of basic financial accounting and reporting practices, including financial control.

**202: MANAGERIAL ACCOUNTING. [3]**
Prerequisite: Business Administration 201. Preparation of accounting reports and analyses for use by management in planning and controlling enterprise operations. Topics include statement analysis, resource flow statements, budgeting, cost concepts and applications, and the role of income taxes in decision-making.

**212: INTRODUCTION TO DATA PROCESSING. [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 COBOL; laboratory exercises.

**232: BUSINESS COMMUNICATION. [3]**
An introduction to the forms, practices, and problems of effective business communications. Includes inquiry into the sources and uses of business information; techniques for analyzing and evaluating data; for conducting interviews and conferences; and for developing and using creative abilities of employees. Emphasis is placed on written exercises.
234: PRINCIPLES OF MANAGEMENT. [3]

The fundamentals of management; particular emphasis on the theories of management; evolution of management thought; managerial functions of planning, organizing, directing and controlling organizational activity. Practical application of theory to actual business situations.

261: STATISTICAL ANALYSIS I. [3]

Prerequisite: Six credits of college mathematics (Math 107, 108 is recommended). The course is designed for the student who needs to use statistics in his chosen field of study. Principal emphasis is placed on the use of statistical methods as scientific tools in the analysis of practical problems rather than on theory. Topics covered include: collection and presentation of data; descriptive statistics; elementary probability theory; properties and applications of important probability distributions—binomial, hypergeometric, multinomial, poisson, normal; sampling distributions; introduction to statistical inference-estimation.

262: STATISTICAL ANALYSIS II. [3]

Prerequisite: Business Administration 261. A continuation of Business Administration 261. Topics covered include: methods of statistical inference-estimation and hypothesis testing; properties and applications of the t, chi square and f distributions; elementary decision theory; time series construction and analysis—index numbers, trend, seasonal and cyclic analysis; linear regression and correlation.

301: COST ACCOUNTING. [3]

Prerequisites: Business Administration 201, 202 or permission of instructor. Cost accounting provides data for three major purposes: (1) planning and controlling routine operations, (2) non-routine decisions, policy making and long-range planning, and (3) inventory valuation and income determination. Cost accounting is a comprehensive and detailed course in cost analysis, reporting, and control. It identifies many complicating factors and alternative treatments that occur in financial and managerial accounting.

302: PRINCIPLES OF MANAGEMENT SCIENCE I. [3]

Prerequisite: Business Administration 201, 261 and junior class standing. Introduces both the viewpoint and methodology of the quantitative approach to decision-making problems. Emphasis is on the presentation and application of established techniques to practical business problems. Computer-based application packages are used as a primary tool of analysis. Topics covered include: mathematical model development; linear and dynamic programming; the distribution and assignment problems; utility theory; statistical decision theory, with emphasis on the Bayesian approach.

303: PRINCIPLES OF MANAGEMENT SCIENCE II. [3]

Prerequisite: Business Administration 302. A continuation of Business Administration 302. Topics covered include: queuing theory and Markov processes; inventory models; statistical quality control; computer simulation techniques; PERT and CPM analysis; applications to practical business problems emphasizing design, research, model development and analysis in such areas as marketing and finance.

307: INTRODUCTION TO INTERNATIONAL BUSINESS. [3]

A general overview of foreign trade from the viewpoint of business management. The historical dimension of international business; physical movement of goods; conditions essential for successful trading; the role of
government in international trade; how international business policies are developed.

309: LABOR-MANAGEMENT RELATIONS. [3]
An examination of American trade unions and of unionism. 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.

311: 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, to distribution channels, to functions, costs and alternative policies, to social and economic consequences, and to governmental supervision and control of the marketing of consumer and industrial goods.

312: DIGITAL COMPUTER CONCEPTS. [3]
Prerequisite: Business Administration 212 or permission of instructor. The organizational structure of computer installations; management information systems; quality control, recovery and multi-processing scheduling techniques; evaluating and installing proposed computer systems.

320: DISTRIBUTION SYSTEMS. [3]
Prerequisite: Business Administration 311. 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.

325: MARKETING RESEARCH. [3]
Prerequisite: Business Administration 311. The concepts and uses of research to improve the effectiveness of marketing; particular emphasis upon the collection, analysis, and presentation of information important to marketing decisions.

332: 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 involved in collective bargaining, pay policies, merit rating, promotion, training, etc., with emphasis upon their relationship to management.

341: INTRODUCTION TO BUSINESS FINANCE. [3]
Prerequisite: Economics 103, 104 and Business Administration 201 and 202 or permission of instructor. A survey of business finance with attention directed to financial problems of business firms, large and small, and to methods for solving them.

342: FEDERAL TAXATION. [3]
Prerequisite: Business Administration 201 and 202 or permission of instructor. An examination of the federal tax structure, including the economic structure of taxation, the Internal Revenue Code and the impact of judicial decisions.

346: PRINCIPLES OF INVESTMENTS. [3]
Prerequisite: Business Administration 201, 202 and Business Administration 341 or permission of instructor. An introduction to considerations of personal and business investments with emphasis upon tests of a good investment, sources of information, types of investments, and mechanics of purchase and sale.
347: FUTURES MARKETS. [3]
Prerequisite: Business Administration 341 and 346 or permission of instructor. An examination of the futures markets including the commodity exchanges, the International Monetary Market, and the stock option markets as they function to provide a pricing and marketing function for industry; as investment vehicles; and as a way of reducing economic risks through hedging.

351: GOVERNMENT AND BUSINESS. [3]
Prerequisite: Economics 103 and 104 or permission of instructor. A consideration of public policies intended to resolve or mitigate problems caused by industrial and other combinations, by public utility industries, by government enterprises, and by labor-management relations.

353: INTERMEDIATE APPLIED STATISTICS FOR MANAGEMENT. [3]
Prerequisite: Business Administration 261 and 262. Several of the more advanced statistical methodologies of importance in business applications are treated, including: survey sampling, experimental design, multiple regression and correlation, forecasting. The techniques are applied to such business areas as marketing, personnel, accounting, auditing, and finance. Use of computer packages for analysis is emphasized.

357: ORGANIZATIONAL BEHAVIOR AND ADMINISTRATION. [3]
Prerequisite: Business Administration 234 or permission of instructor. Perspectives for understanding and predicting behavior in formal organizations as applied to management theory and practice. Basic concepts of organizational behavior such as power and authority, roles, motivation, and group dynamics are explored in relationship to managerial functions such as the design of organizations and the promotion of organizational effectiveness and change.

369, 370: INTERMEDIATE ACCOUNTING. [3, 3]
Prerequisite: Business Administration 201 and 202. Valuation, income measurement, and other theoretical problems in accounting for the financial transactions of an enterprise. Preparation and analysis of financial reports including statements of financial position, earnings statements, combined financial statements, statements of changes in financial position, and financial statements adjusted for price-level changes.

371: ADVANCED ACCOUNTING. [3]
Prerequisite: Business Administration 201, 202, 369 and 370, or permission of instructor. Advanced accounting theory applied to specialized problems in partnerships, ventures, consignments, installment sales, statements of affairs, receiver's accounts, realization and liquidation, reports and consolidation of parent and subsidiary accounts and fund accounting.

401: AUDITING. [3]
Prerequisite: Business Administration 369, 370 or permission of instructor. Audit objectives, reports and procedures are presented as part of the independent public accountant's review along with the newer tools of statistical sampling and EDP. Professional ethics and legal liabilities are examined as part of the framework within which the CPA works.

412: MARKETING MANAGEMENT. [3]
Prerequisite: Business Administration 311 or permission of instructor. The managerial aspects of marketing emphasizing the development of marketing strategies and plans and integrating the specific elements of the marketing process. Emphasis on case analysis.
421, 422: BUSINESS LAW. [3, 3]
Prerequisite: Senior class standing. 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, partnership, bankruptcy, and other topics. This course utilizes the principles of marketing and finance as presented in Business Administration 311 and 341.

431: THE SOCIAL ENVIRONMENT OF AMERICAN BUSINESS. [3]
Prerequisite: Senior class standing or permission of instructor. An introduction to the social position and responsibilities of American business and to the place of ethics and standards in its conduct.

433: ADVANCED FINANCIAL MANAGEMENT. [3]
Prerequisites: Economics 103, 104, Business Administration 201, 202, and 341 or permission of instructor. Completion of Business Administration 342 is recommended but not required. Functions and objectives of financial management; problems of internal financial analysis; management and control of current assets, capital budgeting, short and intermediate term financing, forecasting and planning the capital structure of the firm; leasing; dividend policy; valuation of the form. Extensive use of business cases.

434: BUSINESS STRATEGY AND POLICY. [3]
Prerequisite: Final semester. A senior-level, capstone course designed to acquaint the student with the structure and management of various types of organization and the shaping of business policy. The principles of management and the managerial functions of planning, organizing, staffing, directing, and controlling are related, through case studies, to actual business subjects in the business curriculum, and will stress techniques of managerial decision-making, as they relate to business strategy formation; in large, medium, and small enterprises.

499: INDEPENDENT STUDY IN BUSINESS ADMINISTRATION. [1-3]
Prerequisites: Senior Class Standing 24 hours of required business administration courses, including principles of marketing and introduction to business finance. A research proposal approved in advance by the instructor and the department chairman. Investigation of a business problem according to individual interest of the student, with emphasis on research methods.
Department of Education

Professors Snyder (Chairman), Brown-Azarowicz, Eaves, Joy, Montebello, Schindler
Associate Professors Aebischer, Bindel, Edgemon, Evans, Gilstrap, Kilby, Martin, Richardson, Schuchman, D. Smith, Spuhler
Assistant Professors Austin, Carroll, Duck, Dzama, Gray, Keller, Krotee, Linn, Major, Metcalf, Perkes, Repp, Shelton, Snoddy, Wilson
Instructor Bloecker
Lecturers Armstrong, Bouey-Yates, Bowen, Brown, Hobson, Hurt, Murphey, Sigal, Tankard, Wagner

Requirements for Prospective Teachers

The teacher education program is designed to develop teachers who are qualified academically and professionally, and who possess the personal attributes needed for success in the teaching profession.

The teacher education program serves the following categories of students:

Undergraduate students who are working toward the Bachelor of Science Degree in Education and the Virginia Collegiate Professional Certificate with endorsement at the elementary school level.

Undergraduate students who are working toward the Bachelor of Arts or Bachelor of Science degree and the Virginia Collegiate Professional Certificate with endorsement at the secondary school level.

Students who have earned baccalaureate degrees and who are working toward the Virginia Collegiate Professional Certificate with endorsement at the elementary or secondary school level.

Students who have earned baccalaureate degrees and who are working toward the Master of Education Degree and the Collegiate Professional Certificate with endorsement at the elementary or secondary level. (See the graduate catalog for detailed information).

Admission to the Teacher Education Program

Admission to the teacher education program is on a selective basis. Undergraduates and students holding baccalaureate degrees must be admitted to the program prior to enrollment in 400-level education courses. Formal application for admission to the teacher education program must be made by November 1 or March 15 of the semester preceding that in which the student intends to enroll in 400-level education courses.

Admission to the teacher education program is granted by the Teacher Education Committee. To be considered for admission to the teacher education program, students must have completed Education
and have a grade point average of 2.300 in all courses transferred to or attempted at George Mason University. Students holding baccalaureate degrees must have an average of 2.300 on all course work attempted in earning their degrees and in work at George Mason University. All students must have an average of 2.300 in professional courses*, and 2.300 in the major*. A minimum grade of (C) is required in all professional courses*.

In granting admission to the teacher education program, the Teacher Education Committee will give consideration to emotional balance, leadership ability, ability in oral and written expression, moral character, and freedom from disqualifying physical and health conditions. Virginia “Certification Regulations for Teachers” stipulate in part as follows:

I. Applicant must be a citizen of the United States, must be at least eighteen years of age, and must possess good moral character.

II. 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.

A review of qualifications needed to be a teacher is conducted throughout the program. In addition, the academic record and other qualifications of each student are reviewed prior to approval for student teaching. For approval for student teaching an overall grade point average of 2.300 is required. For students holding baccalaureate degrees, the grade point average for student teaching is computed on all course work attempted in earning the baccalaureate degree, plus all course work at George Mason University. All students must have an average of 2.300 in education courses*, and 2.300 in the major*. A minimum grade of (C) is required in professional courses*. A minimal grade of (C) in Student Teaching is required to secure the recommendation of the university for certification. Applications for student teaching must be filed by May 31 for the fall semester and October 15 for the spring semester.

Students holding baccalaureate degrees who are working toward the Virginia Collegiate Professional Certificate will be required to meet the subject matter requirements specified by Virginia “Certification Regulation for Teachers.” The professional requirements are those prescribed for undergraduate students. Students in this category must agree to complete the entire sequence of education courses, including student teaching.

Teaching in the Secondary School

The following program for teaching in the secondary schools,
usually grades seven through 12, may be completed as (1) an undergraduate or (2) following graduation.

Students wishing to follow the first (1) alternative should plan their undergraduate programs so that they:
1. Meet the general education requirements for certification as outlined below.
2. Complete the 200 and 300 level education courses as undergraduate electives.

