

## CHAPTER 6

# THE COLLEGES AND SCHOOLS

## COLLEGE OF AGRICULTURE (AGRI)

1224 Symons Hall, 405-2080

Professor and Dean: Thomas A. Fretz

**NOTE: Course requirements for the College of Agriculture are currently under review. See your advisor to determine the courses you must take to fulfill the requirements of your program.**

The College of Agriculture offers a diversity of academic programs that apply science, management, and engineering to improve the world in which we live and work. At College Park, feeding the world population, developing sound environmental practices and policies, understanding animal and plant biology, and the profitable management of agribusinesses are all vital concerns of the College. Integrating the use and protection of natural resources with the production of a safe and abundant food supply is the challenge facing students. Contemporary subjects like genetic engineering, international trade and policy, dietetics, nutrition, and landscape architecture have joined the disciplines of crop and animal sciences (including pre-veterinary medicine) in the curricula. All undergraduates have an opportunity to work closely with faculty in state-of-the-art facilities including a new agricultural engineering and animal sciences building, a dairy processing pilot plant, and a plant sciences building that contains landscape architecture design studios. Nearby resources such as the U.S. Department of Agriculture's National Research Center, Maryland Cooperative Extension Service, the National Institutes of Health, the Smithsonian Institution, Maryland's Departments of Agriculture and Natural Resources, and the Patuxent Wildlife Research Center enhance teaching, research, internship, and career opportunities for students.

Learning opportunities are strengthened through student involvement in such co-curricular activities as the College Honors Program, career programs, leadership workshops, and student clubs and organizations. Students have a faculty advisor who assists them in selecting courses to meet their individual needs. Graduates find careers such as agribusiness managers, dietitians, food scientists, engineers, park managers, land use planners, sales representatives, stock and commodity brokers, or lawyers specializing in environmental issues. Others work at government and industry research laboratories, hospitals, fish and wildlife programs, public health departments and large production operations. Many graduates pursue advanced study in veterinary or graduate schools.

The College of Agriculture has the following programs of study:

- **Agricultural and Resource Economics**—Business management; Environmental and Resource Policy; Farm Production; Food Production; International Agriculture; and Political Process
- **Agronomy**—Conservation of Soil, Water, and the Environment; Crops Science; Soil Science; and Turf and Urban Agronomy
- **Animal Sciences**—Animal Management and Industry; Avian Business; Laboratory Animal Management; and Sciences
- **Biological Resources Engineering**
- **General Agricultural Sciences**
- **Horticulture**—Landscape Management; Horticultural Production; and Horticultural Science
- **Institute of Applied Agriculture** (2-year program)
- Landscape Architecture

- **Natural Resources Management**—Environmental Education/Park Management; Land and Water Resource Management; and Plant and Wildlife Resource Management
- **Nutrition and Food Science**—Dietetics; Food Science; and Nutrition
- **Combined Degree:** College of Agriculture and Veterinary Medicine

## Advantage of Location and Facilities

Educational opportunities in the College of Agriculture are enhanced by the proximity of several research units of the federal government. Teaching and research activities in the College are conducted with the cooperation of scientists and professional people in government positions. Of particular interest are the Agricultural Research Center at Beltsville, the National Agricultural Library, and the U.S. Department of Agriculture Headquarters in Washington, D.C.

Instruction in the basic biological and physical sciences, social sciences and engineering principles is conducted in well-designed classrooms and laboratories. The application of basic principles to practical situations is demonstrated for the student in numerous ways. For example, modern greenhouses are available for teaching and research on a wide variety of plants, plant pests, and crop cultural systems. Dairy and beef cattle and flocks of poultry are available for teaching and research purposes.

In addition to on-campus facilities, several operating research farms, located in central, western, and southern Maryland and on the Eastern Shore, support the educational programs in agriculture by providing locations where important crops, animals, and poultry can be grown and maintained under practical and research conditions.

## Requirements for Admission

For students entering the College of Agriculture it is recommended that their high school preparatory course include: English, 4 units; mathematics, 3 units; biological and physical sciences, 3 units; and history or social sciences, 2 units. Four units of mathematics should be elected by students who plan to major in agricultural engineering. The Landscape Architecture major is a limited enrollment program (LEP). See the Admissions chapter in this catalog for general LEP admission policies.

## Degree Requirements

Students graduating from the college must complete at least 120 credits with an average of 2.0 in all courses applicable toward the degree. Included in the 120 credits must be the following:

1. CORE (40 credits)
2. College Requirements
  - a. Chemistry: Any one course of three or more credits in chemistry numbered 102 or higher.
  - b. Mathematics or any course that satisfies the CORE Program
  - c. Biological Sciences: Any one course carrying three or more credits selected from offerings of the Departments of Botany, Entomology, Microbiology, or Zoology.

Courses marked "for non-science majors" cannot be used to satisfy degree requirements for any major in the College of Agriculture.

3. Requirements of the major and supporting areas, which are listed under individual program headings in Chapter 7.

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### Required Courses

Courses required for students in the College of Agriculture are listed in each curriculum. The program for the freshman year is similar for all curricula. Variations in programs will be suggested based on students' interests and test scores.

#### Typical Freshman Program—College of Agriculture

	Semester	
	Credit Hours	
	I	II
ENGL 101—Introduction to Writing .....	3	
BIOL 105—Principles of Biology I .....	4	
MATH .....		3
ANSC 101—Principles of Animal Science .....	3	
BIOL 106—Principles of Biology II .....	4	
AGRO 101 .....	4	
ENAG 200 .....		2
SPCH 107—Technical Speech Communication .....	3	
CORE Program Requirement .....	3	
Elective .....	1	
<b>Total .....</b>	<b>15</b>	<b>15</b>

### Advising

Each student in the College of Agriculture is assigned to a faculty advisor. Advisors normally work with a limited number of students and are able to give individual guidance. Students entering the freshman year with a definite choice of curriculum are assigned to departmental advisors for counsel and planning of all academic programs. Students who have not selected a definite curriculum are assigned to a general advisor who assists with the choice of electives and acquaints students with opportunities in the curricula in the College of Agriculture and in other units of the university.

### Financial Assistance

A number of scholarships are available for students enrolled in the College of Agriculture. These include awards by the Agricultural Development Fund, Arthur M. Ahalt Memorial Scholarship, Eugene Fox/Bowie-Crofton Garden Club Scholarship, Chapel Valley Landscape Company Honorary Scholarship, George Earle Cook, Jr. Scholarship Fund, Ernest T. Cullen Memorial Scholarship, Mid-America Dairymen, Inc. Scholarship, Richard F. Davis Memorial Award, Delmarva Corn and Soybean Scholarship, Delaware-Maryland Agribusiness Association, Mylo S. Downey Memorial Scholarship, C. Walter England Dairy Technology Fund, James R. Ferguson Memorial Scholarship, Goddard Memorial Scholarship, Manasses J. and Susanna Grove Memorial Scholarship, Joe E. James Memorial Award Fund, The Kinghorne Fund, Gary Lee Lake Memorial Scholarship, Maryland Turfgrass Association, Maryland State Golf Association, Maryland and Virginia Milk Producers, Inc., Dr. Ray A. Murray Scholarship Fund, Paul R. Poffenberger Scholarship Fund, The Ross and Pauline Smith Fund for Agriculture, Herbert J. Snyder Scholarship, Southern States Cooperative, Inc., The David N. Steger Scholarship Fund, T. B. Symons Memorial Scholarship, Takoma Horticultural Club Scholarship, The A.F. Vierheller Award Fund in Horticulture, Veterinary Science Scholarship, Siegfried Weisberger Jr. Memorial Fund, Siegfried Weisberger Jr. Scholarship Fund, and the Winslow Foundation.

### Honors

Students may apply for admission to the College Honors program after completing 56 credits with a minimum 3.2 GPA in a program within the College. Honors students work with a faculty mentor and must take at least 12 credits of honors courses including a senior thesis. Interested students should contact their faculty advisor.

### Student Organizations

Students find opportunity for varied expression and growth in the several voluntary organizations sponsored by the College of Agriculture. These organizations are Ag Student Council, Alpha Zeta, Agribusiness Club, Agronomy Club, Alpha Gamma Rho, Animal Husbandry Club, ASAE, the Society for Engineering in Agricultural, Food and Biological Systems, Collegiate FFA, Food and Nutrition Club, Landscape Architecture Student Association, INAG Club, Natural Resources Management Society, Poultry

Science, Soil and Water Conservation Society UMCP Student Chapter, UM Cavalry, and Veterinary Science Club.

## Research and Service Units

### Agricultural Experiment Station

The Maryland Agricultural Experiment Station (MAES) supports a wide array of agricultural enterprises, as well as environmental, economic, and social needs through a statewide network of facilities and faculty. Experiment Station research and education centers are located in 10 facilities throughout Maryland. Nearly 120 scientists throughout the University of Maryland System are affiliated with MAES.

State-of-the art methodologies support the Experiment Station's diverse, interdisciplinary research program encompassing plant and animal biology; biotechnology; agricultural productivity; environment and natural resources; utilization and marketing; and land use and public policy. Genetic principles and biotechnological techniques are applied to improve turf and ornamental plants, vegetable and field crops, poultry, beef and dairy cattle, and other animals. Alternative crops and plant species that can tolerate the increased levels of ultraviolet light and other conditions brought on by global problems such as ozone depletion and the greenhouse effect are another focus of MAES research efforts.

Biochemistry helps to evaluate the nutritional value of crops, the feed conversion efficiency of poultry and other animals, and the quality of plant and animal products for human consumption. Engineering principles help produce and maintain optimal environments for agricultural production; improve processing systems that lead to enhanced food quality; and enhance waste utilization and disposal techniques. Water quality studies analyze the presence and effects of toxins entering the Chesapeake Bay, and contribute to efforts to minimize the possible flow of agricultural chemicals into surface and ground water. Economic and social science studies are applied to preserve Maryland's high quality of life by maintaining farmland and open space.

Undergraduate students do have opportunities to assist in the MAES research program, and to benefit from the Station's productive linkage with the Cooperative Extension Service as well as public and private research units, including the U.S. Department of Agricultural Research Center close to the campus in Beltsville.

### Cooperative Extension Service

The Maryland Cooperative Extension Service (MCES) educates citizens in the application of practical, research-based knowledge to critical issues in agriculture and agribusiness; home and family economics, nutrition, and health; youth development and 4-H; and family and community leadership. The statewide program includes more than 180 faculty and support staff located in 23 counties, the City of Baltimore, four regional centers, and the University of Maryland College Park and Eastern Shore campuses.