Students who elect the second (2) alternative are admitted as special undergraduate students following award of the baccalaureate degree. These students can complete the remaining requirements for certification in one semester.

Bachelor's Degree: College of Arts and Sciences

This program is offered in the College of Arts and Sciences with the general requirements prescribed by that college. Majors are available in biology, chemistry, economics, English, French, German, government, history, mathematics, physics, psychology, sociology, and Spanish.

The following constitutes the program for the Virginia Collegiate Professional Certificate. This program requires 131 semester hours. Completion of this program will usually require attendance at one or more summer sessions. The courses marked *** are not counted toward the 120 semester hours required for the Bachelor of Arts degree. In addition to meeting the general requirements for the Bachelor of Arts degree, the student must also meet the general education requirements for Virginia certification and those of the George Mason University Teacher Education Program. An outline of these requirements follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>12</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>(6)</td>
</tr>
<tr>
<td>English, Foreign Language, Speech, Fine Arts,</td>
<td></td>
</tr>
<tr>
<td>Music, or Philosophy</td>
<td>(6)</td>
</tr>
<tr>
<td>Social Science</td>
<td>12</td>
</tr>
<tr>
<td>History 121 or 122</td>
<td>(3)</td>
</tr>
<tr>
<td>Anthropology, Economics*, Fine Arts, 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>
</tbody>
</table>

***See footnote on page 187.

*See footnote on page 187.
Electives ........................................................................................................ 8
(From the areas listed above)

Education .................................................................................................... 27
  Education 201**, 202**, 301, 313, 416, and 435***

Health and Physical Education .................................................................. 5
  Health 210 ............................................................................................... (3)
  Physical Education (from 100 series)*** ............................................... (2)

Virginia Teaching Field Endorsement Minimal Requirements. 12-45
(See Certification Regulations for details. The following teaching field totals include any semester-hours credits also appearing in the general degree requirements. New certification regulations are now being formulated.)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>24</td>
</tr>
<tr>
<td>Chemistry</td>
<td>24</td>
</tr>
<tr>
<td>Dramatics</td>
<td>12</td>
</tr>
<tr>
<td>Economics</td>
<td>18</td>
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<tr>
<td>English</td>
<td>30</td>
</tr>
<tr>
<td>English &amp; Dramatics</td>
<td>36</td>
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<tr>
<td>English &amp; Journalism</td>
<td>36</td>
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<td>English &amp; Speech</td>
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<td>Foreign Language</td>
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<td>General Science</td>
<td>24</td>
</tr>
<tr>
<td>Government</td>
<td>18</td>
</tr>
<tr>
<td>History</td>
<td>24</td>
</tr>
<tr>
<td>History and Social Science</td>
<td>42</td>
</tr>
<tr>
<td>Mathematics</td>
<td>27</td>
</tr>
<tr>
<td>Physics</td>
<td>20</td>
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<tr>
<td>Sociology</td>
<td>18</td>
</tr>
<tr>
<td>Speech</td>
<td>12</td>
</tr>
</tbody>
</table>

*Three semester hours required for social studies endorsement.
**Strongly recommended.
***Physical education and Education 435 do not count toward the total semester hours required for the College of Arts and Sciences degree.
## Sample Program for College of Arts and Science Degree and Virginia Collegiate Professional Certificate

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101</td>
<td>3</td>
<td>Major Subject**</td>
<td>3</td>
</tr>
<tr>
<td>English 101</td>
<td>3</td>
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### Third Semester

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
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<tr>
<td>Literature</td>
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<tr>
<td>Music or Philosophy</td>
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### Fourth Semester

<table>
<thead>
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<td>History 121</td>
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<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Major Subject**</td>
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<tr>
<td>Mathematics</td>
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### Fifth Semester

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>Anthropology, Psychology or Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Education 301</td>
<td>3</td>
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<td>Education 444</td>
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<tr>
<td>Major Subject**</td>
<td>6</td>
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<tr>
<td>Non-Western Culture</td>
<td>3</td>
</tr>
<tr>
<td></td>
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### Sixth Semester

<table>
<thead>
<tr>
<th>Hours</th>
<th>Hours</th>
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<tbody>
<tr>
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<tr>
<td>Non-Western Culture</td>
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### Seventh or Eighth Semester

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>Education 416</td>
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<tr>
<td>Education 421</td>
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<tr>
<td>Education 435*</td>
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<td>Education 446</td>
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### Seventh or Eighth Semester

<table>
<thead>
<tr>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 101</td>
<td>3</td>
</tr>
<tr>
<td>Health 210</td>
<td>3</td>
</tr>
<tr>
<td>Major Subject**</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>15</td>
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</tbody>
</table>

*Physical education and Education 435 do not count toward the 120 semester hours required for the College of Arts and Sciences degree.

**A total of 24 semester hours is shown for the major subject. To the extent that overlapping with general degree requirements apply, majors requiring more than 24 hours may be reduced. Majors requiring additional semester hours will increase the requirement of work during the summer sessions.
Total Hours .................................................................................................................. 131

Teaching Physical Education

The program for teaching Health and Physical Education is offered by the College of Professional Studies. This program qualifies the individual for the Bachelor of Science in Education Degree with a major in health and physical education and for the Virginia Collegiate Professional Certificate with endorsement in health and physical education. This certificate is valid at both the elementary and secondary school levels.

During the senior year the student will complete a professional semester which will include Health 401, Physical Education 470, and Education 436.

Bachelor of Science in Education
Major in Health and Physical Education

Semester Hrs.

I. Language Arts and Culture ................................................................. 26 or 27

A. English
   1. English Composition (101-102) ....................... 6

B. Speech—Select one ................................................................. 3
   1. Principles of Effective Speaking (151)
   2. Public Speaking (152)
   3. Oral Interpretation (LAC 355)
      Option of c or d ................................................. 8 or 9

C. Foreign Language (8*)—Select one
   1. French, 0-8
   2. Spanish, 0-8
   3. German, 0-8

D. Regional Cultures (9)—Select three
   1. Latin America (LAC 151)
   2. Sub-Saharan Africa (LAC 152)
   3. Asia and W. Pacific (LAC 153)
   4. North Africa & the Middle East
      (LAC 154)

*Replace course(s) exempt with course(s) from I.D.

**A total of 24 semester hours is shown for the major subject. To the extent that overlapping with general degree requirements apply, majors requiring more than 24 hours may be reduced. Majors requiring additional semester hours will increase the requirement for work during the summer sessions.
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>E. Literature</td>
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</tr>
<tr>
<td>1. Rdgs. in Eng. and Amer. Lit. (205, 206)</td>
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</tr>
<tr>
<td>F. Humanities—Select one</td>
<td>3</td>
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<tr>
<td>1. Art Appreciation (101)</td>
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</tr>
<tr>
<td>2. Music Appreciation (101)</td>
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<tr>
<td>II. Social Studies</td>
<td></td>
</tr>
<tr>
<td>A. History</td>
<td></td>
</tr>
<tr>
<td>1. American (History 121, 122)</td>
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</tr>
<tr>
<td>B. Other subjects</td>
<td>9**</td>
</tr>
<tr>
<td>1. Anthropology</td>
<td></td>
</tr>
<tr>
<td>2. Economics</td>
<td></td>
</tr>
<tr>
<td>3. Geography</td>
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<td>4. Government</td>
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<td>5. History</td>
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<td>6. Sociology</td>
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<tr>
<td>III. General and Health Sciences</td>
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</tr>
<tr>
<td>A. Personal and Community Health</td>
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<tr>
<td>(Health 210)</td>
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<tr>
<td>B. P.E. Activities (P.E. 101 to 140)</td>
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</tr>
<tr>
<td>C. Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>D. Laboratory Science</td>
<td>8</td>
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<td>IV. Professional Sequence:</td>
<td></td>
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<tr>
<td>Education 201, 202, 301, 313, 436, and</td>
<td>21</td>
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<tr>
<td>Health 401 and Physical Education 302, 470,</td>
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<tr>
<td>V. Major</td>
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<td>Health 205</td>
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</tr>
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<td>Physical Ed. (Additional hours from</td>
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<tr>
<td>100 series)</td>
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<tr>
<td>Physical Ed. 201, 220, 221, 222, 302, 304,</td>
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</tr>
<tr>
<td>306, 308, 316, 460</td>
<td>30</td>
</tr>
<tr>
<td>VI. Open Electives</td>
<td></td>
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<tr>
<td></td>
<td>4-6</td>
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<tr>
<td>TOTAL MINIMUM SEMESTER HOURS</td>
<td>128</td>
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</table>

*Men 106 and 107 or 141; women 106 and 141

**Only 6 required here for those taking the Regional Cultures sequence. World History may be one of the courses.
## Sample Program in Health and Physical Education

### Freshman Year—1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Biology 103</td>
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</tr>
<tr>
<td>English 101</td>
<td>3</td>
</tr>
<tr>
<td>History 121</td>
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<tr>
<td>Art or Music</td>
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<td>Physical Ed. 100 series</td>
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<tr>
<td><strong>Total</strong></td>
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### Freshman Year—2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Biology 104</td>
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<tr>
<td>English 102</td>
<td>3</td>
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<tr>
<td>History 122</td>
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<td>Reg. Cult. or For. Lang.**</td>
<td>3-4</td>
</tr>
<tr>
<td>Physical Ed. 201</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. 100 series</td>
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### Sophomore Year—1st Semester

<table>
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<tbody>
<tr>
<td>Education 201</td>
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<tr>
<td>English 205</td>
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</tr>
<tr>
<td>LAC 355, Speech 151 or 152</td>
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<tr>
<td>Health 205</td>
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<td>Physical Ed. 220</td>
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<td><strong>Total</strong></td>
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### Sophomore Year—2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Education 202</td>
<td>3</td>
</tr>
<tr>
<td>English 206</td>
<td>3</td>
</tr>
<tr>
<td>Reg. Cult. or For. Lang.**</td>
<td>3-4</td>
</tr>
<tr>
<td>Physical Ed. 221</td>
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<tr>
<td>Physical Ed. 222</td>
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<td>Physical Ed. 100 series</td>
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### Junior Year—1st Semester

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>Education 301</td>
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<td>Mathematics</td>
<td>4</td>
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<td>Physical Ed. 302</td>
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<tr>
<td>Physical Ed. 308</td>
<td>3</td>
</tr>
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<td>Social Studies</td>
<td>3</td>
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<td><strong>Total</strong></td>
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### Junior Year—2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Education 313</td>
<td>3</td>
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<tr>
<td>Education 444</td>
<td>1</td>
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<tr>
<td>Reg. Cult. or Soc. Studies</td>
<td>3</td>
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<td>Physical Ed. 304</td>
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<td>Physical Ed. 316</td>
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### Senior Year—1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Education 445</td>
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<td>Physical Ed. 306</td>
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<td>Physical Ed. 460</td>
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<td>Physical Ed. 100 series</td>
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<td>Social Studies</td>
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<tr>
<td>Electives</td>
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### Senior Year—Professional Semester

<table>
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<tr>
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<tr>
<td>Education 436</td>
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<td>Education 446</td>
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<td>Health 401</td>
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<td>Physical Ed. 470</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

**Replace course(s) exempt with course(s) from I.D.**

Total Hours: 128

[http://catalog.gmu.edu](http://catalog.gmu.edu)
Teaching in Elementary Schools

Programs in early childhood education (nursery school, kindergarten, grades 1-3) and in elementary education (grades 4-7) are offered. These programs require completion of 128 semester hours.

One semester of the senior year will be a professional semester during which Education 407, 419, and 431, or Education 408, 420 and 432 will be completed. The student will need to decide prior to enrollment in Education 401, or 402, whether he desires to be certified at the early childhood level or at the elementary level.

The following are the programs leading to the awarding of the Bachelor of Science Degree with a Major in Early Childhood Education or in Elementary Education and the Virginia Collegiate Professional Certificate with endorsement at the nursery school-kindergarten—grade 3 level, or the grade 4-7 level.

**Bachelor of Science in Education**

<table>
<thead>
<tr>
<th>Major in Early Childhood or Elementary Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Req. Semester Hrs.</td>
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</table>

<table>
<thead>
<tr>
<th>I.</th>
<th>Language Arts and Culture</th>
<th>32 or 33</th>
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</thead>
<tbody>
<tr>
<td>A.</td>
<td>English</td>
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<tr>
<td></td>
<td>1. English Composition (101-102)</td>
<td>6</td>
</tr>
<tr>
<td>B.</td>
<td>Speech—Select one</td>
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<tr>
<td></td>
<td>1. Principles of Effective Speaking (Sp 151)</td>
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<tr>
<td></td>
<td>2. Public Speaking (Sp 152)</td>
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</tr>
<tr>
<td></td>
<td>3. Interpretive Reading (LAC 355)</td>
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<tr>
<td></td>
<td>Option of c or d</td>
<td>8 or 9</td>
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<tr>
<td>C.</td>
<td>Foreign Language (8*)—Select one</td>
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</tr>
<tr>
<td></td>
<td>1. French, 0-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Spanish, 0-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. German, 0-8</td>
<td></td>
</tr>
<tr>
<td>D.</td>
<td>Regional Cultures—Select three</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>1. Latin America (LAC 151)</td>
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</tr>
<tr>
<td></td>
<td>2. Sub-Sahara Africa (LAC 152)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Asia and W. Pacific (LAC 153)</td>
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</tr>
<tr>
<td></td>
<td>4. North Africa and the Middle East (LAC 154)</td>
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</tr>
<tr>
<td>E.</td>
<td>Literature</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>1. Rdgs in Eng. and Amer. Lit. (205, 206)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2. Children's Literature (LAC 305)</td>
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</tbody>
</table>

*Replace course(s) exempt with course(s) from D.*
F. Humanities ........................................... 6  
   1. Art for the Elem. School  
      (LAC 273) ........................................ 3  
   2. Music for Elem. School  
      (LAC 182) ........................................ 3  

II. Social Studies ........................................ 18*  
   A. History  
      1. American (History 121, 122) ...................... 6  
      2. World (History 101) .............................. 3  
   B. Other subjects  
      1. Anthropology .................................. 3  
      2. Economics .................................... 3  
      3. Geography .................................... 3  
      4. Government ................................... 3  
      5. Sociology .................................... 3  

III. General and Health Sciences ......................... 21  
   A. Personal and Community Health  
      (Health 210) ................................... 3  
   B. P.E. Activities (P.E. 101 to 140) ................. 4  
   C. Mathematics (GHS 371, 372) ....................... 6  
   D. Laboratory Science ............................... 8  

IV. Professional (Major) Sequence ......................... 36  
   Early Childhood Education: 201, 202, 301, 313, 401, 403, 407, 419, 431, and Health 301 36  
   or  
   Elementary Education: 201, 202, 301, 313, 402, 404, 408, 420, 432, and Health 301 .......... 36  

V. Open Electives** ................................... 20 or 23  
   TOTAL MINIMUM SEMESTER HOURS ................. 128

*Only 15 required in social studies for those taking the regional cultures sequence.

**Open Electives: early childhood or elementary education majors should plan the utilization of the available electives in such a way that his competence will be strengthened. This can be done by planning a program in a subject area such as foreign language, English, social studies, music, art, science, library science, or by electing courses in instructional media and graduate courses open to qualified undergraduates.
### Sample Program for Early Childhood or Elementary Education Major

#### Freshman Year—1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 103</td>
<td>4</td>
</tr>
<tr>
<td>English 101</td>
<td>3</td>
</tr>
<tr>
<td>Geography 101 or 102</td>
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</tr>
<tr>
<td>History 101</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. (100 series)</td>
<td>0-1</td>
</tr>
<tr>
<td>Regional Culture or For. Lang.</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

#### Freshman Year—2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Biology 104</td>
<td>4</td>
</tr>
<tr>
<td>Economics 101</td>
<td>3</td>
</tr>
<tr>
<td>English 102</td>
<td>3</td>
</tr>
<tr>
<td>History 121</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. (100 series)</td>
<td>0-1</td>
</tr>
<tr>
<td>Regional Culture or For. Lang.</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

#### Sophomore Year—1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Education 201</td>
<td>3</td>
</tr>
<tr>
<td>English 205</td>
<td>3</td>
</tr>
<tr>
<td>History 122</td>
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<td>LAC 273</td>
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</tr>
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<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</table>

#### Sophomore Year—2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Education 202</td>
<td>3</td>
</tr>
<tr>
<td>Education 301</td>
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</tr>
<tr>
<td>English 206</td>
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</tr>
<tr>
<td>LAC 182</td>
<td>3</td>
</tr>
<tr>
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</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</table>

#### Junior Year—1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Education 313</td>
<td>3</td>
</tr>
<tr>
<td>Education 444</td>
<td>1</td>
</tr>
<tr>
<td>Health 210</td>
<td>3</td>
</tr>
<tr>
<td>LAC 305</td>
<td>3</td>
</tr>
<tr>
<td>LAC 355 or Speech 151 or 152</td>
<td>3</td>
</tr>
<tr>
<td>GHS 371</td>
<td>3</td>
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<tr>
<td>Physical Ed. (100 series)</td>
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#### Junior Year—2nd Semester

<table>
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<td>Education 401 or 402</td>
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<tr>
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<td>Health 301</td>
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<td>GHS 372</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. (100 series)</td>
<td>0-1</td>
</tr>
<tr>
<td>Elective</td>
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#### Senior Year—1st or 2nd Sem.

<table>
<thead>
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<tr>
<td>Education 445, 446</td>
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<td>Regional Culture</td>
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#### Professional Semester

<table>
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<tbody>
<tr>
<td>Education 407 or 408</td>
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<tr>
<td>Education 419 or 420</td>
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<tr>
<td>Education 431 or 432</td>
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<tr>
<td>Education 447</td>
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<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

**Total Hours:** 128

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Education Courses

The courses listed constitute the undergraduate program. Courses in the 200 and 300 series are open to all undergraduates. The 400 series of courses are open only to those students who have been admitted to the teacher education program. Certain courses in the 400 series may be taken for credit by graduate students in the preparatory phase of elementary and secondary education programs. Students may not receive credit for more than one of the comparable courses relating to early childhood and intermediate grades. For example, students taking Education 401 may not receive credit for Education 402.

Six semester hours of work in graduate education courses may be elected. This work will be in addition to undergraduate requirements in education courses.

With the permission of his adviser, the chairman of the department, the course instructor, and the Dean of the Graduate School, an undergraduate student may be permitted to enroll in graduate course work for grade and if successful, apply the credit gained toward an undergraduate degree. The student should consult with the chairman of the department for identification of graduate course work which can be taken for undergraduate credit.

201, 202: HUMAN GROWTH AND DEVELOPMENT. [3, 3]
Prerequisite: 201 for 202. Designed to acquaint prospective teachers with the area of human growth and development with emphasis on childhood and adolescence. Included are studies of intelligence, physical, social, and emotional development emphasizing the underlying causes of behavior. The behavioral characteristics of different age levels, individual differences, and methods of adjustment are considered. Field experiences in public schools are required.

301: FOUNDATIONS OF EDUCATION. [3]
The historical and philosophical 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 to include current issues and problems in education is made. The relationships between educational objectives, the structure of the educational system, and curricula are considered. Field experiences in public schools are required.

313: EDUCATIONAL PSYCHOLOGY. [3]
Prerequisite: Education 201, 202. Designed to acquaint the prospective teacher with the principles of psychology and their application to teaching. The various aspects of the learning process, individual differences, and adjustment are considered. Emphasis is placed on evaluation of pupil progress, development of personality and attitudes, and motivation. Field experiences in public schools are required.

400: IN SERVICE EDUCATIONAL DEVELOPMENT. [2, 3, 4, 6]
Prerequisites: Employment in a professional capacity by sponsoring school division, or educational agency, acceptability to the university, or permission of department. Offered upon request of a school division, or other educational agency, or upon establishment of a need on the part of a group of education personnel.
Provides an opportunity for instruction in various educational areas, such as learning theory, curriculum, evaluation, materials, media, methods, reading, or other areas. The course may take any form appropriate for the area involved to include practicums and workshops. May be repeated. If applicable to a specific degree program may be accepted toward a degree by the university. May not be taken for graduate credit.

401: TEACHING METHODS AT EARLY CHILDHOOD LEVELS. [3]
Prerequisites: Education 301 and 313. The organization and conduct of learning experiences provided children in nursery school, kindergarten and primary grades are considered. Emphasis is placed on a balance of activities during the school day, developing an understanding of the approaches used in teaching, unit and lesson planning. Major emphasis is placed on the teaching of art and the social studies. Field experiences in public schools are required.

402: TEACHING METHODS IN THE INTERMEDIATE GRADES. [3]
Prerequisites: Education 301 and 313. Deals with the organization and direction of learning experiences provided for children in the intermediate grades. Emphasis is placed on a balancing of activities during the school day, developing and understanding of the approaches used in teaching, and unit and lesson planning. Major emphasis is placed on the teaching of art and the social studies. Field experiences in public schools are required.

403: DEVELOPMENTAL READING FOR EARLY CHILDHOOD LEVELS. [3]
Prerequisite: Education 401. Corequisite LAC 305. Reading readiness abilities, readiness for reading at the primary level, word analysis and word recognition skills, vocabulary development, reading comprehension and critical reading, interpretive oral reading, reading skills in content fields, study skills, and adaptive rates of reading. Emphasis is placed on reading at the nursery school, kindergarten, and grades 1, 2, and 3 levels. Field experiences in public schools are required.

404: DEVELOPMENTAL READING IN THE INTERMEDIATE GRADES. [3]
Prerequisite: Education 402. Corequisite LAC 305. Reading readiness abilities, readiness for reading at the primary level, word analysis and word recognition skills, vocabulary development, reading comprehension and critical reading, interpretive oral reading, reading skills in content fields, study skills, and adaptive rates of reading. Emphasis is placed on reading at the intermediate grade level, grades 4 through 7. Field experiences in public schools are required.

*407: DIAGNOSTIC READING AND LANGUAGE ARTS FOR EARLY CHILDHOOD LEVELS. [3]
Prerequisites: Education 403 and LAC 305. A study of the theory, methods, practices and materials involved in the teaching of communication skills with emphasis on the diagnostic teaching of reading to include techniques for evaluation of reading progress, difficulties experienced by children in learning to read, diagnostic techniques available to the classroom teachers, differentiation of instruction to fit individual capabilities, and corrective methods. Emphasis is placed on reading at the nursery school, kindergarten, and grade 1, 2, and 3 levels. Field experiences in public schools are required.

*Taught as a block of 15 semester-hours during the professional semester.
**408: DIAGNOSTIC READING AND LANGUAGE ARTS IN THE INTERMEDIATE GRADES. [3]**  
Prerequisites: Education 404 and LAC 305. A study of theory, methods, practices and materials involved in the teaching of communication skills with emphasis on the diagnostic teaching of reading to include techniques for evaluation of reading progress, difficulties experienced by children in learning to read, diagnostic techniques available to the classroom teacher, differentiation of instruction to fit individual capabilities, and corrective methods. Emphasis is placed on reading at the intermediate grade level, grades 4 through 7. Field experiences in public schools are required.

**416: TEACHING METHODS IN THE SECONDARY SCHOOLS. [3]**  
Prerequisite: Education 313. Corequisite: Education 421. A study of the theories, practices, and methods involved in teaching. Emphasis is placed on the development of course, unit, and lesson plan objectives; development of units, evaluation of student progress, classroom management, providing for individual differences, and techniques used in motivation. Field experiences in the public schools are required.

**419: TEACHING OF SCIENCE AT EARLY CHILDHOOD LEVELS. [3]**  
Prerequisite: Education 403. Corequisite: Education 407. A study of the theory, methods, practices, and materials involved. Emphasis is placed on the relationship of the child to the environment leading to the development of basic generalizations in science. Field experiences in the public schools are required.

**420: TEACHING OF SCIENCE IN THE INTERMEDIATE GRADES. [3]**  
Prerequisite: Education 404. Corequisite: Education 408. A study of the theories, practices, methods, and materials involved. Emphasis is placed on teaching broad concepts in the areas of earth-space science, chemistry, and physical science. Field experiences in the public schools are required.

**421: INSTRUCTIONAL MEDIA. [3]**  
Prerequisite: Education 313. Corequisite: Education 416. A study of the theory, methods, and practices involved in the use of instructional media in the teaching learning situation with emphasis on the secondary school level. Specific training in the use of audio-visual devices and equipment is included. Particular attention is given to the selection, evaluation, and utilization of media in relation to the particular instruction involved. Field experiences in the public schools are required.

**431: STUDENT TEACHING AT EARLY CHILDHOOD LEVELS. [9]**  
Prerequisites: Senior standing, an overall grade point average of 2.300, and Education 407 and 419. A full-time program of ten weeks' duration in a public school involving the study of pupils, observation of teaching, preparation of instructional materials, teaching, and participation in other school activities as required or needed. Attendance at periodic seminars is required.

*Taught as a block of 15 semester-hours during the professional semester.
*432: STUDENT TEACHING IN THE INTERMEDIATE GRADES. [9]
Same as *431 except course prerequisites which are 408 and 420.

**435: STUDENT TEACHING IN THE SECONDARY SCHOOL. [9]
Same as *431 except course prerequisites which are 416 and 421.

*436: STUDENT TEACHING IN ELEMENTARY AND SECONDARY SCHOOLS. [9]
Same as *431 except course prerequisites are Health 401 and Physical Education 470 for Health and Physical Education students.

440, 441: INDEPENDENT STUDY IN EDUCATION. [2 or 3]
Prerequisite: Admission to teacher education program and permission of department chairman. Students repeating the course will register for Education 441. By arrangement. Various subjects, principally by directed study, discussion and research. Among the subject areas in education are: elementary science; reading; the slow learner; mathematics; English; social sciences; arts and crafts; health; secondary science; language arts; child growth and development; culturally deprived; social foundations; music; learning disabilities; guidance; and the mentally retarded.