Research faculty and extension agents work cooperatively to ensure that state-of-the-art research is effectively translated into educational programs, and delivered efficiently to the citizens of Maryland. These programs are focused in four major areas: 1) agricultural and aquacultural profitability; 2) nutrition, diet, food safety, and health; 3) natural and environmental resources; and 4) youth development education. In addition to work on farms and with agribusinesses, extension programs are aimed at many small and part-time farmers, youth, rural non-farm and urban family consumers as well as local officials and community leaders. The Service maintains a close working relationship with the Maryland Department of Agriculture and other state agencies and organizations. In addition, more than 15,000 volunteers in Maryland give generously of their time and energy.

A variety of methods help the Extension Service reach and teach Maryland citizens. Downlink satellite technology enables Maryland training sessions to include conferences and speakers from across the country. State-of-the-art communication technology enables the Extension Home and Garden Information Center to answer 60,000 questions annually about plants and pests. More traditional methods include conferences, teaching institutes, short courses, field days, and demonstrations, along with videotapes, newsletters, newspapers, radio and television.

General administrative offices of the Maryland Cooperative Extension Service are located at the University of Maryland at College Park; the Extension administrator of the 1890 Program (an integral part of the total MCES effort) is located at the University of Maryland Eastern Shore.

## Combined Degree Curriculum—College of Agriculture and Veterinary Medicine

Students enrolled in the College of Agriculture who have completed at least 90 hours, including all University and College requirements, may qualify for the Bachelor of Science degree from the University of Maryland, College of Agriculture, upon successful completion in an accredited College of Veterinary Medicine of at least 30 semester hours. It is strongly recommended that the 90 hours include credits in animal science.

### Combined Degree Requirements

	Semester Credit Hours
CORE Program Requirements .....	40
ANSC 221—Fundamentals of Animal Production.....	3
ANSC 201—Genetics .....	3
ANSC 203—Feeds & Feeding .....	3
BIOL 105—Principles of Biology I .....	4
BIOL 106—Principles of Biology II .....	4
Mathematics (must include at least 3 credits of Calculus) .....	6
CHEM 103—General Chemistry I .....	4
CHEM 113—General Chemistry II .....	4
CHEM 233—Organic Chemistry I .....	4
CHEM 243—Organic Chemistry II .....	4
PHYS 121—Fundamentals of Physics I .....	4
PHYS 122—Fundamentals of Physics II .....	4
Biochemistry .....	3
Electives .....	10

\*Includes 11 required credits listed above.

For additional information, please contact the Associate Dean, VMRCVM, 1203 Gudelsky Veterinary Center, University of Maryland, College Park, Md. 20742, 935-6083.

## VIRGINIA-MARYLAND REGIONAL COLLEGE OF VETERINARY MEDICINE—MARYLAND CAMPUS

### College of Agriculture

1203 Gudelsky Veterinary Center, 405-6083

Professor and Associate Dean: Mohanty  
 Professors: Dutta, Mallinson, Marquardt  
 Associate Professors: Carmel, Dyer, Samal, Vakharia  
 Assistant Professors: Ingling, Gasper  
 Instructor: Hohenhaus  
 Lecturer: Loizeaux  
 Director: Stephenson

The Virginia-Maryland Regional College of Veterinary Medicine is operated by the University of Maryland and the Virginia Polytechnic Institute and State University. Each year, 30 Maryland and 50 Virginia residents comprise the entering class of a four-year program leading to a Doctor of Veterinary Medicine (DVM).

The first three years are given at Virginia Polytechnic Institute and State University in Blacksburg, Va. The final year of instruction is given at several locations, including the University of Maryland at College Park.

A student desiring admission to the College must complete the pre-veterinary requirements and apply for admission to the professional curriculum. Admission to this program is competitive, and open to all Maryland residents. All Maryland residents' applications are processed at the College of Veterinary Medicine, Maryland Campus, University of Maryland at College Park.

### Institute of Applied Agriculture—Two-Year Program

The Institute of Applied Agriculture, a two-year, college-level program offered as an alternative to the four-year program, prepares students for specific occupations in technical agriculture.

The Institute offers three major programs with the following specialty areas:

- I. Farm Production/Agribusiness Management
- II. Ornamental Horticulture
  - A. General Ornamental Horticulture
  - B. Landscape Management
  - C. Urban Forest Management
- III. Turfgrass Management
  - A. Golf Course Management
  - B. General Turfgrass Management

**The Farm Production/Agribusiness program** develops skills needed for farm operation or for employment in agricultural service and supply businesses such as feed, seed, fertilizer, and machinery companies, and farmers' cooperatives.

**Options in Ornamental Horticulture** prepare students for employment in, or management of, greenhouses, nurseries, garden centers, landscape maintenance companies and tree care professions.

**The Turfgrass Management program** concentrates on the technical and management skills needed to work as a golf course superintendent, in commercial or residential lawn care companies, or in other turfgrass-related industries such as parks and cemeteries.

To enhance a student's occupational knowledge, the Institute requires completion of a Supervised Work Experience program, usually done in the summer between the first and second years.

A graduate of the Institute is awarded a Certificate in Agriculture specifying the student's major area of study. Graduation requires the successful completion of a minimum of 60 credit hours of a recognized program option, completion of Supervised Work Experience, and a 2.0 cumulative grade point average.

Although designed as a two-year terminal program, the Institute does not restrict continuing education. In general, all Institute courses are transferable to the University of Maryland at College Park and the University of Maryland Eastern Shore. The extent to which the courses can be applied to a bachelor's degree will depend on the individual department in which a student is planning to major.

#### Courses Common to All Programs

COMM I-1—Oral Communication .....	3
COMM I-2—Written Communication .....	3
AGMA I-1—Agricultural Mathematics .....	3
BOTN I-1—Introduction to Plant Science .....	3
AGRO I-1—Soils and Fertilizers .....	3
AGRO I-11—Pesticide Use and Safety .....	2
ENBE 200—Fundamentals of Agricultural Mechanics .....	3
AGEC I-2—Business Law .....	3
AGEC I-4—Business Operations .....	3
AGEC I-8—Using Computers in Agriculture .....	2
AGEC I-10—Personnel Management .....	3
AGEC I-14—Supervised Work Experience .....	1

#### Courses for Farm Production and Agribusiness Management Majors

ANSC I-1—Introduction to Animal Science .....	3
ANSC I-2—Feeds and Feeding .....	3
ANSC 240—Dairy Cattle Management .....	2
ANSC 241—Dairy Cattle Management Practicum .....	1
ANSC I-8—Livestock Management .....	3
ANSC I-10—Seminar .....	1
ANSC 222—Meats .....	3
AGRO I-7—Grain and Forage Crop Production .....	4
AGRO I-12—Crop Production Practices .....	3
AGEC I-7—Agricultural Marketing .....	3
AGEC I-11—Farm Management .....	3

#### Courses for Ornamental Horticulture and Turfgrass Majors

HORT I-2—Woody Ornamentals I .....	3
HORT I-3—Plant Propagation .....	3
HORT I-5—Diseases of Ornamentals .....	3
HORT I-8—Arboriculture .....	3
HORT I-18—Woody Ornamentals II .....	2
HORT I-26—Landscape Design and Implementation .....	3
HORT I-27—Landscape Management .....	3
ENTM I-2—Pests of Ornamental Plants .....	3
AGRO I-2—Turf Management .....	4
AGRO I-4—Golf Course Management I .....	3
AGRO I-5—Golf Course Management II .....	3

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URFS I-1—Urban Forest Management .....	3
URFS I-2—I.P.M. Monitoring .....	2

For additional information, write: Director, The Institute of Applied Agriculture, 2123 Jull Hall, University of Maryland, College Park, Md. 20742-2525, or call 405-4686, or hook into InAgOnLine via modem at 314-2034 (9600 baud) or 314-2035 (2400 baud).

### SCHOOL OF ARCHITECTURE

Architecture Building, 405-6284

Professor and Dean: Steven W. Hurtt  
Associate Dean: Stephen F. Sachs  
Assistant to the Dean: Nancy Lapanne  
Professors: Bechhoefer, Bennett, Etlint, Fogle, Hill, Lewis, Schlesinger, Schumacher, Vann  
Associate Professors: Bovill, DuPuy, Gournay, Kelly  
Assistant Professors: Bell, Gardner  
Lecturers: McInturff, Wiedemann  
†Distinguished Scholar-Teacher

The School of Architecture offers a four-year undergraduate program leading to the Bachelor of Science degree in architecture, and a graduate program leading to the degree of Master of Architecture. The undergraduate major in architecture is designed to minimize the time required to complete the curriculum leading to the professional degree, Master of Architecture.

Students receive rigorous and comprehensive instruction from a faculty whose members are active in professional practice or research. Many faculty members have distinguished themselves across the professional spectrum and represent different approaches to architectural design. Their individual areas of expertise include architectural design and theory, history, architectural archaeology, technology, urban design and planning, and historic preservation. Visiting critics, lecturers, and the Kea Distinguished Professor augment the faculty; together they provide students with the requisite exposure to contemporary realities of architectural design.

The B.S. degree in architecture will qualify graduates to pursue a career in any of a number of fields, such as construction, real estate development, public administration, or historic preservation, or to continue in graduate work in professional fields such as architecture, urban planning, or law.

### Admission to Architecture

See the Admissions section in this catalog for general LEP admission policies.

**Freshman Admission and the 45-Credit Review.** Most entering freshmen who have a GPA of 3.0 and 1100 SATs will gain admission to the School of Architecture directly from high school, as allowed by space considerations within the School. Because space may be limited before all interested freshmen are admitted to the program, early application is encouraged. Freshmen admitted to the program will have access to the necessary advising through their initial semesters to help them determine if Architecture is an appropriate major for their interests and abilities.

Freshmen who are admitted directly to Architecture will be subject to a performance review by the time they have completed 45 credits. To meet the provisions of the review, these students must complete: (1) Fundamental Studies; (2) 60% of Distributive Studies; (3) ARCH 170, 220, and 242 with grades of B in each; (4) MATH 220, PHYS 121, and PHYS 122 with minimum grades of C in each and a combined GPA of 2.6 for the 3 courses; (5) three letters of recommendation; and (6) a portfolio review as specified by the School. Students who do not meet these requirements will not be allowed to continue in the LEP and will be required to select another major.

**Transfer Admission.** The following requirements affect new transfer students to the University as well as on-campus students hoping to change majors to Architecture. Admission of transfer students may be severely limited, and capacity is determined each year in accordance with the success of incoming freshmen.

In order to be admitted to Architecture, transfer students will be required to meet the following set of gateway requirements: (1) completion of Fundamental Studies; (2) completion of all Distributive Studies; (3) completion of ARCH 242 with a grade of B; (4) completion of MATH 220 and PHYS 122 with minimum grades of C and a combined average of 2.4;

(5) successful review of a portfolio to assess drawing skills; and (6) attainment of a minimum cumulative GPA for all college-level work attempted. The required GPA is set each year and may vary from year to year depending upon available space. Contact the School of Architecture or the Office of Undergraduate Admissions for the current GPA standard.