444, 445, 446, 447: DIRECTED FIELD EXPERIENCES. [1]
Prerequisite: Permission of Director of Field Experiences. Students repeating the course will register for the next higher number. Provides an administrative means for students taking professional education courses to be given credit for field experience activities conducted in conjunction with education courses. Courses with field experience activities include Education 201, 202, 301, 313, 401, 402, 403, 404, 407, 408, 416, 419, 420, and 421. Registration must be concurrent with or subsequent to registration for courses requiring field experiences. One semester hour of credit is given for each 30 hours of field experiences successfully completed. Credit is without grade.

Health

205: GENERAL SAFETY. [3]
Safety problems relating to water sports, non-motorized vehicles, and home environment are discussed and safety materials, methods and techniques are developed. Liability, prevention and emergency care of all types of injuries with reference to first aid and athletics. Proper use of personnel, facilities and equipment. Includes Red Cross Standard First Aid Certification. Two lecture; three laboratory hours.

210: PERSONAL AND COMMUNITY HEALTH. [3]
Designed to provide the prospective teacher with the information needed to function effectively in a public school. Emphasis is placed on health problems involving mental illness, alcohol, tobacco, drugs, venereal disease, communicable diseases, and accidents. Attention is also given to medical care, physical fitness, nutrition, weight control, and community and world health problems.

*Taught as a block of 15 semester-hours during the professional semester.

**Not counted within the 120 hours required for the B.A. degree for students entering September, 1971 and after.

http://catalog.gmu.edu
301: TEACHING HEALTH AND PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. [3]

Prerequisites: Health 210 and two physical education courses in the 100 series. Designed to provide the prospective teacher with information concerning the theory, methods, and materials involved in the teaching of physical education, health, safety, and recreation in the elementary school. Emphasis is placed on the application of methods and materials to classroom and playground situations. Field experiences in the public schools are included. Not for health and physical education majors.

401: THE SCHOOL HEALTH PROGRAM. [3]

Prerequisite: Health 210. Course deals with the three areas of the school health program—health services, healthful school environment and health education—as the interrelated responsibility of both school and community. Major emphasis is placed on health education curricula and methods appropriate for the intermediate and secondary schools. Field experiences in public schools are required.

402: DRIVER EDUCATION. [3]

Critical analysis of traffic accidents, attitude factors, essential knowledge of automobile operation, traffic laws and regulations. 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.

Physical Education

Activity Courses

(101-161)

A variety of activities taught for physical conditioning and recreational values. Instruction in the techniques, rules, and strategy of play in three hours of activity each week. May be counted toward a degree in the College of Professional Studies. Cannot be counted within the hours for a degree in the College of Arts and Sciences.

Dance
107: Folk, Square and Social Dance. (1)
141: Beginning Modern Dance. (1)
142: Intermediate Modern Dance. (1)
143: Advanced Modern Dance. (1)

Individual Sports
105: Aerobics, Basic Conditioning, Cross Country and Track. (1)
106: Beginning Gymnastics and Softball. (1)
116: Combative Sports, Games, Unarmed Combat, and Wrestling. (1)
117: Beginning and Intermediate Swimming. (1)*
118: Senior Life Saving. (1)*
122: Intermediate Tennis. (1)
133: Tennis. (1)
140: Golf. (1) (A student fee is collected.)
151: Badminton and Tennis. (1)
161: Archery and Golf. (1)

*Will be offered when facilities are available.

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Team Sports
101: Soccer and Volleyball. (1)
111: Basketball and Soccer. (1)
114: Speedball and Softball. (1)
121: Flag Football and Basketball. (1)
124: Basketball and Softball. (1)
131: Volleyball and Field Hockey. (1)

Recreational Activities
115: Recreation—Fishing and Camping. (1) ($20.00 Fee)
119: Recreation—Trap and Skeet Shooting. (1) ($20.00 Fee)
120: Recreation—Orienteering, Backpacking and Cookery. (1)

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.

205: FUNDAMENTALS OF MOVEMENT. [1]
Elements of movement and the study and practice of basic movements as the foundation upon which the more specialized skills are built. Emphasis is placed upon developing the student's ability in observing and analyzing movement and movement patterns. Three class hours.

220, 221: ANATOMY AND PHYSIOLOGY. [3, 3]
Prerequisite: Completion of laboratory science requirement. Completion of Physical Education 220 before Physical Education 221, permission of Instructor. The course deals with the integration of knowledge pertaining to human anatomy and physiology. Emphasis is given to specific knowledge concerning the interaction between the skeleto-muscular, metabolic, neurological and cardio-pulmonary function of the body. Three lecture and one hour laboratory.

222: KINESIOLOGY. [3]
Prerequisite: Physical Education 220 or permission of instructor. Designed to acquaint the student with the study of human movement. Fundamental joint movement, servomotor control, body mechanics, kinesthetic awareness, kinematics, kinetics and cinematographic analysis will be emphasized. Three hours lecture and an hour laboratory. Field experiences may be required.

302: PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL. [3]
Prerequisite: Physical Education 322. Basic philosophy, characteristics, content and method of the program in the elementary school. How to plan and organize the program; elements in a balanced program, facilities, equipment and evaluation. Field experiences in public schools are required.

304: SPORT, CULTURE AND SOCIETY. [3]
Prerequisite: Physical Education 201 or permission of instructor. Deals with the impact on society from historical, political, economic and cultural viewpoints.
306: PSYCHOMOTOR LEARNING. [3]
Prerequisites: Physical Education BB-1-BB, Education 202 or permission of instructor. The study of one of man's three educational domains. The content of the course will emphasize psychomotor learning, perceptual motor skill, movement behavior, learning theory motivation, personality and human performance. Field experiences may be required.

308: DEVELOPMENTAL PHYSICAL EDUCATION. [3]
Prerequisite: Completion of laboratory science requirement or permission of instructor. This course will be a synthesis of the developmental processes of the human as it relates to movement and exercise. An in-depth study of various chronic or functional inadequacies which may interfere with the individual's successful participation will be included. Field experiences may be required.

316: RECREATION AND OUTDOOR EDUCATION. [3]
Prerequisites: Physical Education 115 and 119. Techniques of recreational leadership: community resources, supervision and evaluation methods of converting leisure into useful and cultural achievements. Participation in such outdoor recreational skills as camping, map reading, firearms safety, hand loading, trap and skeet shooting, angling techniques, fishing and archery. Two lecture hours. Three laboratory hours. ($20.00 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.

361: TECHNIQUES AND TEACHING INDIVIDUAL SPORTS. [1]
Prerequisite: Two semesters of physical education activities in individual sports. This course is a study of techniques, skills and organization involved in teaching individual sports. Fall: tennis and badminton. Spring: archery and golf.

410: PSYCHOLOGY OF SPORT AND COACHING. [3]
Illustrates the latest research, trends, and techniques of modern coaching. The course will emphasize practical as well as scientific principles of coaching.

450: PSYCHOLOGY OF EXERCISE. [3]*
Prerequisites: Completion of Laboratory Science Requirement, Physical Education 220, 221, 222. A study of the physiological response of the human body to both acute and chronic exercise stress.

460: MANAGEMENT AND EVALUATION IN PHYSICAL EDUCATION. [3]
Prerequisites: Physical Education 201, 302, 304 306, 308. The course deals with management and evaluation of the total physical education program in elementary and secondary schools. Administrative principles, organizational details and evaluation procedures are viewed in terms of health and physical education classes, intramural sports and athletics.

470: PHYSICAL EDUCATION CURRICULUM AND METHODS IN THE SECONDARY SCHOOL. [3]
Prerequisite: Physical Education 302. Included are methods and materials, *Will be offered when equipment is available.
audi o-visual aids, safety precautions, evaluation and other topics related to
the teaching and guidance of youth in secondary school physical education.
Field experiences in public schools are required.

Library Science

Courses in library science are offered to enable students to qualify as school librarians in addition to their achieving certification at the elementary or secondary school level. Those students electing to qualify as school librarians in addition to their normal program will spend an additional three week period in directed library practice. The following are the courses required for certification as a school librarian: Education 421, and 431 or 432 or 435; and LAC 305. Library Science 401, 402, 403, and 404.

401: ADOLESCENT AND ADULT LITERATURE. [3]
Prerequisite: None. Adolescent and adult literature including the study of historical and recent developments, types, principles of critical analysis, and usage in the junior and senior high schools.

402: REFERENCE WORK AND BIBLIOGRAPHY. [3]
Prerequisite: None. Reference and bibliographic skills for elementary and secondary school librarians.

403: TECHNICAL PROCESSING FOR SCHOOL LIBRARIES. [3]
Techniques of cataloging and classification for elementary and secondary school librarians.

404: ADMINISTRATION OF SCHOOL LIBRARIES. [3]
Prerequisites: Library Science 401, 402, and 403. Problems of administering an elementary or secondary school library. Includes organizational plans, teaching duties, finances, reports, and equipping a school library.

405: PRACTICUM IN THE SCHOOL LIBRARY/MEDIA CENTER. [3]
Prerequisite: Admission to the Teacher Education Program or possession of a teaching certificate. Library Science 401, 402, 403, 404 and permission of instructor. Supervised practice in the school library/media center.
Department of General Studies

Associate Professors J. Smith (Chairman), Ellert, Hill
Assistant Professor Ku
Acting Assistant Professor Hoyer
Instructor Longwell
Lecturers Gair, Johnson

Objective

There is no major in this department. The purpose of this department is to house general education courses developed primarily by and for the College of Professional Studies, academic area offerings adapted for the elementary school level curriculum content, academic area courses adapted for special professional needs and unsuitable in the traditional liberal arts framework, and advanced transfer-credit blocks for non-traditional but non-the-less academic-related lectures and practical experiences directly and clearly professional in nature. The department also is the agency coordinating the service course offerings by the other colleges for the College of Professional Studies general education core.

The courses, whether "service" in nature from elsewhere or listed in this department, are divided into three areas whose titles describe the nature of appropriate content within their respective areas: language arts and culture, social studies, and general and health sciences.

General Study Courses

LANGUAGE ARTS AND CULTURE

Art

LAC 273: ART FOR THE ELEMENTARY SCHOOL. [3]
Prerequisite: Education 201. Theory, techniques and materials in art structure related to the personal growth of children. Class meets six hours per week.

English

LAC 305: CHILDREN'S LITERATURE. [3]
Prerequisite: Twelve semester hours of English. Survey of children's literature suitable for nursery school, kindergarten, and the elementary school. The historical development, types, representative authors and illustrations are studied. Critical analyses of selected works are made. The habits and interests of children at these levels are studied. The techniques of story telling and presentation of literature to children are studied and practiced.
Music

LAC 182: MUSIC FOR THE ELEMENTARY SCHOOL. [3]
Study of notational, tonal, and rhythmic aspects of music for the elementary school. Both participatory and listening activities will be developed, practiced and observed. Class meets five hours per week.

Regional Cultures

LAC 151: LATIN AMERICA. [3]
Study of life in this region as it is today with emphasis on the cultural (art, music, philosophy) features and the practical (governmental, economic, and sociological) aspects plus an overview of essential historical background.

LAC 152: SUB-SAHARA AFRICA. [3]
Study of life in this region as it is today with emphasis on the cultural (art, music, philosophy) features and the practical (governmental, economic, and sociological) aspects plus an overview of essential historical background.

Study of life in this region as it is today with emphasis on the cultural (art, music, philosophy) features and the practical (governmental, economic, and sociological) aspects plus an overview of essential historical background.

LAC 154: NORTH AFRICA AND THE MIDDLE EAST. [3]
Study of life in this region as it is today with emphasis on the cultural (art, music, philosophy) features and the practical (governmental, economic, and sociological) aspects plus an overview of essential historical background.

LAC 350: COMPARATIVE CULTURES. [3]
Prerequisite: Two LAC Regional Cultures courses or equivalents and permission of instructor. Cross cultural and interdisciplinary seminar examining significant contemporary themes that affect the Third World.

Speech

LAC 355: ORAL INTERPRETATION IN THE ELEMENTARY SCHOOL. [3]
Pre- or corequisite: LAC 305. Studying the principles involved in the interpretation of the written word in its intellectual, emotional, and aesthetic entirety. Practice with prose and poetry utilizing the literature appropriate to kindergarten and elementary school children.

Philosophy, literature, religion, et cetera (see standard A&S offerings scheduled for CPS students).

SOCIAL STUDIES


GENERAL AND HEALTH SCIENCES

Mathematics

GHS 371, 372: MATHEMATICS FOR THE ELEMENTARY SCHOOL I, II. [3, 3]
Prerequisite: Forty-five semester-hours of college credit. Concepts and theories underlying elementary school mathematics.

Biology, chemistry, physics, et cetera (see standard A&S offerings scheduled for CPS students).
CHAPTER VI.

University Directory
The Rector and Visitors

John C. Wood  
Rector

Richard A. Bishop................................................Alexandria  
Elias Blake, Jr......................................................Reston  
Harriet F. Bradley (Secretary).................................McLean  
Anita L. Capps......................................................Arlington  
Alvin E. Conner, M.D..............................................Manassas  
A. George Cook, III..............................................Alexandria  
John J. Corson.....................................................Arlington  
William C. Frogale..............................................Falls Church  
John T. Hazel, Jr. (Vice Rector)..............................Fairfax  
Carl V. Lyon.........................................................Annandale  
John W. Macy, Jr..................................................McLean  
Warren J. Pace......................................................Falls Church  
Lutrelle F. Parker, Sr.............................................Arlington  
Lester G. Sturgill...................................................Leesburg  
Currell H. Tiffany................................................Warrenton
UNIVERSITY OFFICERS

Administration

PRESIDENT’S OFFICE

Vergil H. Dykstra, Ph.D. .................................................................President
†Sheppard B. Kominars, Ph.D. ..............................................Vice President for Planning and Program Development
Louise F. Lowe, M.A. .................................................................Executive Assistant to the Board and Special Assistant to the President

ACADEMIC AFFAIRS

Robert C. Krug, Ph.D. .................................................................Provost
Leon E. Boothe, Ph.D. .................................................................Dean of the College of Arts and Sciences
Clayton M. Schindler, Ph.D. ......................................................Dean of the College of Professional Studies
William S. Willis, Doct. Univ. (Paris) .................................Dean of the Graduate School
William C. Johnston, Ph.D. ......................................................Dean of the Summer Session
Ralph C. Baxter, Ph.D. ...............................................................Associate Provost
Helen S. Garson, Ph.D. ...............................................................Assistant to the Dean, College of Arts and Sciences
Robert T. Hawkes, Jr., M.A. ..............................................Director of Extended Studies

FINANCIAL AFFAIRS

Henry P. Adams, B.S. .................................................................Comptroller
John R. Hiltenbrand, B.S. ......................................................Director of Personnel

STUDENT AFFAIRS

Robert A. Turner, M.A.T. ..........................................................Dean of Students
Charles A. Repp, Ed.D. ...............................................................Director of Financial Aid and Placement
Kenneth E. Bumgarner, M.A. ..................................................Assistant Director of Student Personnel Services

ADMISSIONS AND RECORDS

Louis J. Aebischer, Ed.S. ..........................................................Director of Admissions
*Lewis C. Jones, M.S.T. ..............................................................Assistant Director of Admissions
Michael J. McDermott, Jr., Ph.L. ............................................Registrar

†Effective July 1, 1974.
208/GEORGE MASON UNIVERSITY

COUNSELING

Walter J. Moretz, Jr., Ph.D. Director of University Counseling and Psychological Services Center

CHARLES ROGERS FENWICK LIBRARY

Patrick J. Larkin, M.S.L.S. Library Director
Richard B. O'Keeffe, M.S.L.S. Assistant Library Director

PUBLICATIONS, DEVELOPMENT, AND INFORMATION

J. William Gephart, M.S.B.A. Director of Publications and Development
William M. McDowell, M.A. Director of Information Services

PLANNING AND RESEARCH

Joseph I. Gurfein, M.S. Director of Planning
John P. Sullivan, M.A. Director of Institutional Analysis

SAFETY AND GROUNDS

James R. Conner Director of Buildings and Grounds
Robert W. Gowin Director of Safety

SUPPORTING SERVICES

Admissions Counselor Jo Anna Bolton
Bursar Benjamin H. Dozier
Campus Security Chief Louis E. Law
Printing Coordinator Patrick B. Alexander
Purchasing Agent Wilford L. Clark
Recorder Aileen L. Ferguson

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The Faculty

(This is a record of 1973-74 faculty.)


ADAMS, Henry Patteson, Professor, Comptroller. B.S., United States Naval Academy, 1939.

AEBISCHER, Louis John, Associate Professor of Education, Director of Admissions. B.S., Syracuse University, 1936; M.S., Syracuse University, 1947; Ed.S., George Washington University, 1971.

AGUERA, Victorio Garcia, Associate Professor of Spanish. B.S.T., Colegio Mayor Teologico Hispano-americano, 1958; M.A., Catholic University, 1970; Ph.D., Catholic University, 1971.

ALI, Monica Marie, Lecturer in Chemistry. A.B., Emanuel College, 1963; M.S., Georgetown University, 1967; Ph.D., Georgetown University, 1971.

ALTMAN, Charlotte Hall, Associate Professor of Psychology. B.A., University of Minnesota, 1929; M.A., Clark University, 1933; Ph.D., University of Chicago, 1954.


ANDREWS, Alice Chandler, Instructor in Geography. A.B., University of Georgia, 1949; M.A., Northwestern University, 1950.

ANDRYKOVITCH, George Eugene, Assistant Professor of Biology. B.S., University of Pittsburgh, 1962; M.S., University of Pittsburgh, 1965; Ph.D., University of Maryland, 1968.


ARMSTRONG, Phillip James, Lecturer in Education. A.B., St. Mary's, 1956; M.A., The Catholic University of America, 1961.

AUDILET, Devereux Oldfield, Lecturer in Biology. B.S., Mary Washington College, 1965; Ph.D., Georgetown University, 1973.

AUSTIN, Virginia LaRose, Assistant Professor of Education. B.S.M., DePauw University, 1931; M.Ed., University of Maryland, 1954.


BAXTER, Ralph Clayton, Professor of English, Associate Provost. A.B., University of Detroit, 1958; M.A., Wayne State University, 1959; Ph.D., Wayne State University, 1964.

BERGOFFEN, Debra, Beth, Instructor in Philosophy. B.A., Syracuse University, 1962; M.A., Georgetown University, 1966; Ph.D., Georgetown University, 1974.


BERRY, Alan Douglas, Assistant Professor of Chemistry. B.S., Duke University, 1965; Ph.D., University of Pennsylvania, 1970.

BINDEL, Jr., Henry Joseph, Associate Professor of Education, Executive Secretary, Department of Education. B.S., Eastern Kentucky University, 1949; M.A., Eastern Kentucky University, 1951; Ed.D., University of Maryland, 1971.

BIRRER, George Eddy, Assistant Professor of Business Administration. B.A., Carroll College, 1966; M.B.A., Gonzaga University, 1969.


BLOCH, Howard Ruben, Associate Professor of Economics. A.B., Duke University, 1958; Ph.D., Princeton University, 1964.

BLOECKER, Jr., Victor, Instructor in Education. B.S., University of Pennsylvania, 1942; M.A., University of Southern California, 1950.

BOLSTEIN, Arnold Richard, Assistant Professor of Mathematics. B.A., Wagner College, 1962; M.S., Purdue University, 1964; Ph.D., Purdue University, 1967.

BOOTHE, Leon Estel, Professor of History, Dean of the College of Arts and Sciences. B.S., University of Missouri, 1960; M.A., University of Missouri, 1962; Ph.D., University of Illinois, 1966.


BRADLEY, Ted Ray, Assistant Professor of Biology. B.S., Rollins College, 1962; M.A., University of North Carolina, 1966; Ph.D., University of North Carolina, 1968.


BROOKS, Nancy Cook, Assistant Professor of Spanish. A.B., University of Kansas, 1947; M.A., University of Kansas, 1948.

BROWN, Jane Ella, Lecturer in Education. A.B., King College, 1955; M.Ed., College of William and Mary, 1963; Ed.D., University of Virginia, 1972.

BROWN, Lorraine Anne, Assistant Professor of English. B.A., University of Michigan, 1952; M.A., University of Michigan, 1961; Ph.D., University of Maryland, 1968.
FACULTY/211

BROWN, Stephen Jeffrey, Professor of English. B.A., Yale University, 1950; B.A., Cambridge University, 1952; M.A., Yale University, 1954; Ph.D., Yale University, 1959.


BUFFARDI, Louis Carl, Assistant Professor of Psychology. A.B., University of Rochester, 1964; M.A., Fordham University, 1966; Ph.D., Kansas State University, 1970.

BUFILL, Jose Angel, Assistant Professor of Spanish. B.A., Instituto Del Vedado, 1942; Doctor EnDerecho, University of Havana, 1955; M.A., State University of New York, 1967.


BURTON, Stephen Douglas, Lecturer in Music.

CABELL, Mary Katherine, Associate Professor of Mathematics. B.A., University of Tennessee, 1955; M.A., University of Virginia, 1957; Ph.D., University of Virginia, 1960.

CANNAVALE, Jr., Frank John, Assistant Professor of Sociology (on leave). A.B., Rutgers University, 1964; A.M., University of Pennsylvania, 1967; Ph.D., University of Pennsylvania, 1971.


CARTER, Courtney Morton, Lecturer in English. B.A., College of William and Mary, 1965; M.A., University of Virginia, 1966.

CASSARA, Ernest, Professor of History, Chairman of Department of History. A.B., Tufts College, 1952; Tufts University, 1954; Ph.D., Boston University, 1957.


CHAMBERS, Barbara Fromm, Assistant Professor of Mathematics. B.S., University of Alabama, 1962; M.A., University of Alabama, 1964; Ph.D., University of Alabama, 1969.

CHILDRESS, Jr., Joseph Atkins, Assistant Professor of Mathematics. B.S., Virginia Polytechnic Institute, 1964; M.A., University of Georgia, 1967; Ph.D., University of Georgia, 1970.

CHUNG, Jae Wan, Assistant Professor of Economics. B.C., Seoul National University, 1963; M.C., Seoul National University, 1965; M.A., State University of New York, 1969; Ph.D., New York University, 1972.

CLARKE, Robert Lewis, Lecturer in History. B.A., St. Augustines College, 1942; M.A., University of Wisconsin, 1948.

COCKE, Charles Pollard, Acting Assistant Professor of Business Administration. B.S., University of Virginia, 1965; J.D., George Washington University, 1970.

COHELAN, Evelyn Ellis, Professor of Nursing, Director of Nursing Program. B.S., University of California, 1951; M.S., University of California, 1953; Ed.D., University of California, 1963.

COHEN, Edmund David, Assistant Professor of Psychology. A.B., George Washington University, 1965; M.S., Case Western Reserve University, 1967; Ph.D., Case Western Reserve University, 1968.


COOPER, George David, Associate Professor of Psychology. A.B., Shepherd College, 1957; Ph.D., Duke University, 1962.

CORDERO, Anne Deing, Associate Professor of French. Dipl. Dolmetscher, University of Mainz, 1955; M.A., University of Florida, 1957; Ph.D., George Washington University, 1968.

COZZENS, Robert Francis, Associate Professor of Chemistry. B.S., University of Virginia, 1963; Ph.D., University of Virginia, 1966.

CRAGG, Edward E., Lecturer in Mathematics. B.A., Rice University, 1967; M.S., Rice University, 1969; Ph.D., Rice University, 1971.

CRAWFORD, Donald Lee, Assistant Professor of Biology. B.A., Oklahoma City University, 1970; M.S., University of Wisconsin, 1972; Ph.D., University of Wisconsin, 1973.


CZARSTY, Steven Lawrence, Acting Assistant Professor of Business Administration. B.S., University of Hartford, 1968; M.B.A., University of Connecticut, 1969.

DEAN, Jack H., Lecturer in Biology. B.S., California State University, 1965; M.S., California State University, 1969; Ph.D., University of Arizona, 1972.

DeMARCE, Virginia Marie, Assistant Professor of History. B.A., University of Missouri, 1961; M.A., Stanford University, 1963; Ph.D., Stanford University, 1967.

DERR, Laura Muntz, Instructor in English. B.A., University of Kentucky, 1968; M.A., University of Kentucky, 1969.


DOREY, Frederick James, Assistant Professor of Mathematics. B.A., Boston College, 1964; M.A., Boston College, 1966; Ph.D., University of Massachusetts, 1969.

DORIGAN, Janet Virginia, Assistant Professor of Biology. B.A., Stanford University, 1956; Ph.D., University of Hawaii, 1970.

DRAPER, Richard Noel, Associate Professor of Mathematics. B.S., Baldwin-Wallace College, 1959; Ph.D., Johns Hopkins University, 1966.

DUCK, Lloyd Earl, Assistant Professor of Education. A.B., College of William and Mary, 1966; M.A.T., University of Virginia, 1968.

DUFFNER, Margaret Cain, Instructor in Speech. A.B., MacMurray College, 1940; M.A., Northwestern University, 1943.

DUMEZ, Elizabeth Anne, Assistant Professor of Social Welfare. A.B., University of Kentucky, 1962; M.S.W., The Catholic University of America, 1966.

DYKSTRA, Vergil Homer, Professor of Philosophy, President. B.A., Hope College, 1949; M.A., University of Wisconsin, 1950; Ph.D., University of Wisconsin, 1953.

DZAMA, Mary Ann, Assistant Professor of Education. B.A., Carlow College, 1964; M.Ed., Duquesne University, 1968; D.Ed., University of Virginia, 1972.

EARLY, Jr., Stephen Tyree, Professor of Political Science, Chairman of Department of Public Affairs. B.A., University of Virginia, 1948; M.A., University of Virginia, 1950; Ph.D., University of Virginia, 1954.

EASSA, Christine Wolynec, Instructor in Chemistry. B.S., University of Manitoba, 1960; B.S. in Ed., Kent State University, 1962; M.S., University of Hawaii, 1966.
EAVES, Robert Wendell, Professor of Education. A.B., University of North Carolina, 1928; M.A., George Washington University, 1933; Ed.D., George Washington University, 1940.