**Appeals.** Students who are unsuccessful in gaining admission to Architecture at the freshman or transfer level, and believe they have extenuating or special circumstances which should be considered, may appeal in writing to the Office of Undergraduate Admissions. The student will be notified in writing of the appeal decision once it is made.

Students admitted to Architecture as freshmen who do not pass the 45-credit review but believe they have special circumstances which should be considered may appeal directly to the School.

For further information, contact the Counselor for Limited Enrollment Programs at 314-8378.

### Curriculum Requirements

In the first two years of college, directly admitted students and those seeking to transfer into the School of Architecture should adhere to the following curriculum:

	Credit Hours
General Education (CORE) and Elective .....	28
ENGL 101—Introduction to Writing (CORE) .....	3
MATH 220—Elementary Calculus I (CORE) .....	3
ARCH 170—Introduction to the Built Environment (CORE) .....	3
MATH 221—Elementary Calculus II (recommended) .....	3
PHYS 121—Fundamentals of Physics I (CORE) .....	4
ARCH 220—History of Architecture I* .....	3
ARCH 242—Drawing I .....	2
PHYS 122—Fundamentals of Physics II (CORE) .....	4
ARCH 221—History of Architecture II .....	3
<b>Total Credits .....</b>	<b>56</b>

### Curriculum Requirements

**Bachelor of Science, Major in Architecture.** If admitted after completing 56 credits, students are expected to complete the following requirements for a total of 120 credits:

	Credit Hours
<b>Third Year</b>	
ARCH 400—Architecture Studio I* .....	6
ARCH 410—Architectural Technology I .....	4
ARCH 4xx—Arch. History/Area A** .....	3
ARCH 401—Architecture Studio II .....	6
ARCH 411—Architectural Technology II .....	4
ARCH 343—Drawing II Line Drawing .....	3
ENGL 391—Advanced Composition .....	3
CORE Requirements .....	3
Total .....	32
<b>Fourth Year</b>	
ARCH 402—Architecture Studio III .....	6
ARCH 445—Visual Analysis of Architecture .....	3
ARCH 412—Architectural Technology III .....	4
ARCH 403—Architecture Studio IV .....	6
ARCH 413—Architectural Technology IV .....	4
CORE Requirements .....	3
One of the following .....	3
ARCH 460 Site Analysis & Design	
ARCH 450 Introduction to Urban Planning	
ARCH 454 Theories of Urban Form	
ARCH 4xx—Arch. History/ Area B** .....	3
Total .....	32
<b>Total Credits .....</b>	<b>120</b>

\*Courses are to be taken in sequence as indicated by Roman numerals in course titles.

\*\* Architecture history courses: Area A, ARCH 422, 423, 432, and 436  
Area B, ARCH 433, 434, and 420.

## Special Resources and Opportunities

The school is housed in a modern, air-conditioned building providing design workstations for each student, a large auditorium, and seminar and classroom facilities. A well-equipped woodworking and model shop, darkroom, a lab equipped with testing machines and various instruments used in studying the ambient environment, and computer terminal facilities are also provided. The Architecture Library, one of the finest in the nation, offers convenient access to a current circulating collection of more than 24,000 volumes, 6,000 periodicals, and an extensive selection of reference materials. Rare books and special acquisitions include a collection relating to international expositions and the 11,000-volume National Trust for Historic Preservation Library. A visual resources facility includes a reserve collection of 250,000 slides on architecture, landscape architecture, urban planning, architectural science, and technology as well as audio-visual equipment for classroom and studio use.

The school provides learning experiences through CADRE Corporation, a nonprofit center for Architectural Design and Research, which provides an organizational framework for faculty and students to undertake contract research and design projects appropriate to the school's fundamental education mission. CADRE Corporation projects include building and urban design, urban studies, building technology, historic preservation, architectural archaeology, studies in energy conservation, or other work for which the school's resources and interests are uniquely suited.

Summer programs include the Caesarea Ancient Harbor Excavation Project (CAHEP), an ongoing land and underwater excavation in Israel at the harbor of Herod the Great at Caesarea Maritima. In addition, summer workshops for historic preservation are sponsored by the school each year in Cape May, N.J., which is a designated national historic landmark district, and Kiplin Hall in North Yorkshire, England. Students may earn direct credit doing hands-on restoration work and by attending lectures by visiting architects, preservationists, and scholars.

Course Code: ARCH

## COLLEGE OF ARTS AND HUMANITIES (ARHU)

1102 Francis Scott Key Hall, 405-2088

Professor and Dean: Robert Griffith  
Office of Student Affairs: 405-2108  
Academic Advisors: 405-2108

The College of Arts and Humanities embraces a heterogeneous group of disciplines, all of which value the development of critical thinking, fluent expression in writing and speech, sensitivity to ethical and aesthetic standards, and a complex understanding of history and culture. Departments and programs in Arts and Humanities, while they have strong individual identities, are also involved in interdisciplinary studies. Thus students will find, for example, courses in the Department of English that approach literature from political perspectives, courses in the Department of History that rely on feminist perspectives, courses in the Department of Art History that study African cultures and so on.

Examples of the special opportunities available to students in this richly variegated college include an exceptional slide library in the Art History Department, the Music Department's computer music resources including a MIDI Laboratory, the English Department's computer-based writing laboratory, an AT&T Foreign Language Classroom, the Pugliese Theatre for experimental drama, a junior-year abroad program in Nice, a year-abroad program in Sheffield, and Honors programs in most departments.

Preparation in the Arts and Humanities provides valuable background for careers in a broad range of fields. Students should be aware of the many eloquent testimonials from leaders of the nation's businesses, industry and government to the skills of oral presentation, written exposition, critical thinking, and analytic problem-solving nurtured in humanities courses. These skills are essential to a successful career in any number of different fields.

## Entrance Requirements

Students wishing to major in one of the creative or performing arts are encouraged to seek training in the skills associated with such an area prior to matriculation. Students applying for entrance to these programs may be required to audition, present slides, or submit a portfolio as a part of the

admission requirements.

## Graduation Requirements

The following College requirements apply only to students earning Bachelor of Arts degrees from the College of Arts and Humanities. These requirements are in addition to or in fulfillment of campus and departmental requirements. For information concerning the Bachelor of Music in the Department of Music the student should consult a department advisor.

### Distribution

A minimum of 45 of the total of 120 semester hours must be upper-level work (i.e., courses numbered 300-499).

### Foreign Language

Language proficiency may be demonstrated in one of several ways:

- Successful completion of level 4 in one language or level 2 in each of two languages in high school, or
- Successful completion of a 12-credit sequence or of the intermediate level in College language courses, or
- Successful completion of a language placement examination in one of the campus language departments offering such examinations.

Students whose native language is not English should see an advisor in the College Office of Student Affairs.

### Major Requirements

All students must complete a program of study consisting of a major (a field of concentration) and supporting courses as specified by one of the academic units of the College. No program of study shall require in excess of 60 semester hours. Students should consult the unit in which they will major for specific details; certain units have mandatory advising.

A major shall consist, in addition to the lower-division departmental prerequisites, of 24 to 40 hours, at least 12 of which must be in courses numbered 300 or 400 and at least 12 of which must be taken at the University of Maryland at College Park.

A major program usually requires a secondary field of concentration (supporting courses). The nature and number of these courses are determined by the major department.

No grade lower than C may be used to fulfill major or supporting course requirements. No course for the major or support module may be taken Pass-Fail.

## Advising

Freshmen and new transfer students have advisors in the Arts and Humanities College Office of Student Affairs (405-2110) who assist them in the selection of courses and the choice of a major. After selecting a major, students are advised in their major department and may also continue to see College advisors. For further information about advising, students should see the section on advising in the Mini-Guide, available from the College.

## Degrees and Majors

The College of Arts and Humanities offers the degree of Bachelor of Arts in the following fields of study:

- American Studies
- Art
- Art History
- Chinese
- Classics
  - Classical Humanities
  - Greek
  - Latin
- Dance
- English Language and Literature
- French Language and Literature

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German Language and Literature  
History  
Italian Language and Literature  
Japanese  
Jewish Studies  
Linguistics  
Music  
Philosophy  
Romance Languages  
Russian Language and Literature  
Russian Area Studies  
Spanish Language and Literature  
Speech Communication  
Theatre  
Women's Studies

The College also offers the degree of Bachelor of Music, certificate programs in Women's Studies and East Asian Studies; and a program in Comparative Literature.

### Internships

Some departments in Arts and Humanities have well-established internship offerings. Typically, students must complete an application and attach a current academic transcript. Internships are generally for one semester of the junior or senior year for students with a good academic record. In addition to the work itself, students write an analysis of the experience. For more information, students should contact their major departmental advisor. A Literacy Internship Program is available through the College office, 405-2115.

### Certification of High School Teachers

A student who wishes certification as a high school teacher in a subject represented in this College must consult the College of Education in the second semester of the sophomore year. Application for admission to the Teacher Education program is made at the time that the first courses in Education are taken. Enrollment in the College of Education is limited.

### Honors

Departmental Honors Programs are offered in the Departments of Art History and Archeology, English, French, German, History, Music, Philosophy, Spanish, Speech, and Theatre. Departmental Honors Programs are administered by an Honors Committee within each department. Programs and policies differ from department to department. Admission to a Departmental Honors Program ordinarily occurs at the beginning of the first or second semester of the student's junior year. Students must have a cumulative grade point average of at least 3.0 to be admitted. Most departments require a comprehensive examination over the field of the major program, or a thesis. On the basis of the student's performance on the Honors Comprehensive Examination and in meeting such other requirements as may be set by the Departmental Honors Committee, the faculty may vote to recommend the candidate for the appropriate degree with (departmental) honors or for the appropriate announcement in the commencement program and citation on the student's academic record and diploma.

In some departments, honors students enjoy certain academic privileges similar to those of graduate students.

**Phi Beta Kappa.** Consult the description of Phi Beta Kappa elsewhere in this catalog.

### Research and Service Units

#### Academic Computing Services

1116 Francis Scott Key Hall, 405-2104  
Director: John F. Smith

Academic Computing Services provides facilities and support for a wide range of computing needs for undergraduate students in the College of Arts and Humanities. There are currently 65 networked microcomputers located in three laboratories throughout the College which are available for student use. In addition, the College provides discipline specific classroom laboratories for the Professional Writing Program in English, foreign language instruction and graphic design.