ELSTUN, Esther Nies, Associate Professor of German, Chairman of Department of Foreign Languages. B.A., The Colorado College, 1960; M.A., Rice University, 1964; Ph.D., Rice University, 1969.

EMSLEY, Michael Gordon, Professor of Biology, Chairman of Department of Biology. B.Sc., Imperial College of Science and Technology, 1953; A.R.C.S. Associateship of Royal College of Science, 1953; Ph.D., University of London, 1964.

ERNST, Carl Henry, Associate Professor of Biology. B.S., Millersville State College, 1960; M.Ed., West Chester State College, 1963; Ph.D., University of Kentucky, 1969.


EVANS, Arlette Raymonde, Assistant Professor of French. B.A., University of Algiers, 1941; M.S., Georgetown University, 1965.

EVANS, Jr., William Benjamin, Associate Professor of Education. B.S., University of Maryland, 1940; M.A., Teachers College, Columbia University, 1946; Ed.D., George Washington University, 1960.

FEINSTEIN, Hyman Israel, Associate Professor of Chemistry. A.B., University of Michigan, 1930; M.A., Columbia University, 1932.

FISCHER, Klaus Gunter, Assistant Professor of Mathematics. B.S., Lafayette College, 1966; M.A., Syracuse University, 1968; Ph.D., Northwestern University, 1973.

FLETCHER, James John, Assistant Professor of Philosophy. A.B., Iona College, 1963; M.A., Marquette University, 1966; Ph.D., Indiana University, 1973.

FLINN, Jane Margaret, Lecturer in Physics. B.A., Oxford University, 1960; M.S., University of California, Los Angeles, 1962; Ph.D., Catholic University, 1969.


FONT, Maria Teresa, Associate Professor of Spanish. Licenciado en Filosofía y Letras, Universidad de Oriente, 1960; Ph.D., University of Maryland, 1969.


FRIES, Victoria Rader, Acting Assistant Professor of Sociology. B.A., University of California, 1966; M.A., University of Chicago, 1968; Ph.D., University of Chicago, 1973.


GALLEHR, Donald Raymond, Assistant Professor of English. B.S., St. Bonaventure University, 1964; M.A., Fordham University, 1966.

GARCIA, Paul, Associate Professor of Spanish. B. of Philosophy, Colegio P. Feijoo, 1953; M.A., Duquesne University, 1964; Ph.D., St. Louis University, 1967.

GARSON, Helen Sylvia, Associate Professor of English, Assistant to the Dean, College of Arts and Sciences. A.B., George Washington University, 1946; M.A., University of Georgia, 1947; Ph.D., University of Maryland, 1967.

GEPHART, John William, Associate Professor, Director of Development. B.S., University of Maryland, 1967; M.S.B.A., George Washington University, 1967.

GEISSNER, Theodore Lee, Assistant Professor of Psychology. B.S., Fordham University, 1962; M.A., University of Maryland, 1967; Ph.D., University of Maryland, 1971.


GIBSON, Margaret Ferguson, Assistant Professor of English. B.A., Hollins College, 1965; M.A., University of Virginia, 1967.

GILSTRAP, Robert Lawrence, Associate Professor of Education. B.S., North Texas State University, 1954; M.Ed., North Texas State University, 1960; Ed.D., George Peabody College for Teachers, 1963.


GLEISSNER, Richard Anthony, Assistant Professor of History. B.S., University of Wisconsin, 1958; M.A., Marquette University, 1959; Ph.D., University of Maryland, 1968.

GODBOLD, John Walter, Assistant Professor of Government. B.A., Millsaps College, 1939; M.P.A., St. Louis University, 1959.


GRAS, Vernon Walter, Associate Professor of English. M.A., University of Chicago, 1952; Ph.D., University of Chicago, 1967.


GURFEIN, Joseph Ingram, Associate Professor of Engineering, Director of Planning. B.S., United States Military Academy, 1941; M.Sc., Harvard University, 1947.

GURKAYNAK, Mehmet Rustu, Acting Assistant Professor of Psychology. M.A., University of Istanbul, 1966; M.A., University of Kansas, 1970.


HARDEWICK, Robert Sterling, Acting Assistant Professor of Sociology. B.S., Nyack College, 1959; M.A., University of Minnesota, 1963.


HARSH, Joseph Lee, Associate Professor of History. B.A., Gettysburg College, 1963; M.A., Rice University, 1966; Ph.D., Rice University, 1970.


HAWKES, Jr., Robert Thomas, Assistant Professor of History, Director of Extended Studies. B.A., Randolph-Macon College, 1964; M.A., University of Virginia, 1967.
HAYN, Rolf, Associate Professor of Economics. A.B., Indiana University, 1944; A.M., Indiana University, 1948; Ph.D., University of Wisconsin, 1954.

HAZERA, Lydia DeLeon, Assistant Professor of Spanish. B.A., University of Colorado, 1945; A.M., University of Michigan, 1949; Ph.D., George Washington University, 1971.

HECHT, Leo, Instructor in Russian. B.S., Columbia University, 1961; M.A., Columbia University, 1961


HENDERSON, Carol Cantlon, Assistant Professor, Librarian. B.A., Ohio State University, 1960; M.S.L.S., Catholic University, 1969.

HERNANDEZ, Jose M., Lecturer in History. Dr. Juris, University of Havanna, 1947; M.A., Georgetown University, 1969.

HILL, Thomas Harry, Associate Professor of Music Education. B.M., Boston University, 1949; M.Mus., Boston University, 1955; D.M.A., The Catholic University of America, 1970.

HINTON, William Frederick, Assistant Professor of Biology. A.B., University of North Carolina, 1967; M.A., University of North Carolina, 1968.

HO, Alana Wang, Assistant Professor, Librarian. B.A., Providence College, Taiwan, 1964; M.S., Kansas State Teachers College, 1967.

HOBSON, Irmgard Wagner, Assistant Professor of German. Staatsexamen Tubingen University, Germany, 1961; M.A., Tufts University, 1965; Ph.D., Harvard University, 1970.


HOULGATE, Laurence Davis, Associate Professor of Philosophy. B.A., California State College, 1961; M.A., University of California, 1965; Ph.D., University of California, 1967.


HUDSON, Donald Ray, Assistant Professor of Business Administration. B.B.A., Tulane University, 1959; M.B.A., University of Miami, 1970; Ph.D., Georgia State University, 1974.

HUGHES, John James, Associate Professor of Sociology. A.B., Fordham College, 1944; M.S.W., Fordham University, 1954.

HURTA, Donald William, Lecturer in Business Administration. B.E.E., University of Detroit, 1965; M.S., University of California, 1966; Ph.D., University of California, 1969.


HYMSON, Edward Bernard, Assistant Professor of Economics. A.B., University of California, 1966; M.A., University of California, 1967; Ph.D., University of California, 1971.

JACKSON, James Louis, Professor of English. A.B., University of Illinois, 1938; M.A., University of Illinois, 1940; Ph.D., University of Illinois, 1949.

JANSEN, Louise Maria, Lecturer in German. M.A., University of Amsterdam, 1963.

JENSEN, Ronald Jacob, Assistant Professor of History. B.A., Coe College, 1961; M.A., Indiana University, 1965; Ph.D., Indiana University, 1971.


JOHNSON, Charles Royal, Lecturer in Mathematics Education. B.A., Northwestern University, 1969; Ph.D., California Institute of Technology, 1972.

JOHNSTON, William Cargill, Professor of Physics, Chairman of Department of Physics, Dean of Summer Session. B.A., Davidson College, 1939; M.S., University of Virginia, 1941; Ph.D., University of Virginia, 1943.

JONES, Jr., Lewis Carson, Assistant Professor of Education, Assistant Director of Admissions (on Leave). B.A., South Carolina State College, 1952; M.S.T., The American University.

JONES, Norman Anderson, Lecturer in History. B.S., Kansas State University, 1950; M.S., Kansas State University, 1952; Ph.D., Georgetown University, 1959.

JORDAN, Nehemiah, Professor of Psychology. B.A., Brooklyn College, 1948; M.A., University of Kansas, 1950; Ph.D., University of Kansas, 1952.

JOSLIN, James Kelvin, Assistant Professor of Biology. B.S., University of Wisconsin, 1960; M.S., University of Wisconsin, 1962; Ph.D., Michigan State University, 1971.

JOY, Barnard DeJean, Professor of Education. B.S., Oregon State University, 1930; M.A., University of Maryland, 1934; Ed.D., George Washington University, 1944.

JOYCE, Elaine Elder, Assistant Professor of Biology. B.A., Ursuline College, 1963; Ph.D., Georgetown University, 1970.

KARLSON, Robert Emil, Associate Professor of English. B.A., College of William and Mary, 1948; M.A., Breadloaf School of English, 1957; Ph.D., George Washington University, 1970.

KASSCHAU, Margaret Ramsey, Lecturer in Biology. A.B., University of Rochester, 1964; M.S., University of South Carolina, 1970; Ph.D., University of South Carolina, 1973.


KEELER, Wayne Hewit, Assistant Professor of Chemistry. B.S., Marietta College, 1964; Ph.D., University of Iowa, 1971.

KEITH, Nobuko Tsukui, Assistant Professor of English. B.A., Tsuda College, 1961; M.A., University of Nebraska, 1964; Ph.D., University of Nebraska, 1967.

KELLER, Frances Marie, Assistant Professor of Education; Professional Counselor. B.S., West Virginia University, 1944; M.Ed., University of Virginia, 1972.

KELLEY, Michael Robert, Assistant Professor of English. B.A., Catholic University of America, 1962; M.F.A., Catholic University of America, 1965; Ph.D., Catholic University of America, 1970.

KELLY, John Robert, Assistant Professor of Sociology. B.A., Monmouth College, 1951; M.Div., Yale University, 1954; M.A., University of Southern California, 1965; M.S., University of Oregon, 1971; Ph.D., University of Oregon, 1972.

KELSO, Donald Preston, Assistant Professor of Biology. B.S., University of Tennessee, 1962; M.S., University of Florida, 1965; Ph.D., University of Hawaii, 1970.

KHOURY, Angela Jurdak, Associate Professor of Government. B.A., American University of Beirut, 1937; M.A., American University of Beirut, 1938; Ph.D., The American University, 1968.

KILBY, Emelia-Louise, Associate Professor of Education. B.S., Mary Washington College, 1944; M.A., New York University, 1947; Ph.D., University of Washington, 1956.

KILEY, William Thomas, Associate Professor of Mathematics. B.S., St. Mary's College, 1960; Ph.D., Brown University, 1969.


KLEIN, Barry Michael, Lecturer in Physics. B.S., New York University Graduate School of Arts and Sciences, 1962; M.S., New York University Graduate School of Arts and Sciences, 1965; Ph.D., New York University, 1969.

KREILKAMP, Karl, Associate Professor of Philosophy. A.B., University of Minnesota, 1935; A.M., Catholic University of America, 1937; Ph.D., Catholic University of America, 1939.

KROTEE, March Lee, Assistant Professor of Health and Physical Education. B.S., Westchester State College, 1965; M.A., University of Maryland, 1967; Ph.D., University of Pittsburgh, 1971.

KRUG, Robert Charles, Professor of Chemistry, Provost. B.S., University of Richmond, 1940; M.S., Pennsylvania State University, 1941; Ph.D., Ohio State University, 1944.

KU, Kenneth Kung-kai, Assistant Professor of Regional Cultures. A.B., Kuang Hua University, 1944; M.A., Seton Hall University, 1963.

LADKIN, Jean Frances, Lecturer in Psychology. B.A., Ohio State University, 1965; M.A., Catholic University of America, 1967; Ph.D., Catholic University of America, 1971.

LANKFORD, William Fleet, Associate Professor of Physics. B.A., University of Virginia, 1960; M.S., University of South Carolina, 1964; Ph.D., University of South Carolina, 1969.

LARKIN, Patrick Joseph, Associate Professor, Library Director. A.B., St. Mary's Seminary and University, 1956; M.S., Catholic University of America, 1963.


LEPAGE Raymond Gratian, Assistant Professor of French. Diplome d'Etudes Superieures, Universite de Louvain, 1963; B.A., Providence College, 1964; M.A., University of Maryland, 1966; Ph.D., George Washington University, 1972.


LIEB, Jr., Bernard Joseph, Assistant Professor of Physics. B.S., College of William and Mary, 1965; M.S., College of William and Mary, 1967; Ph.D., College of William and Mary, 1971.

LINN, John Roy, Assistant Professor of Health and Physical Education. B.S., Bowling Green University, 1960; M.A., George Washington University, 1967.


LONGWELL, William Shelley, Instructor in Regional Cultures. B.S., Ohio State University, 1967; M.A., Northwestern University, 1971.

LOWE, Louise Ferreira, Assistant Professor, Executive Assistant to the Board of Visitors, Special Assistant to the President. B.A., University of Alabama, 1944; M.A., Teachers College, Columbia University, 1954.

LOWRY, Edith Clark, Lecturer in History. B.A., Mount Holyoke College, 1928; M.A., Radcliffe College, 1929; Ph.D., Oxford University, 1932.


MacCONKEY, Dorothy Ingling, Assistant Professor of Sociology, Acting Chairman, Department of Sociology. A.B., Beaver College, 1947; M.A., Wichita State University, 1953; Ph.D., University of Maryland, 1974.

MADERO, James Nicholas, Acting Assistant Professor of Psychology. B.A., St. John's University, 1965; M.A., Catholic University of America, 1969.

MAJOR, Janemarie Nealis, Assistant Professor of Education. A.B., Hunter College, 1956; M.S.Ed., Hunter College, 1958.


MAO, Agnes Liu, Instructor, Librarian. B.L., National Chengchi University, 1966; M.I.L.S., University of Maryland, 1970.

MARCHIONE, Anthony Ronald, Assistant Professor of Business Administration. B.A., George Washington University, 1957; M.B.A., Old Dominion University, 1967; Ph.D., The American University, 1972.


MARTIN, William Reed, Associate Professor of Education. B.A., Gettysburg College, 1955; M.A., Syracuse University, 1958; Ph.D., University of Minnesota, 1968.

MASS, Michael Alan, Acting Assistant Professor of Business Administration. B.S., University of Pennsylvania, 1970; J.D., Georgetown University Law Center, 1973.


McCoy, James L., Lecturer in Biology. B.S., West Virginia University, 1960; M.S., West Virginia University, 1962; Ph.D., West Virginia University, 1964.

McDERMOTT Jr., Michael James, Associate Professor of Philosophy, Registrar. A.B., Fordham University, 1958; Ph.L., Loyola Seminary, 1959.


McFarlane, William Hugh, Professor of Philosophy, Chairman of Department of Humanities. B.A., University of Virginia, 1950; Ph.D., University of Virginia, 1957.


McKEITHEN, Eleanor Jean, Assistant Professor of Psychology. A.B., University of North Carolina, 1949; M.A., Syracuse University, 1952; Ph.D., Syracuse University, 1962.

McKINLEY, Raymond Ralph, Lecturer in Astronomy. B.S., University of Southern California, 1965; M.S., University of Illinois, 1967.


Meister, David, Lecturer in Psychology. B.A., New York University, 1947; M.A., University of Iowa, 1948; Ph.D., University of Kansas, 1951.

Mellinger, Jeanne Cummins, Assistant Professor of Psychology, Acting Chairman, Department of Psychology. B.A., Swarthmore College, 1948; Ph.D., University of Chicago, 1952.

Mendelsohn, Mary Barry, Lecturer in Psychology. B.A., City University of New York, 1968; M.S., Purdue University, 1970; Ph.D., Purdue University, 1972.

Metcalf, James Alfred, Assistant Professor of Health and Physical Education. B.S., University of Maryland, 1963; M.A., University of Maryland, 1966; Ph.D., University of Maryland, 1970.

Metzler Jr., Fred, Assistant Professor of Biology. B.A., University of Maine, 1963; M.S., Kansas State University, 1966; Ph.D., Kansas State University, 1970. (Deceased January 20, 1974)


Mielczarek, Eugenie Vorburger, Professor of Physics. B.S., Queens College, 1953; M.S., Catholic University, 1957; Ph.D., Catholic University, 1963.
MILLAR, Edmund Frederick, Acting Assistant Professor of Sociology. A.B., University of Notre Dame, 1966; M.A., Case Western Reserve University, 1971.


MOLIN, Sven Eric, Associate Professor of English. B.A., Amherst College, 1950; M.A., Columbia University, 1951; Ph.D., University of Pennsylvania, 1956.

MONTEBELLO, Mary S., Professor of Education. B.S., Ohio Dominican College, 1950; M.A., Ohio State University, 1954; Ph.D., Ohio State University, 1964.

MORETZ, Jr., Walter Jennings, Associate Professor of Psychology. Director, University Counseling and Psychological Services Center. B.A., Lenoir Rhyne College, 1955; M.Div., Lutheran Seminary, 1959; Ph.D., Florida State University, 1970.


MOSELEY III, George Van Horn, Associate Professor of History. B.A., University of Colorado, 1954; M.A., Yale University, 1960; D.Phil., Oxford University, 1970.

MURPHY, Krishna, Acting Assistant Professor of Business Administration. B.S., Trivandrum College, India, 1962; M.S., Carnegie-Mellon University, 1970.

MUSHRUSH, George William, Associate Professor of Chemistry. B.S., Indiana University of Pennsylvania, 1962; M.S., George Washington University, 1965; Ph.D., George Washington University, 1968.

MUSSELL, Kay Johnson, Instructor in English. B.A., University of Iowa, 1965; M.A., University of Iowa, 1970; Ph.D., University of Iowa, 1973.


NICHOLSON, Jeanne Bell, Assistant Professor of Government. A.B., University of Maryland, 1966; M.A., The Johns Hopkins University, 1969.

NIX, Carroll Eugene, Assistant Professor of Biology. B.A., East Texas State University, 1964; Ph.D., Oregon State University, 1968.

O'CONNOR, John Sylvester, Instructor in English. B.A., University of Michigan, 1968; M.A., University of Virginia, 1969.

O'KEEFFE, Richard Bennett, Assistant Professor, Assistant Library Director. B.A., Catholic University of America, 1955; M.S.L.S., Catholic University of America, 1958.

OPPELT, John Andrew, Associate Professor of Mathematics, Chairman of Department of Mathematics. A.B., Loyola College, 1959; M.S., University of Notre Dame, 1961; Ph.D., University of Notre Dame, 1965.

PACHECO, Josephine Fennell, Assistant Professor of History. B.A., Westhampton College of the University of Richmond, 1941; M.A., University of Chicago, 1943; Ph.D., University of Chicago, 1950.


PALMIERI, Anthony Francis, Instructor in English. B.A., University of Maryland, 1964; M.A., University of Maryland, 1966.


PAPP, Zoltan, Associate Professor of Mathematics. Dipl. Math., University of Debrecen, 1958; Dr. rer. nat., University of Debrecen, 1960.

PASNAK, Robert, Assistant Professor of Psychology. B.S., University of Maryland, 1964; M.S., Pennsylvania State University, 1966; Ph.D., Pennsylvania State University, 1969.

PAYNE, John D., Associate Professor of Art. B.A., Beloit College, 1959; M.S., University of Wisconsin, 1961; M.F.A., University of Wisconsin, 1969.

PENG, Jia-Jeou, Assistant Professor of Psychology. B.S., National Taiwan University, 1963; M.A., Wayne State University, 1967; Ph.D., Wayne State University, 1970.

PERKES, Albert Cordell, Assistant Professor of Education. B.S., Utah State University, 1966; M.A., Utah State University, 1969; Ph.D., Ohio State University, 1973.


PHILLIPS, Jr., Samuel Hudgins, Associate Professor of Economics. B.A., College of William and Mary, 1958; M.A., University of Virginia, 1960; Ph.D., University of Virginia, 1966.

PIELKE, Robert Gerald, Assistant Professor of Religion. B.A., University of Maryland, 1964; B.D., Lutheran Theological Seminary, 1967; Ph.D., Claremont Graduate School, 1973.

PIKE, Lawrence Herbert, Assistant Professor of Biology. B.A., Colby College, 1966; M.S., University of Oregon, 1969; Ph.D., University of Oregon, 1971.


POWERS, Ann Bleigh, Lecturer in French. A.B., West Virginia University, 1956; M.A., George Washington University, 1958; Ph.D., University of Cincinnati, 1967.

PRINCE, Jeffrey S., Assistant Professor of Biology. B.A., University of Massachusetts, 1965; Ph.D., Cornell University, 1971.


QUITMEYER, Herman Carl, Instructor in Business Administration. B.S., University of California, 1958; M.S., Naval Postgraduate School, 1964.


RASKIN, Miriam Susan, Assistant Professor of Social Welfare. B.A., Brooklyn College, 1965; M.S.W., University of Maryland, 1969.


RICH, Robert Martin, Assistant Professor of Sociology. B.A., University of Illinois, 1960; M.A., University of Chicago, 1962; Ph.D., University of Chicago, 1966.

RICHARDSON, Maxine, Associate Professor of Health and Physical Education. B.S., University of Oklahoma, 1939; M.A., University of Iowa, 1946.

RUBINSTEIN, Leonard, Assistant Professor of Biology. B.S., Massachusetts Institute of Technology, 1963; Ph.D., Purdue University, 1971.


SANFORD III, James Francis, Assistant Professor of Psychology. B.A., Ohio Wesleyan University, 1966; M.S., Kansas State University, 1968; Ph.D., Kansas State University, 1973.

SAPERSTONE, Stephen Harold, Assistant Professor of Mathematics. B.E.P., Cornell University, 1962; M.A., University of Maryland, 1965; Ph.D., University of Maryland, 1970.

SASSCER, John Clarence, Lecturer in Biology. A.B., Catholic University of America, 1953; M.S., Catholic University of America, 1955.

SCHINDLER, Clayton Moss, Professor of Education, Dean of College of Professional Studies. A.B., Mount Union College, 1934; M.S., University of Southern California, 1946; Ph.D., Ohio State University, 1950.

SCHUCHMAN, Betty Jane, Associate Professor of Education. B.S., Indiana University, 1953; M.S., Indiana University, 1963; Ed.D., Indiana University, 1967.


SEHRT, Helen Ludwig, Assistant Professor of German. A.B., George Washington University, 1948; M.A., George Washington University, 1950.

SEIDMAN, Stephen Benjamin, Assistant Professor of Mathematics. B.S., City College of New York, 1964; M.A., University of Michigan, 1965; Ph.D., University of Michigan, 1969.

SHAFER, Jay Charles, Assistant Professor of Biology. B.S., Bucknell University, 1961; Ph.D., Cornell University, 1967.

SHAW, Wei Hwa, Assistant Professor of Mathematics. B.S., National Taiwan Normal University, 1965; M.S., Michigan State University, 1968; Ph.D., Michigan State University, 1973.


SIFF, Frederick Howard, Acting Assistant Professor of Business Administration. B.S., Worcester Polytechnic Institute, 1964; M.S., New York University, 1966.

SIGAL, Beve Linkon, Lecturer in Education. J.D., DePaul University, 1943; Ph.D., DePaul University, 1945; M.Ed., DePaul University, 1964.

SINCLAIR, Norman Ross, Assistant Professor of Biology. B.A., University of Connecticut, 1962; M.S., University of Connecticut, 1964; Ph.D., Cornell University, 1969.


SKOG, Judith Ellen, Assistant Professor of Biology. B.S., Tufts University, 1966; M.S., University of Connecticut, 1968; Ph.D., Cornell University, 1972.

SMITH, Donald Francis, Associate Professor of Education. B.S., East Carolina University, 1960; M.A., East Carolina University, 1960; Ed.D., The American University, 1968.

SMITH, John Melvin, Associate Professor of Mathematics, Chairman of Department of General Studies. B.S., University of Richmond, 1959; M.A., University of Maryland, 1961; Ph.D., University of Maryland, 1970.

SNAVELY, William Pennington, Professor of Economics, Chairman, Department of Economics. B.A., Hampden-Sydney College, 1940; M.A., University of Virginia, 1941; Ph.D., University of Virginia, 1950.

SNODDY, Henry Nicholas, Assistant Professor of Education. B.S., Georgetown University, 1951; M.Ed., University of Virginia, 1963; Ed.D., University of Virginia, 1970.

SNYDER, James Max, Professor of Education, Chairman of Department of Education. B.S.Ed., West Virginia University, 1935; M.A., West Virginia University, 1939; Prof. Cert., The American University, 1966; Ed.D., The American University, 1967.

SODER, Jr., John Phillip, Assistant Professor of History. B.A., St. Bonaventure University, 1956; M.A., St. Bonaventure University, 1962; Ph.D., Georgetown University, 1970.

SOLOMON, Ess Barry, Assistant Professor of Economics. B.A., University of Washington, 1963; Ph.D., University of California, 1968.

SPECTOR, Ronald Harvey, Lecturer in History. B.A., Johns Hopkins University, 1964; M.A., Yale University, 1966; Ph.D., Yale University, 1967.

SPENCE, Vernon Gladden, Associate Professor of History. B.A., McMurry College, 1946; M.A., Southern Methodist University, 1947; Ph.D., University of Colorado, 1968.

SPINDLER, Frank MacDonald, Associate Professor of History. B.A., University of Texas, 1939; M.Div., General Theological Seminary, 1949; M.A., University of Houston, 1955; Ph.D., American University, 1966.


STALICK, Wayne Myron, Assistant Professor of Chemistry. B.A., University of Oregon, 1964; Ph.D., Northwestern University, 1969.

STANLEY, Melissa Sue, Associate Professor of Biology. B.S., University of Oregon, 1953; M.A., University of Oregon, 1959; Ph.D., University of Utah, 1965.


SULLIVAN, John Patrick, Associate Professor, Director of Institutional Analysis. B.S., United States Naval Academy, 1951; M.A., George Washington University, 1965.

SUNDELL, Michael Gordon, Professor of English, Chairman of Department of English. B.A., Hamilton College, 1956; M.A., Yale University, 1958; Ph.D., Yale University, 1962.