#### The Art Gallery

1202 Art-Sociology Building, 405-2763  
Director: Terry Gips

The Art Gallery presents a series of exhibitions each year of historic and contemporary art in a variety of media and subject matter. Opportunities for museum training and experience are available to students through intern and work-study positions.

#### The Center for Studies in Nineteenth-Century Music

2101 Skinner Building, 405-7780  
Director: H. Robert Cohen  
Associate Director: Luke Jensen

The Center for Studies in Nineteenth-Century Music promotes research focusing on nineteenth-century music and musical life. The center's programs are designed to facilitate the study, collection, editing, indexing, and publication of documentary source materials.

#### The Center for Renaissance and Baroque Studies

1120 Francis Scott Key Hall, 405-6830  
Founding Director: S. Schoenbaum  
Executive Director: Adele Seeff  
Associate Director: Susan Jensen

The Center for Renaissance and Baroque Studies promotes teaching and research in the Renaissance and Baroque periods in all disciplines of the arts and humanities, as well as in such allied fields as the history and philosophy of science.

#### The Language Center

1105 Jimenez Hall, 405-4926  
Director: J. Marshall Unger (Acting)  
Assistant Director: Charlotte Groff Aldridge

The Language Center promotes cross-departmental projects in teaching and research relating to other languages and cultures. It provides for the common needs of language instruction for all the individual campus units involved in second-language acquisition. It encompasses three units:

#### Language House

0107 St. Mary's Hall, 405-6995  
Coordinator: Dolores Bondurant

The Language House is a campus residence for students wishing to immerse themselves in the study of a foreign language and culture. A total of 92 students of Chinese, French, German, Hebrew, Italian, Japanese, Russian, and Spanish share 19 apartments. A live-in graduate mentor leads each language cluster. The goal of language immersion is achieved through activities organized by the students and mentors, a computer-based Language Learning Center, an audio-visual room, an international cafe, and foreign television programs received via satellite.

#### Language Media Services

1202 Jimenez Hall, 405-4924  
Contact: Jorge Padilla-Morales

The Language Media Center serves the technological needs of foreign language instruction at College Park. It houses a large collection of video and audio programs in more than 25 languages, graphic and resource materials, language laboratories, and video viewing rooms.

#### FOLA

1105 Jimenez Hall, 405-4046  
Coordinator: Naime Yaramanoglu (Acting)

The FOLA (Foreign Language) Program enables qualified students with high motivation to acquire a speaking knowledge of a number of foreign languages not offered in regular campus programs. While instruction is basically self-directed, students meet regularly with a native-speaking monitor for practice sessions to reinforce what has already been covered through the individual use of books and audio tapes. Final examinations are administered by outside examiners who are specialists in their fields.

**Maryland English Institute**

2140 Taliaferro Hall, 405-8634

Director: Leslie A. Palmer

The Maryland English Institute (MEI) offers special instruction in English to students at the University of Maryland who need to improve their competence in the language before they are able to undertake a full program of academic work. Two programs are offered: a half-time semi-intensive course and a full-time intensive course.

**Semi-intensive.** This program is open only to University of Maryland students, both graduate and undergraduate, who fall within a TOEFL score range of 450-549. Candidates in this proficiency range may be admitted to the University of Maryland on a provisional basis, requiring them to satisfactorily complete the MEI Semi-intensive program in order to become full-time students. Classes meet two hours per day, five days per week. In addition, students have two hours per week of assigned work in the language laboratory. The program is designed especially to perfect the language skills necessary for academic study at the University of Maryland. Enrollment is by permission of the director, and no credit is given toward any degree at the University.

**Intensive.** This full-time English-as-a-Foreign-Language program is open to non-native speakers of English who need substantial improvement in their English competence before they can undertake any academic study at a College or university in the United States. On the basis of an entrance examination, students will be assigned to classes at their particular proficiency levels. They will have five hours of English language instruction per day, five days per week during the regularly scheduled semester and an eight-week summer session. The program is intended primarily for students who wish to enroll at the University of Maryland after completing their language instruction. However, satisfactory completion of the language program does not guarantee acceptance at the University. Enrollment is by permission of the director and no credit is given toward any degree at the University.

Course Code: ARHU

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## COLLEGE OF BEHAVIORAL AND SOCIAL SCIENCES (BSOS)

2141 Tydings Hall, 405-1697

Professor and Dean: Irwin L. Goldstein

Associate Dean: Stewart L. Edelstein

Assistant Dean: Katherine Pedro Beardsley

Assistant Dean: Diana Ryder Jackson

Advising and Records Office: 405-1697

Advising Office for Students of Color, Athletes and International Students: 405-1708

The College of Behavioral and Social Sciences is comprised of a diverse group of disciplines and fields of study all of which emphasize a broad liberal arts education as the foundation for understanding the environmental, social, and cultural forces that shape our world. At the heart of the behavioral and social sciences is the attempt to understand human beings, both individually and in groups. Disciplines in the behavioral and social sciences use approaches that range from the scientific to the philosophical, from the experimental to the theoretical. Integral to all the disciplines, however, is the development and application of problem solving skills, which in combination with other academic skills, enable students to think analytically and to communicate clearly and persuasively. Students interested in human behavior and in solving human and social problems will find many exciting opportunities through the programs and courses offered by the College of Behavioral and Social Sciences.

The College is composed of the following major programs that lead to the Bachelor of Arts or the Bachelor of Science degree, as appropriate:

Afro-American Studies Program\*

Department of Anthropology

Department of Criminal Justice and Criminology

Department of Economics

Department of Geography

Department of Government and Politics

Department of Hearing and Speech Sciences

Department of Psychology

Department of Sociology

\*The Afro-American Studies Program also offers an undergraduate

certificate requiring 21 semester hours of coursework (See "Campus-Wide Programs" in this catalog.)

### Advising

The BSOS Undergraduate Advising Office and the Advising Office for Students of Color, Athletes, and International Students coordinate advising and maintain student records for BSOS students. Advisors are available to provide information concerning University requirements and regulations, transfer credit evaluations, and other general information about the University by appointments taken on a walk-in basis from 9 a.m. to 5 p.m. daily. Undergraduate advisors for each undergraduate major are located in the department offices. These advisors are available to assist students in selecting courses and educational experiences in their major area of study consistent with major requirements and students' educational goals.

### Graduation Requirements

Each student must complete a minimum of 120 hours of credit with at least a 2.0 cumulative average. Courses must include the credits required in the University's general education requirements (CORE) and the specific major and supporting course and grade requirements of the programs in the academic departments offering bachelor's degrees.

All students are urged to speak with an academic advisor in the College Advising Office at least two semesters before graduation to review their academic progress and discuss final graduation requirements.

### Honors

Undergraduate honors are offered to graduating students in the Afro-American Studies Program, the departments of Anthropology, Criminology and Criminal Justice, Economics, Geography, Government and Politics, Psychology, and Sociology.

**Dean's Scholars.** To be named a Dean's Scholar is the highest academic award that a BSOS student can earn in the College. Dean's Scholars are those graduating seniors who have completed 90 credits at UMCP and have maintained a minimum cumulative grade point average of 3.8.

**Dean's List.** Any student who has passed at least 12 hours of academic work in the preceding semester, without failure of any course and with an overall average grade of at least 3.5 will be placed on the Dean's List of Distinguished Students.

### Student Organizations and Honor Societies

Students who excel in their academic discipline may be selected for membership in an honorary society. Honoraries for which students in BSOS are chosen include:

Alpha Kappa Delta—Sociology  
Alpha Phi Sigma—Criminal Justice  
Lambda Epsilon Gamma—Law  
Omega Delta Epsilon—Economics  
Pi Sigma Alpha—Political Sciences  
Psi Chi—Psychology

Students who major in the Behavioral and Social Sciences have a wide range of interests. The following is a list of student organizations in the disciplines and fields of the Behavioral and Social Sciences:

Anthropology Student Organization  
Conservation Club  
Criminal Justice Student Association  
Economics Club  
Gamma Theta Upsilon (Geography)  
Government and Politics Club  
Minority Pre-Professional Psychology Society  
National Student Speech-Language and Hearing Association  
(NSSLHA), Maryland Chapter  
Pre-Medical Society (Pre-Med/Psychology Majors)  
Thurgood Marshall Pre-Law Society

For more information about these student organizations or starting a new student group, please contact the Office of Campus Activities, 1191 Adele H. Stamp Student Union, 314-7174.

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### Field Experiences/Pre-Professional and Professional Training

Pre-professional training and professional opportunities in the behavioral and social sciences are available in many fields. The internship programs offered by many departments in the College provide students with practical experience working in governmental agencies, nonprofit organizations, corporations, and the specialized research centers and laboratories of the College.

### Undergraduate Research Opportunities

Undergraduate research internships allow qualified undergraduate students to work with research laboratory directors and faculty in departments and specialized research centers, thus giving the student a chance for a unique experience in the design and conduct of research and scholarship. Students are advised to consult with their department advisors on research opportunities available in the major.

### Special Resources and Opportunities

#### Advising Office for Students of Color, Athletes and International Students

2110 Tydings Hall, 405-1708

This Advising Office provides academic and other support services designed specifically to meet the needs of students of color, athletes, and international students in the College. This office provides advising on academic and other concerns related to students' progress at the University; provides referrals, when appropriate, to other campus offices; and sponsors workshops and related activities on issues of particular relevance to these students. Advisors are available on a walk-in basis and by appointment.

#### The Center for Political Participation and Leadership

1126 Taliaferro Hall, 405-7751

Director: Georgia Sorenson

The Center was established in November 1989 to foster and encourage young people to prepare for elective office and community and public service. Special attention is paid to students from groups historically underrepresented in the political spectrum. Closely affiliated with the academic departments in the College, the Center has established internships and Fellowships with Maryland senators and delegates, the Women Legislators of Maryland, the Offices of the Governor and Lt. Governor and Cabinet members. The Center has placements on Capitol Hill and in offices of county and local elected officials around the state. Research Fellowships for the study of global politics have been funded in the past.

#### The BSOS Computer Laboratory

0221 LeFrak Hall, 405-1670

Acting Director: Charles Wellford

The College believes strongly that the study of behavioral and social sciences should incorporate both quantitative analysis and computational skills. Consequently, curricula in most departments require some coursework in statistics, quantitative research methods, and the use of computers. The BSOS Computer Laboratory provides undergraduate students in the College with the facilities and staff assistance to satisfy a wide range of computer-related needs. The Laboratory operates eight computer classroom facilities and a special purpose graphics lab which are available for both in and out-of-class student use.

### Research and Service Units

The College of Behavioral and Social Sciences sponsors several special purpose, college-wide research centers. These centers include **The Center for International Development and Conflict Management** and the **Center for Substance Abuse Research**. These interdisciplinary centers often offer internships and a selected number of undergraduate research assistant opportunities for interested students. These research experiences offer excellent preparation for future graduate study and/or job opportunities in the private and public sectors.