SWANN, Darius Leander, Assistant Professor of Religion. A.B., Johnson C. Smith University, 1945; B.D., Johnson C. Smith University, 1948; S.T.M., Union Theological Seminary, 1959.

SWEITZER, Edward Martin, Lecturer in Biology. B.S., Millersville State College, 1965; M.S., University of Maryland, 1968; Ph.D., University of Maryland, 1970.

FACULTY/229

TAVANI, Nicholas John, Associate Professor of Sociology. A.B., Temple University, 1951; B.D., Reformed Episcopal Seminary, 1957; M.A., University of Maryland, 1965; Ph.D., University of Maryland, 1969.

TEDDER, James Dale, Associate Professor of French. A.B., University of North Carolina, 1960; M.A., University of Wisconsin, 1961; Ph.D., University of North Carolina, 1967.


TONGREN, Hale Nuckolls, Associate Professor of Business Administration. M.B.A., Harvard University, 1959; D.B.A., George Washington University, 1968.

TUREK, Ralph Benjamin, Acting Assistant Professor of Music. B.S., Duquesne University, 1966; M.M., Duquesne University, 1970.

TURNER, Robert Amrine, Associate Professor of Mathematics, Dean of Students. B.S., United States Military Academy, 1933; M.A.T., Duke University, 1964.

TUTTLE, John Robert, Lecturer in Business Administration. B.S., United States Naval Academy, 1954; B.S., United States Naval Postgraduate School, 1961; M.S., University of Michigan, 1962.

TYER, Zita Eileen, Assistant Professor of Psychology. B.A., Texas Christian University, 1959; Ph.D., Texas Tech University, 1968.


VAHLE, Jr., Cornelius Wendell, Lecturer in History. B.A., St. John's University, 1954; M.A., The Catholic University of America, 1957; Ph.D., Georgetown University, 1967.


VAN DEN HEUVEL, Jaren G., Lecturer in Psychology. B.A., Central College, 1959; M.A., Western Michigan University, 1961; Ph.D., University of South Carolina, 1968.


WALL, James Robert, Associate Professor of Biology. B.S., Virginia Polytechnic Institute, 1951; Ph.D., Cornell University, 1955.

WALLS, Aileen Stephens, Associate Professor of English. A.B., Howard Payne College, 1938; University of Arkansas, 1947; Ph.D., University of Illinois, 1962.
WALTER, Jr., Charles Robert, Professor of Chemistry, Chairman of Department of Chemistry. B.A., University of Virginia, 1943; Ph.D., University of Virginia, 1950.

WALTERS, Clarence Paul, Acting Assistant Professor of Psychology. B.A., Pacific Lutheran University, 1967; M.A., Pacific Lutheran University, 1970.


WELANETZ, Ludolph Frisch, Assistant Professor of Engineering. M.E., Cornell University, 1928; M.M.E., Cornell University, 1936; Ph.D., Cornell University, 1938.


WILHELMI, Mary Charlotte, Assistant Professor, Administrative Assistant and Public Information Officer, Consortium for Continuing Higher Education in Northern Virginia. B.S., Iowa State University, 1950; M.A., Virginia Polytechnic Institute and State University, 1973.

WILLIAMS, Marden Emerson, Assistant Professor of Sociology. B.A., Moravian College, 1946; J.D., University of Wisconsin, 1949; M.Div., University of Dubuque, 1959; S.T.M., Boston University, 1966; Ph.D., University of Iowa, 1971.

WILLIS, William Scott, Professor of French, Dean of the Graduate School. B.A., University of Virginia, 1942; M.A., University of Virginia, 1947; Doctorat de l'Université, University of Paris, 1951.

WILSON, Arlene Ethel, Lecturer in Economics. B.A., St. Lawrence University, 1955; M.A., University of Michigan, 1959.

WILSON, III, John William, Assistant Professor of Biology. B.A., Amherst College, 1966; Ph.D., University of Chicago, 1972.

WILSON, Laura Williamson, Assistant Professor of Education. B.S., East Carolina University, 1950; M.A., Appalachian State University, 1968; Ed.D., George Washington University, 1972.

WOLFE, Clarence Christopher, Lecturer in Biology. B.S., St. Vincent College, 1962; M.S., University of Nebraska, 1966; Ph.D., Virginia Polytechnic Institute and State University, 1972.


YATES, Elizabeth Bouey, Lecturer in Education. B.A., Virginia Union University, 1943; M.A., Teachers College, Columbia University, 1945; Ed.D., George Washington University, 1969.

YONUSCHOT, Gene Raymond, Assistant Professor of Chemistry. B.S., California Polytechnic College, 1963; Ph.D., University of Missouri, 1969.

ZIEG Jr., Kermit Charles. Associate Professor of Business Administration. B.S., Indiana University, 1965; M.A., Ohio State University, 1966; Ph.D., Ohio State University, 1968.
Emeritus Faculty
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Index

A.

Academic:
- achievement, 47; deficiencies, 38-39;
- programs, 46-50; regulations, 34-44;
- requirements, 47-49; standing, 38.

Accounting, 179.

Accreditation, 2.

Activities, 15-16.

Administration, 207-208.

Admission:
- application, 22; conditional, 25;
- engineering, 24; foreign students, 25;
- from another college, 25; from secondary school, 24;
- general requirements, 22-23; medical reports, 23;
- to teacher education program, 184-185.

Adolescent psychology, 210.

Advanced placement program:
- by examination, 42; with credit, 41;
- without credit, 41-42.

Affirmative action, 2.

Alumni Association, 232.

American minority cultures, 47.

American Studies:
- courses, 161; requirements, 157-158.

Announcements, 2.

Anthropology, 155.

Art, 85-87.

Astronomy, 131.

Athletics, 16-17.

Attendance, 37.

Audit, 37.

Automobiles, 19.

Awards, 234.

Bachelor of Science Degrees:
- biology, 57; business administration, 177;
- chemistry, 66; economics, 70;
- education, 186; elementary education, 192-194;
- health & physical education, 189-191; in the College of Arts & Sciences, 55;
- in the College of Professional Studies, 175-176; law enforcement, 171;
- mathematics, 116;
- nursing, 175;
- physics, 127; public administration, 142-143;
- social welfare, 152.

Biology Department:
- courses, 60-64; requirements, 57.

Bookstore, 15.

Business Administration Department:
- courses, 179-183; requirements, 177-179.

Business law, 183.

C.

Calendar, 7-9.

Career planning, 17.

Campus Ministry Association, 18-19.

Certification for secondary school teaching, 55.

Change of status and address, 20.

Change of courses, 37.

Checks, 28.

Chemistry Department:
- courses, 67-69; requirements, 65-66.

Class standing, 43.

Class schedules, 52.

Classification as a Virginia Student, 26-27.

College Level Examination Program (CLEP), 42-43.

College of Arts & Sciences, 53-173;
- Bachelor of Arts, 53-54; Bachelor of Science, 55;
- Engineering, 56, 132.

College of Professional Studies, 175-205;
- Bachelor of Science, 177, 189, 192.

Commencement, 49.

Conduct, 19.

Consortium, 50.

Correspondence Directory, 4.

Counseling center, 17-18.

Course descriptions, 52.

Credit & Grades, 34.

Credit without grade, 35.

Credits earned at other colleges, 43.
D.
Dean's List, 44.
Degree requirements:
application, 49; general (all degrees), 52; second bachelor's degree, 49; (see Bachelor of Arts); (see Bachelor of Science).
Deposits, 28-29.
Discrimination prohibited, 2.
Drama, 80.
E.
Ecology, 63.
Economics:
courses, 73-75; requirements, 70.
Education Department:
admission to program, 187; courses, 195-198; health, 198-199; library science, 202; requirements, 184; teaching—elementary school, 192-194; physical education, 189-191; secondary school, 186-188.
Emeritus faculty, 232.
Engineering, 56, 132; admission, 24; courses, 132, two-year program, 56.
English Department:
courses, 78-84; journalism courses, 83; requirements, 76; speech courses, 83-84; schedules, 77; theater, 84.
European Studies:
courses, 163-167; requirements, 162.
Evening Session, 50.
Examinations, 38; absence from examinations & special examinations, 38; final examinations, 38; re-examinations, 38.
F.
Fees & expenses, 27-29; deferred payment, 27-28; degree application, 49; deposits, 28-29; fees schedule, 27; payment of fees, 27; motor vehicle registration fee, 29; Film, 78; non-resident fee, 27; refunds, 28; transcript fee, 29.
Financial Assistance, 29-32; emergency loan fund, 32; Federal programs, 29-30; other programs, 31-32; State loans and grants, 30-31.
Fine & Performing Arts Department:
Art courses, 86-87; art major, 85-86; music courses, 89-93; music major, 88-89.
Firearms, 20.
Foreign language placement, 40-41.

Foreign Language Department:
French courses & major, 95-98; German courses & major, 98-102; Latin, 102; Portuguese, 102; Russian, 102-103; Spanish courses & major, 103-107.
Foreign students, 25.
French, 95.

G.
General Studies Department:
art, 203; English, 203; mathematics, 204; music, 204; regional cultures, 204; speech, 204.
Geography courses, 139-140.
George Mason University Foundation, Inc, 31, 232.
German, 98.
Government & politics courses & major, 140-145.
Grade reports, 38.
Grades & grade points, 34.
Graduate studies, 50, 240.
Graduation requirements, 49; (See departments)

H.
Health, 198-199.
Health insurance, 17.
History Department:
courses, 109-114; requirements, 108.
Honor Committee Members, 233.
Honor System, 18.
Honors, 44.
Housing, 17.

I.
Insurance, 17.
Interdisciplinary Programs, 157-173.

J.
Job placement, 17.
Journalism, 83.

L.
Latin, 102.
Latin American Studies:
courses, 168, 170; requirements, 168.
Law Enforcement Program, 171-173.
Library, Charles Rogers Fenwick, 13, 15.
Living Accommodations, 17.
Loans & grants, 30-31.
Major (regulations concerning): change of major, 44; double major, 44; selection of major, 43-44.

Map, 10.

Mathematics Department: courses, 117-119; requirements, 115-117.

Medical technology, 175.

Motor vehicles, 19; registration fee, 29.

Music courses and major, 88-93.

Natural Science Requirements, 60.

Newspaper production, 83.

Non-academic events & publications, 20.

Non-resident fee, 27.

Patriot Educational Foundation, 31.

Painting, 85.

Philosophy & Religion Department: Philosophy Major, 120-121; Philosophy Courses, 121-124; Religion Courses, 125-126.

Physical education: courses, 198-202; requirements, 189-191.

Physics Department: astronomy, 131; courses, 129-131; engineering, 132; requirements, 127-128.

Placement, 40-43; advanced placement, 41; credits earned at other colleges, 43; foreign language placement, 40-41.

Portuguese, 102.


Psychology Department: courses, 133-138; requirements, 133.

Public Affairs Department: geography courses, 139-140; government and politics courses, 144-145; G&P requirements, 140-141; major in Public Administration, 142.

Public Administration major & courses, 142-145.

Readmission, 39-40; after suspension, 39; after voluntary withdrawal, 40; general, 40.

Rector & Visitors, 206.

Re-examination, 38.

Refunds, 28.

Regional Cultures, 204.

Registration, 23-26; classification as a Virginia Student, 26; delayed registration, 26; preregistration, 26; student identity card, 26.

Registration, Academic Briefing and Orientation (Calendar), 7-9.


Religion courses, 125-126.

Repeating a course, 37.

Reports, 38.

Residence requirements, 47.

Russian, 102.

Retired Faculty, 232.

Scholarships, 29-31.

Second Bachelor's Degree, 49.

Semester-hour & course load, 34.

Social Work, 154.

Sociology Department: anthropology courses, 155; B.S. in social welfare, 152; social welfare courses, 154-155; sociology courses, 147, 149-152; sociology requirements, 147.

Solicitors & Salesmen, 20.

Spanish, 103.

Speech courses, 83-84.

Student Activities, 15-16.

Student Classification, 43.

Student Government Officers, 233.

Student publications, 233.

Summer session, 50; effect of attending summer session, 39-40.

Suspension, 38-39; readmission after suspension, 39.

Supporting Services, 208.

Teaching, 187.

Theater, 84.

Transcript fee, 29.

Tuition, 27 (set Fees).

University History, 12.

Union Building, 13, 15.

Veteran's Affairs, 32.

Virginia Student, Classification, 26-27.

Visitors, 4.
Withdrawal:
Enforced, 20; readmission after voluntary withdrawal, 40; voluntary, 40.
Withholding Academic Credit, 28.

Z.
Zoology, 61.
Undergraduate

American Studies BA
Art BA
Biology BA, BS
Business Administration BS
Chemistry BA, BS
Early Childhood Education BS Ed
Economics BA, BS
Elementary Education BS Ed
English BA
European Studies BA
French BA
German BA
Government BA
Health and Physical Education BS Ed
History BA
Latin American Studies BA
Law Enforcement BS
Mathematics BA, BS
Music History and Musicology BA
Nursing BS
Philosophy BA
Physics BA, BS
Psychology BA
Public Administration BS
Social Welfare BS
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Graduate

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