### The Center for International Development and Conflict Management

0145 Tydings Hall, 314-7703

Acting Director: Edy Kaufman

The Center for International Development and Conflict Management is a research center focusing on the management and resolution of protracted conflict in the world today. Established in 1981, the Center has a staff composed of University faculty, visiting fellows and associates involved in study of contemporary international and intercommunal conflicts, including their causes, dynamics, management strategies and peaceful resolution.

### Center for Substance Abuse Research (CESAR)

Director: Eric D. Wish, 403-8329

Established in 1990, CESAR is a research unit co-sponsored by the College of Behavioral and Social Sciences and the College of Health and Human Performance. CESAR staff gather, analyze, and disseminate timely information on issues of substance abuse, and monitor alcohol- and drug-use indicators throughout Maryland. CESAR aids state and local governments in responding to the problem of substance abuse by providing the above stated information, as well as technical assistance and research. Faculty members from across campus are involved with CESAR-based research, creating a center in which substance abuse issues are analyzed from multidisciplinary perspectives. Students obtain advanced technical training and hands-on experience through their involvement in original surveys and research.

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## COLLEGE OF BUSINESS AND MANAGEMENT (BMGT)

Office of Undergraduate Studies: 1308 Van Munching Hall, 405-2286

Professor and Dean: William E. Mayer

Professor and Associate Dean: Olian

Associate Dean and Director of EDP: Stocker

Professor and Director of Doctoral Program: Madan

Director of the Masters' Programs: Wellman

Assistant Dean for Undergraduate Studies: Appointment Pending

Director of Undergraduate Student Services: King

Advisors/Consultants: Horick, Mirhadi, Pollard

The College of Business and Management recognizes the importance of education in business and management to economic, social, and professional development through profit and nonprofit organizations at the local, regional, and national levels. The faculty are scholars, teachers, and professional leaders with a commitment to superior education in business and management, specializing in accounting, finance, decision and information sciences, management science and statistics, management and organization, marketing, logistics and transportation, and business and public policy. The College of Business and Management is accredited by the American Assembly of Collegiate Schools of Business, the official national accrediting organization for business schools.

### Degrees

The University confers the following degrees: Bachelor of Science (B.S.), Master of Business Administration (M.B.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.). Information concerning admission to the M.B.A. or M.S. program is available from the College's Director of the Masters' Programs.

### Undergraduate Program

The undergraduate program recognizes the need for professional education in business and management based on a foundation in the liberal arts. Modern society comprises intricate business, economic, social, and government institutions requiring a large number of men and women trained to be effective and responsible managers.

A student in business and management selects a major in one of several curricula: (1) Accounting; (2) Decision and Information Sciences; (3) Finance; (4) General Business and Management (including an International Business option); (5) Management Science and Statistics; (6) Marketing; (7) Human Resource Management; (8) Production Management; or (9) Logistics and Transportation.



Students interested in institutional management, insurance, or real estate may plan with their advisors to select elective courses to meet their specialized needs; however, this interest is in addition to completion of one of the above majors. (See specific suggestions at the end of curricula section to follow.)

## Honors Program

The College of Business and Management Honors Program has two components: class study and individual study. Together, these provide for in-depth inquiry and research into the field of business. Admission is administered through the College of Business and Management Honors Admission Committee. Interested students should contact an advisor in the Office of Undergraduate Studies.

## Advising

General advising in the College of Business and Management is available Monday through Friday in the Office of Undergraduate Studies, 1308 Van Munching Hall, 405-2286. It is recommended that students visit this office each semester to ensure that they are informed about current requirements and procedures.

Transfer students entering the University can be advised during spring, summer, and fall transfer orientation programs. Contact the Orientation Office for further information, 314-8217.

## Admission to Business and Management

See the Admissions section in this catalog for general LEP admissions policies.

**Freshman Admission and the 45 Credit Review.** Most first-time entering freshmen will gain admission to the College of Business and Management directly from high school, as allowed by space considerations within the College. Because space may be limited before all interested freshmen are admitted to the program, early application is encouraged. Freshmen admitted to the program will have access to the necessary advising through their initial semesters to help them determine if Business is an appropriate area for their interests and abilities.

Freshmen who are admitted directly to Business will be subject to a performance review by the time they have completed 45 credits. To meet the provisions of the review, these students must complete: (1) English Fundamental Studies; (2) 60% of lower-level CORE requirements; (3) BMGT 220, BMGT 230 or 231, and ECON 201 or ECON 203 with a combined GPA of 2.5 in the three courses; and (4) a minimum cumulative GPA of 2.0. Students who do not meet these requirements will not be allowed to continue in the LEP and will be required to select another major.

**Transfer Admission.** The following requirements affect new transfer students to the University:

Transfer students, as well as on-campus students hoping to change majors into the College, will be required to meet the following set of gateway requirements: completion of BMGT 220, BMGT 230 or 231, and ECON 201 or 203 with a minimum grade of C in each and a combined average of 2.5 for the three courses. Students who have not completed the gateway may transfer into the College of Business and Management for one or more semesters pending satisfactory completion of the gateway requirements. Students who do not complete the gateway requirements will be required to select another major.

**Appeals.** Students who are unsuccessful in gaining admission to Business at the freshman or transfer level, and believe they have extenuating or special circumstances which should be considered, may appeal in writing to the Assistant Dean for Undergraduate Studies in the College of Business and Management. The student will be notified in writing of the appeal decision once it is made.

Students admitted to Business as freshmen who do not pass the 45-credit review but believe they have special circumstances which should be considered may also appeal directly to the College.

For further information, contact the Office of Undergraduate Studies for the College of Business and Management at 405-2286.

## Statement of Policy on Transfer of Credit from Community Colleges

It is the practice of the College of Business and Management to consider for transfer from a regionally accredited community college only the following courses in business administration: an introductory business course, business statistics, elementary accounting or business law. Thus, it is anticipated that students transferring from another regionally accredited institution will have devoted the major share of their academic effort below the junior year to the completion of basic requirements in the liberal arts. A total of 60 semester hours from a community college may be applied toward a degree from the College of Business and Management.

## Other Institutions

The College of Business and Management normally accepts transfer credits from regionally accredited four-year institutions. Junior- and senior-level business courses are accepted from colleges accredited by the American Assembly of Collegiate Schools of Business (AACSB). Junior- and senior-level business courses from other than AACSB accredited schools are evaluated on a course-by-course basis to determine transferability.

## Summary of Bachelor of Science Degree Requirements (all curricula)

At least 45 hours of the 120 semester hours of academic work required for graduation must be in business and management subjects. A minimum of 57 hours of the required 120 hours must be in 300- or 400-level courses. In addition to the requirement of an overall cumulative grade point average of 2.0 (C average) in all College Park course work. Effective Fall 1989, all business majors must earn a C or better in all required courses, including Economics, Mathematics, and Speech. Electives outside the curricula of the College may be taken in any department of the University, if the student has the necessary prerequisites.

Junior-Senior College Requirements	Credit Hours
BMGT 301—Intro. to Data Processing.....	3
BMGT 340—Business Finance (Prerequisite BMGT 221 and 230) .....	3
BMGT 350—Marketing Principles and Organization (Prerequisite ECON 203) .....	3
BMGT 364—Management and Organizational Theory .....	3
BMGT 380—Business Law .....	3
BMGT 495 or 495A, Business Policies (open ONLY to seniors) .....	3
Economics (see below) .....	6
Total.....	24

## Economics Requirements

**Finance Curriculum:** ECON 430 or ECON 431, **and** one course from ECON 305, 306, 402, 440 or 450.

**General Business and Management Curriculum:** One course from ECON 305, 306, 430, or 440, **and** one course from an approved list of ECON, GEOG, PSYC, or SOCY courses. The approved list is available in 1308 Van Munching Hall. For the International Business option, ECON 440 and one of the following: ECON 305, 306, 311, 315, 316, 317, 361, 370, 374, 375, 380; or any 400-level ECON except 422, 423, or 425.

**All other curricula:** One course from ECON 305, 306, 430 or 440, **and** one of the following courses: ECON 305, 306, 311, 315, 316, 317, 361, 370, 374, 375, 380 or any 400-level ECON course **except** 422, 423, or 425.

## A Typical Program for the Freshman and Sophomore Years

Freshman Year	Credit Hours
CORE and/or electives.....	9 (8)
English 101 or equivalent.....	3
MATH 002*, 115, or 220 (or 140**). .....	3 (4)
First semester total .....	15
CORE and/or electives.....	9 (8)
SPCH 100 or 107 .....	3
MATH 115, (141**), 220 or elective .....	3 (4)
Second semester total.....	15

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### Sophomore Year

CORE and/or electives .....	6
BMGT 220 (Prereq. Sophomore Standing) .....	3
ECON 201 (Prereq. Sophomore Standing) .....	3
MATH 220 or BMGT 230 (231**) or elective .....	3
Third semester total .....	15

CORE and/or electives .....	6
ECON 203 (Prereq. ECON 201) .....	3
BMGT 221 (Prereq. BMGT 220) .....	3
BMGT 230 (Prereq. MATH 220) or 231** (Prereq. MATH 141) or elective .....	3
Fourth semester total .....	15

\*MATH 002 is a non-credit course which prepares a student for either 115 or 220 depending on the grade earned in 002.

\*\*Required for Decision and Information Sciences, Management Science, and Statistics curricula.

## Curricula

### Accounting

Chair: S. Loeb

Professors: Bedingfield, Gordon, M. Loeb, S. Loeb

Assistant Professors: LeClere, Thompson, Wong

Accounting, in a limited sense, is the analysis, classification, and recording of financial events and the reporting of the results of such events for an organization. In a broader sense, accounting consists of all financial systems for planning, controlling and appraising performance of an organization. Accounting includes among its many facets: financial planning, budgeting, accounting systems, financial management controls, financial analysis of performance, financial reporting, internal and external auditing, and taxation.

The accounting curriculum provides an educational foundation for careers in accounting and other management areas whether in private business organizations, government and nonprofit agencies, or public accounting firms.

Course requirements for the junior-senior curriculum concentration in accounting are as follows:

	Credit Hours
BMGT 310, 311—Intermediate Accounting I and II .....	6
BMGT 321—Cost Accounting .....	3
BMGT 323—Income Tax Accounting .....	3
Three of the following courses: .....	9
BMGT 326—Accounting Systems	
BMGT 410—Fund Accounting	
BMGT 411—Ethics and Professionalism in Accounting	
BMGT 417—Advanced Tax Accounting	
BMGT 420, 421—Undergraduate Accounting Seminar	
BMGT 422—Auditing Theory and Practice	
BMGT 424—Advanced Accounting	
BMGT 426—Advanced Cost Accounting	
BMGT 427—Advanced Auditing Theory and Practice	
Total .....	21

The educational requirements of the Maryland State Board of Accountancy for certification are a baccalaureate or higher degree with a major in Accounting or with a non-accounting degree supplemented by coursework the Board determines to be substantially the equivalent of an Accounting major. Students planning to take the CPA examination for certification and licensing outside Maryland should determine the educational requirements for that state and arrange their program accordingly.

**Note: Effective 1999, all graduates who desire to take the CPA examination will be required to have completed 150 semester hours of college work as well as all other course requirements.**

### Decision and Information Sciences

Chair: Alavi

Professors: Alavi†, Yao

Associate Professor: Raschid

Assistant Professor: Wheeler

†Distinguished Scholar-Teacher

Computer-based information systems are an integral part of nearly all businesses, large and small. Decision and Information Sciences provides the data processing skills, the managerial and organizational skills, and the analytical skills required to design and manage business information processing systems. This program gives the student a firm basis in the business functional areas: Marketing, Finance, Production, and Accounting. In addition, it provides an in-depth knowledge of information processing technology, information processing implementation techniques, and Management Science and Statistics. There are many diverse employment opportunities available to graduates of this program. The typical job areas include application programmer/analyst, systems analyst, and computer system marketing analyst. Such positions are available in both large and small corporations, management consulting firms, and government agencies.

Students planning a major in this field must complete MATH 140 and MATH 141 and BMGT 231 prior to junior standing. Students considering graduate work in this field should complete MATH 240 or 400 as early as possible in their careers.

Course requirements for the junior-senior curriculum concentration in the Decision and Information Sciences are as follows:

	Credit Hours
BMGT 302—Information Systems Implementation Techniques .....	3
Three of the following four courses: .....	9
BMGT 402—Database and Data Communication Systems .....	3
BMGT 403—Systems Analysis .....	3
BMGT 404—Seminar in Decision Support Systems .....	3
BMGT 405—Business Telecommunications .....	3
BMGT 407—Information Systems Projects .....	3
BMGT 430—Linear Statistical Models in Business .....	3
BMGT 434—Introduction to Optimization Theory .....	3
BMGT 435—Introduction to Applied Probability Models .....	3
Total .....	24

### Finance

Chair: Kolodny

Professors: Chang, Chen, Haslem, Kolodny, Senbet

Associate Professors: Madan, Maksimovic

Assistant Professors: Hanley, Pichler, Unal

The Finance curriculum is designed to familiarize the student with the institutions, theory, and practice involved in the allocation of financial resources within the private sector. It is also designed to incorporate foundation study in such related disciplines as economics and the quantitative areas.

The Finance curriculum provides an educational foundation for careers involving financial analysis and management, investment analysis and portfolio management, investment banking, insurance and risk management, banking, and international finance; it also provides a foundation for graduate study in business administration, quantitative areas, economics, and law.

Course requirements for the junior-senior curriculum concentration in Finance are as follows:

	Credit Hours
Both of the following courses: .....	6
BMGT 343—Investments	
BMGT 440—Financial Management	
Three of the following courses: .....	9
BMGT 443—Security Analysis and Valuation	
BMGT 444—Futures Contracts and Options	
BMGT 445—Commercial Bank Management	
BMGT 446—International Finance	
BMGT 498—Special Topics in Business and Management (Finance)	
One of the following courses: .....	3
BMGT 310—Intermediate Accounting	
BMGT 332—Operations Research for Management Decisions	
BMGT 430—Linear Statistical Models in Business	
BMGT 434—Introduction to Optimization Theory	
Total .....	18

**NOTE: Students may take alternative courses in Section 2 and 3 subject to availability and approval of the chairperson.**

## Management and Organization

Chair: Locket

Professors: Boltolt, Carroll†, Gannon, Gupta, Levine, Locke, Olian, Sims, Smith, Taylor

Assistant Professors: Stevens, Wally

†Distinguished Scholar-Teacher

Human Resource Management is the direction of human effort. It is concerned with securing, maintaining and utilizing an effective work force. People professionally trained in Human Resource Management find career opportunities in business, government, educational institutions, and charitable and other organizations. Course requirements for the junior-senior curriculum in Human Resource Management are as follows:

	Credit Hours
BMGT 360—Human Resource Management .....	3
BMGT 362—Labor Relations .....	3
BMGT 460—Human Resource Management-Analysis and Problems .....	3
BMGT 462—Labor Legislation .....	3
BMGT 464—Organizational Behavior .....	3
One of the following courses (check prerequisites): .....	3
BMGT 385—Production Management	
BMGT 467—Undergraduate Seminar in Human Resource Management	
GVPT 411—Public Personnel Administration	
JOUR 330—Public Relations	
PSYC 361—Survey of Industrial and Organizational Psychology	
PSYC 451—Principles of Psychological Testing	
PSYC 452—Psychology of Individual Differences	
SOCY 447—Small Group Analysis	
SOCY 462—Industrial Sociology	
Total .....	18

## Management Science and Statistics

Chair: Golden

Professors: Assad, Ball, Bodin, Gass, Golden, Kotz†, Lamone

Associate Professors: Alt, Fromovitz, Widhelm

Assistant Professors: Fu, Kaku, Runger

†Distinguished Scholar-Teacher

Management Science and Statistics is the application of scientific methods to decision problems to provide solutions that best serve the goals and objectives of the organization as a whole. Practitioners in this field are employed in industry, business, and federal, state, and local governments. Students planning to major in this field must complete MATH 140 and 141 prior to junior standing. Students considering graduate work in this field should complete MATH 240 and 241 as early as possible in their careers.

Course requirements for the junior-senior curriculum concentration in the Management Science and Statistics are as follows (three credits per course for a total of 18 credits):

BMGT 430—Linear Statistical Models in Business	
BMGT 431—Design of Statistical Models in Business	
BMGT 434—Introduction to Optimization Theory	
BMGT 435—Introduction to Applied Probability Models	
Two of the following courses (check prerequisites)	
BMGT 385—Production Management	
BMGT 402—Database Systems	
BMGT 433—Statistical Decision Theory in Business	
BMGT 485—Advanced Production Management	
BMGT 486—Total Quality Management	

## Production Management

This curriculum is designed to acquaint the student with the problems of organization and control in the field of Production Management. Theory and practice with reference to organization, policies, methods, processes, and techniques are surveyed, analyzed, and evaluated.

## Marketing

Chair: Durand

Professors: Durand, Greer, Jolson (Emeritus)

Associate Professors: Biehal, Krapfel, Nickels, Wagner

Assistant Professors: Ali, Lefkoff-Hagius, Sengupta, Seshadri, Shankar, Sheinin

Marketing, the study of exchange activities, involves the functions performed in getting goods and services from producers to users. Career

opportunities exist in manufacturing, wholesaling, retailing, service organizations, government, and non-profit organizations, and include sales administration, marketing research, advertising, merchandising, physical distribution, and product management. Students preparing for work in marketing research are advised to elect additional courses in Management Science and Statistics.

Course requirements for the junior-senior curriculum concentration in Marketing are as follows:

	Credit Hours
BMGT 451—Consumer Analysis .....	3
BMGT 452—Marketing Research Methods .....	3
BMGT 457—Marketing Policies and Strategies .....	3
Three of the following courses (check prerequisites): .....	9
BMGT 353—Retail Management	
BMGT 354—Promotion Management	
BMGT 372—Traffic and Physical Distribution Management OR	
BMGT 430—Linear Statistical Models in Business OR	
BMGT 431—Design of Statistical Experiments in Business	
(only one of BMGT 372, 430, and 431 may be taken)	
BMGT 453—Industrial Marketing	
BMGT 454—International Marketing	
BMGT 455—Sales Management	
BMGT 456—Advertising	
Total .....	18

## Transportation, Business, and Public Policy

Chair: Grimm

Professors: Corsi, Grimm, Leete, Preston†, Simon, Taff (Emeritus)

Associate Professor: Windle

Assistant Professors: Dresner, Evers, Mattingly, Ostas, Scott

† Distinguished Scholar-Teacher

## Logistics and Transportation

This curriculum involves the movement of persons and goods in the satisfaction of human needs. The curriculum in Logistics and Transportation includes an analysis of the services and management problems, such as pricing, financing, and organization, of the five modes of transport—air, motor, pipelines, railroads and water—and covers the scope and regulation of transportation in our economy. The effective management of transportation involves a study of the components of physical distribution and the interaction of procurement, the level and control of inventories, warehousing, material handling, transportation, and data processing. The curriculum in Transportation is designed to prepare students to assume responsible positions with carriers, governmental agencies, and in traffic and physical distribution management in industry.

Course requirements for the junior-senior curriculum concentration in Transportation are as follows:

	Credit Hours
BMGT 370—Principles of Transportation .....	3
BMGT 372—Traffic and Physical Distribution Management .....	3
BMGT 470—Advanced Transportation Management .....	3
BMGT 476—Applied Computer Models in Transportation and Logistics .....	3
One of the following courses: .....	3
BMGT 473—Advanced Transportation Problems	
BMGT 475—Advanced Logistics Strategy	
One of the following courses: .....	3
BMGT 332—Operations Research for Management Decisions	
BMGT 454—International Marketing	
BMGT 473 or 475 (depending on choice above)	
BMGT 474—Urban Transportation Systems	
BMGT 477—International Transportation and Logistics	
BMGT 481—Public Utilities	
BMGT 482—Business and Government	
Total .....	18

## General Business and Management

The General Curriculum is designed for those who desire a broader course of study in business and management than offered in the other College curricula. The General Curriculum is appropriate, for example, for those who plan to enter small-business management or entrepreneurship where general knowledge of the various fields of study may be preferred to a more specialized curriculum concentration.

## 58 College of Business and Management

Course requirements for the junior-senior curriculum concentration in General Business and Management are as follows:

	Credit Hours
<b>Accounting/Finance</b>	
One of the following courses: .....	3
BMGT 321—Cost Accounting	
BMGT 440—Financial Management	
<b>Management Science/Statistics</b>	
One of the following courses: .....	3
BMGT 332—Operations Research for Management Decisions	
BMGT 385—Production Management	
BMGT 431—Design of Statistical Experiments in Business	
BMGT 433—Statistical Decision Theory in Business	
<b>Marketing</b>	
One of the following courses: .....	3
BMGT 353—Retail Management	
OR a higher number marketing course (check prerequisites)	
<b>Personnel/Labor Relations</b>	
One of the following courses: .....	3
BMGT 360—Human Resource Management	
BMGT 362—Labor Relations	
<b>Public Policy</b>	
One of the following courses: .....	3
BMGT 481—Public Utilities	
BMGT 482—Business and Government	
<b>Transportation/Physical Distribution</b>	
One of the following courses: .....	3
BMGT 370—Principles of Transportation	
BMGT 372—Traffic and Physical Distribution Management	
Total.....	18

### International Business

International Business is an option in the General Business major and responds to the global interest in international economic systems and their multicultural characteristics. This degree option combines the college-required courses with five International Business courses and a selection of language, culture, and area studies courses from the College of Arts and Humanities and the College of Behavioral and Social Sciences.

Course requirements for the junior-senior curriculum concentration in General Business and Management, International Business option, are:

	Credit Hours
BMGT 372—Traffic and Physical Distribution Management .....	3
BMGT 392—Introduction to International Business .....	3
BMGT 454—International Marketing .....	3
BMGT 477—International Transportation and Logistics .....	3
BMGT 446—International Finance .....	3
Any 400-level BMGT course or an agreed upon foreign language course ...	3

Students are strongly encouraged to complete the language option to increase the applicability of the International Business option.

### Business and Law, Combined Program

In this program, a student completes three years in a chosen major in the business school and, on gaining admission to the University of Maryland School of Law, may use the first year of law school to complete the B.S. requirements provided he/she earns an average grade of C or better. Satisfactory completion of an additional two years in law school will earn the law degree. A student who fails to gain admission to law school, which is highly competitive and contingent on meeting the applicable standards of the school, will be permitted to complete the final year for the B.S. degree at College Park. Interested students are responsible for securing from the law school its current admission requirements. The student must complete all the courses required of students in the College, except BMGT 380 and BMGT 495. This means the student must complete all the pre-business courses; both upper-level ECON courses; BMGT 301, 340, 350, and 364; all lower-level CORE requirements; the 15 to 21 hours in the student's specific business major; and enough additional electives to equal a minimum of 90 semester hours, 30 of which must be numbered 300 or above. No business law course can be included in the 90 hours. The last 30 hours of college work before entering law school must be completed in residence at College Park.

### Insurance and Real Estate

Students interested in insurance or real estate may wish to concentrate in Finance or General Business and Management and plan with their advisors a group of electives to meet their specialized needs. College courses that are occasionally offered in insurance:

BMGT 345—Property and Liability Insurance  
 BMGT 346—Risk Management  
 BMGT 347—Life Insurance

College courses that are occasionally offered in real estate:  
 BMGT 393—Real Estate Principles  
 BMGT 490—Urban Land Management

### Institutional Management

Students interested in hotel-motel management or hospital administration must fulfill one of the 10 majors, such as General Business and Management, Finance, or Human Resource Management, and then plan with their advisors a group of electives, such as the following:

BMGT 440—Financial Management  
 BMGT 482—Business and Government  
 FSAD 300—Food Service Organization and Management

### Honors

#### Honor Societies

**Beta Alpha Psi.** National scholastic and professional honorary fraternity in accounting. Members are elected on the basis of excellence in scholarship and professional service from junior and senior students majoring in accounting in the College of Business and Management.

**Beta Gamma Sigma.** National scholastic honorary society in business administration. To be eligible students must rank in the upper 5% of their junior class or the upper 10% of their senior class in the College of Business and Management. Students are eligible the semester after they have earned 45 credits at the University of Maryland at College Park, and have earned a total of 75 credits.

**Financial Management Association Honorary Society.** National scholastic honorary society sponsored by the Financial Management Association. To be eligible students must be finance majors with a cumulative grade point average of 3.5 for a minimum of 90 credits.

**Omega Rho.** National scholastic honorary society in operations research, management and related areas. Members are elected on the basis of excellence in scholarship from junior and senior students majoring in appropriate quantitative areas.

**Pi Sigma Phi.** National scholastic honorary society sponsored by the Propeller Club of the United States. Membership is elected from outstanding senior members of the University of Maryland chapter of the Propeller Club majoring in transportation in the College of Business and Management.

#### Student Awards

For high academic achievement, students in the College may receive recognition by the Dean's List; Delta Sigma Pi Scholarship Key; Distinguished Accounting Student Awards; and Wall Street Journal Student Achievement Award.

#### Scholarships

The College offers several scholarships, including the AIACC. J. "Bud" Ecalono Memorial Scholarship #16; Alcoa Foundation Traffic Scholarship; Delta Nu Alpha Chesapeake Chapter No. 23 Scholarship; Delta Nu Alpha Washington, D.C., Chapter No. 84 Scholarship; Geico Achievement Award; William F. Holin Scholarship; National Defense Transportation Association Scholarship, Washington, D.C., Chapter; Propeller Club Scholarship; Warren Reed Scholarship (Accounting); Jack B. Sacks Foundation Scholarship (Marketing); and Charles A. Taff Scholarship (Transportation).

## Student Professional Organizations

Students may choose to associate themselves with one or more of the following professional organizations: American Marketing Association; Society of Human Resource Management (Human Resource Management); Association of College Entrepreneurs (all business majors); Black Business Society; Dean's Undergraduate Advisory Council; Delta Nu Alpha (Transportation); Delta Sigma Pi (all business majors); Finance, Banking and Investments Society (finance); National Association of Accountants; Phi Chi Theta (all business majors); Transportation and Logistics Club (NDTA and Propeller Club).

Course Code: BMGT

## COLLEGE OF COMPUTER, MATHEMATICAL AND PHYSICAL SCIENCES (CMPS)

3400 A.V. Williams, 405-2677

Professor and Dean: Richard H. Herman  
Associate Dean: Williams  
Assistant to Dean: Bryant

The search for new knowledge is one of the most challenging activities of humankind. Universities are the key institutions in society where fundamental research is emphasized. The College of Computer, Mathematical and Physical Sciences at College Park contributes very substantially and effectively to the research activities of the University of Maryland. This College is like a technical institute within a large university. Students majoring in any one of the disciplines encompassed by the College have the opportunity of obtaining an outstanding education in their field.

The College serves both students who continue as professionals in their area of specialization, either immediately upon graduation or after postgraduate studies, and those who use their college education as preparation for careers or studies in other areas. The focused specialist as well as the broad "Renaissance person" can be accommodated. Many research programs include undergraduates either as paid student helpers or in forms of research participation. Students in departmental honors programs particularly are given the opportunity to become involved in research. Other students too may undertake research under the guidance of a faculty member.

A major portion of the teaching program of the College is devoted to serving students majoring in disciplines outside of the College. Some of this teaching effort is directed toward providing the skills needed in support of such majors or programs. Other courses are designed as enrichment for non-science students, giving them the opportunity to explore the reality of science without the technicalities required of the major.

The College is strongly committed to making studies in the sciences available to all regardless of their background. In particular, the College is actively pursuing an affirmative action program to rectify the present underrepresentation of women and minorities in these fields. There are in fact many career opportunities for women and members of minorities in the fields represented by the College.

## Structure of the College

The following departments, programs and research units comprise the College:

- Department of Astronomy
- Department of Computer Science
- Department of Geology
- Department of Mathematics
- Department of Meteorology
- Department of Physics
- Applied Mathematics Program\*
- Chemical Physics Program
- Physical Sciences Program
- Center for Automation Research
- Institute for Advanced Computer Studies
- Institute for Physical Sciences and Technology
- Institute for Plasma Research (joint with College of Engineering)

\*See the separate listing for the Applied Mathematics Program in Chapter 7.

## Degree Programs

The following Bachelor of Science degree programs are offered to undergraduates by the departments and programs of the College: Astronomy, Computer Science, Geology, Mathematics, Physics, and Physical Sciences.

## Advising

The CMPS Undergraduate Office, 3400 A.V. Williams Building, 405-2677, centrally coordinates advising and the processing and updating of student records. Inquiries concerning University regulations, transfer credits, and other general information should be addressed to this office. Specific departmental information is best obtained directly from the departments.

## Graduation Requirements

1. A minimum of 120 semester hours with at least a C average is required of all Bachelor of Science degrees from the College.
2. Forty-three credit hours which satisfy the general education CORE program requirements of the University. In some instances, courses taken to satisfy these requirements may also be used to satisfy major requirements.
3. Major and supporting coursework as specified under each department or program.
4. The final 30 semester hours must be completed at College Park. Occasionally, this requirement may be waived by the dean for up to 6 of these 30 credits to be taken at another institution. Such a waiver is granted only if the student already has 30 credits in residence.
5. Students must be enrolled in the program in which they plan to graduate by the time they register for the last 15 hours.

## Financial Assistance

**The Jeffrey and Lily Chen Scholarship Award:** Scholarship and fellowship support will be available for eligible undergraduates and graduate students enrolled in the field of earth or space sciences or physics on the basis of academic standing and other areas related to academic excellence. Preference will be given to those candidates who are children of employees of the General Sciences Corporation; children of employees of the NASA Goddard Space Flight Center; children of employees of the National Weather Service of the National Oceanic and Atmospheric Association (NOAA); or graduate students from Taiwan, Republic of China. Recipients may retain the award for four years, or through the completion of his/her degree, whichever comes first.

Interested undergraduates should direct inquiries about the scholarship award or its requirements to Dr. Thelma Williams, Associate Dean for Undergraduate Studies, 3400 A.V. Williams, 405-2326.

## Research and Service Units

### Institute for Physical Science and Technology

4203 Computer and Space Sciences Building, 405-4875  
Professor and Director: James A. Yorke

The faculty members of the Institute for Physical Science and Technology are engaged in the study of pure and applied science problems that are at the boundaries between those areas served by the academic departments. These interdisciplinary problems afford challenging opportunities for thesis research and classroom instruction. Courses and thesis research guidance by Institute faculty are provided either through the graduate program in chemical physics, the applied mathematics program, or under the auspices of other departments.

## COLLEGE OF EDUCATION (EDUC)

Benjamin Building  
Office of Student Services: 405-2344

Professor and Dean: Willis D. Hawley

The College of Education is a professional college committed to advancing the science and art of teaching/learning, including the practices and processes which occur from infancy through adulthood in both school and non-school settings. The College's mission is to provide preparation for current and future teachers, counselors, administrators, educational

## 60 Education, College of

specialists, and other related educational personnel, and to create and disseminate the knowledge needed by professionals and policy makers in education and related fields.

The College is organized into six departments, two of which offer undergraduate majors in Teacher Education: the Department of Curriculum and Instruction, which offers early childhood, elementary, and secondary education programs; and the Department of Special Education. Enrollment in the professional teacher education programs in the above-mentioned departments is limited to those who meet the admission requirements specified below.

Only students who have been admitted to the teacher education programs are permitted to enroll in the professional education course sequences. Students with other majors who have an interest in the area of education may wish to enroll in a variety of courses offered by the College that deal with schooling, human development, learning styles and techniques, and interaction processes.

In carrying out its mission, the College is committed to a society which is open to and supportive of the educational aspirations of the widest population of learners and to continuous research and evaluation in relation to teaching and learning in a multicultural, high technology society. At times, students may be invited to participate actively with graduate students and faculty members in research undertakings and evaluation processes. Students also make use of the micro-teaching laboratory, the education technology and computer laboratory, and the curriculum laboratory.

In addition to the CORE or USP program requirements, education majors have the opportunity to complete 45 to 55 credit hours of work in the arts, sciences and/or humanities. In the teacher education courses, students develop professional behaviors through active experiences in the college classroom and participate in exploring, learning and practicing with children and teachers in classrooms in the community. The capstone experience of student teaching brings classroom theory and practice together into a personal set of professionally appropriate skills and processes.

### Admission to Teacher Education Professional Course Work

Applicants to the University of Maryland who have declared an interest in education are admitted to a department in the College as intended majors. All intended majors must apply for admission, and be admitted, in order to enroll in coursework in the professional teacher education degree program.

For admission into a teacher education major, a student must (1) complete the English and math lower-level fundamental studies (six credits); (2) earn 45 semester hours with an overall cumulative grade point average of at least 2.5 on a 4.0 scale (granted by UMCP or some other institution) in all coursework prior to enrollment in EDHD 300 (or EDHD 419 A/B for Early Childhood); (3) submit a personal goal statement that indicates an appropriate commitment to professional education; (4) have prior experiences in the education field; (5) submit three letters of recommendation/reference; and (6) have a satisfactory score on the spelling, language, and mathematics segments of the California Achievement Test Level 20. Admission application forms are available in Room 1210 of the Benjamin Building. Students with documented disabilities may contact Disability Support Services (314-7682; TTY, 314-7683) to make special arrangements for taking the examination. Only those who are admitted are able to enroll in the professional education sequence. An overall grade point average of 2.5 must be maintained after admission to Teacher Education to continue in the professional education programs.

A student who initially fails to meet the admission criteria may apply to the College whenever the criteria for admission are met, with the stipulation, however, that a student may take the CAT test a maximum of three times. A plan for becoming eligible for admission may be developed by the student and the department advisor. A Teacher Education Appeals Board reviews appeals from students who do not meet the admission, advancement or retention criteria. Consult the Student Services Office for policies and procedures regarding appeals.

Criteria for admission to the Teacher Education program apply to any teacher preparation program offered by the University of Maryland. Thus, students desiring a major in health or physical education should apply to the College of Education for admission to the professional program in Teacher Education. Students who are not enrolled in the College of Education but who, through an established cooperative program with another college, are preparing to teach must meet all admission, scholastic

and curricular requirements of the College of Education. The professional education courses are restricted to degree-seeking majors who have met College of Education requirements for admission.

### Student Teaching

Prior to receiving a student teaching placement, prospective student teachers must have been admitted to Teacher Education and have completed requirements described below. In programs requiring more than one student teaching placement, the first placement must be satisfactorily completed before the student begins the succeeding placement. Prior to assignment all students in teacher preparation programs must: (1) have maintained an overall grade point average of at least 2.5 with a minimum grade of C in every course required for the major; (2) have satisfactorily completed all other required course work in their program; (3) apply for student teaching to the Office of Laboratory Experiences one semester in advance; (4) be recommended by their department; (5) have on file favorable ratings from prior supervised experiences in school settings including evaluations of the EDHD 300 (or EDHD 419 A/B for Early Childhood) field experiences; and (6) have undergone a criminal background check. A certificate indicating freedom from tuberculosis and proof of immunization for measles (rubella) is also required. This may be obtained from a private physician, a health department, or the University Health Center.

The student teaching experience is for most students the final experience in a professional program preparing them for the beginning teaching years. This culminating phase of the teacher education program provides the prospective teacher with the opportunity to integrate theory and practice in a comprehensive, reality-based, experience. Student teaching placements, as well as all other field experiences, are arranged by the Office of Laboratory Experiences.

Most student teaching placements and accompanying seminars are arranged in the Teacher Education Centers and other collaborative field sites jointly administered by the College of Education and participating school systems. The student teaching semester is a full-time commitment and interference with this commitment because of employment or course work is not permitted. The Office of Laboratory Experiences makes student teaching assignments with consideration given to location, programmatic priorities, diversity, and availability of sites. Students should be prepared to travel to whichever school has been assigned. Living arrangements, including transportation for the student teaching assignments, are considered the responsibility of the student. Students should contact the Office of Laboratory Experiences if there are any questions regarding this policy.

### Graduation Requirements

The degrees of Bachelor of Arts and Bachelor of Science are conferred by the College of Education. Which degree is conferred depends on the amount of liberal arts study included in a particular degree program. Minimum requirements for graduation are 120 semester hours. Specific departmental program requirements for more than the minimum must be fulfilled.

In addition to the University general education requirements (CORE) and the specific requirements for each curriculum, the College requires that all majors complete EDHD 300 (or EDHD 419 A/B for Early Childhood), EDPA 301, and three semester hours of an approved speech course. A grade of C or better is required in all pre-professional and professional coursework required for the major. An overall grade point average of 2.5 must be maintained after admission to Teacher Education. A grade of S is required in student teaching.

Exceptions to curricular requirements and rules of the College of Education must be recommended by the student's advisor and department chairperson and approved by the dean.

### Accreditation and Certification

All bachelor's-degree teacher preparation programs are accredited by the National Council for Accreditation of Teacher Education and have been approved by the Office of Certification and Accreditation of the Maryland State Department of Education using standards of the National Association of State Directors of Teacher Education and Certification. Accreditation provides for reciprocal certification with other states that recognize national accreditation.

The Maryland State Department of Education issues certificates to teach in the public schools of the state. In addition to graduation from an approved program, the Maryland State Department of Education requires satisfactory scores on the National Teacher Exam (NTE) for certification. At the time of graduation, the College informs the Maryland State Department of Education of the graduate's eligibility for certification.

## Special Resources and Opportunities

The College of Education offers many special resources and facilities to students, faculty, and the community. The Center for Educational Research and Development, Institute for the Study of Exceptional Children and Youth, the Music Educators National Conference Historical Center, the Reading Center and the Center of Rehabilitation and Manpower Services all are part of the College of Education. In addition, intended and admitted education majors are likely to find the following resources particularly useful.

### The Student Services Office

1210 Benjamin Building, 405-2344

The Student Services Office provides academic advising support for education students during admission, orientation, registration, graduation, and certification. At other times, students who have been admitted to the College of Education receive academic advising through their departments.

### The Office of Laboratory Experiences

1207 Benjamin Building, 405-5604

The Office of Laboratory Experiences (OLE) is the liaison unit between the College and the public school systems that serve as laboratories for the preparation of teachers. While the primary role of the OLE is to provide teacher education students with sites for internships, student teaching and pre-student teaching classroom experience, the office also operates in-service programs for teachers and facilitates research and staff development activities in the schools. Placement coordinators are available in the OLE to answer questions, provide orientation programs and arrange all field experience placements.

### University Credentials Service, Career Center

3121 Hornbake Library, 314-7225

All seniors graduating in the College of Education are required to complete a credentials file with the Career Center. Credentials consist of a record of a student's academic preparation and recommendations from academic and professional sources. An initial registration fee is required and enables the Career Center to send a student's credentials to interested educational employers, as indicated by the student. Students who are completing teacher certification requirements, or advanced degrees and are interested in teaching, administrative, or research positions in education may also file credentials. (This service is also available to alumni.)

Other services include job vacancy listings in public and private schools and institutions of higher learning, on-campus interviews with state and out-of-state school systems, and information about and applications for school systems throughout the country.

### Curriculum Laboratory

0220 Benjamin Building, 405-3173

The Curriculum Laboratory provides reference assistance and offers both general and subject-specific classroom orientations. Resources include curriculum guides, reference books, K-12 textbooks, exemplary instructional materials, standardized test specimens, and material placed on faculty reserve.

### Educational Technology Center

0307 Benjamin Building, 405-3611

The Educational Technology Center provides a broad range of media services including: 1) distribution and loan of all types of equipment and materials, including operation of a closed-circuit video system throughout the Benjamin Building; 2) development and production of instructional materials; 3) specialized facilities (computer lab, video classroom, television studio, self-service production area, video viewing stations); 4) instruction in media production and utilization techniques; and 5) consultation on ways to develop and use technology effectively.

### Center for Mathematics Education

2226 Benjamin Building, 405-3115

The Center for Mathematics Education provides a mathematics laboratory for undergraduate and graduate students, and a program of tutoring services for children and adolescents. These services are offered in conjunction with specific graduate and undergraduate courses in elementary and secondary school mathematics. Center faculty are engaged in research in mathematics education, serve as consultants to school systems and instructional publishers, and provide in-service teacher education in addition to graduate degree programs.

### Center for Young Children

Denton Complex, 405-3168

The Center for Young Children is part of the Institute for Child Study in the College of Education. It offers a creative learning experience for children three, four, and five years old whose parents are affiliated with the University. The Center engages in child study, curriculum development, and teacher training. Its research and observation facilities are available to parents, faculty, and other persons concerned with the care and education of young children.

### Science Teaching Center

2226 Benjamin Building, 405-3161

The Science Teaching Center offers undergraduate and graduate programs in Science Education. The Center conducts research in Science Education and provides service activities within the Science Education community.

## Student and Professional Organizations

The College sponsors chapters of Phi Delta Kappa; the Undergraduate Teachers Education Association (UTEA); a student national education association; and Kappa Delta Pi, an honor society in education. The Mary McLeod Bethune Society is a pre-professional organization concerned with minority issues and education. A chapter of the Council for Exceptional Children is open to undergraduate and graduate students in Special Education and the Department of Music sponsors a student chapter of the Music Educators National Conference (MENC).

In several departments there are informal organizations of students. Students should contact the individual departments or, in the case of College-wide groups, the Dean's office, for additional information regarding these organizations.

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## A. JAMES CLARK SCHOOL OF ENGINEERING (ENGR)

1131 Engineering Classroom Building, 405-3855

Professor and Dean: William W. Destler  
Undergraduate Student Affairs: 405-3855  
Cooperative Engineering Education: 405-3863  
Center for Minorities in Science and Engineering: 405-3878

The mission of the Clark School of Engineering is to provide quality engineering education, with sufficient scope to include both fundamental and specialized engineering training, so that graduates are prepared to serve the current and emerging needs of society. Just as the boundary between the functions of engineers and applied scientists or mathematicians is becoming less distinct, the various branches of engineering increasingly interact as technical problems become more sophisticated and require interdisciplinary approaches to their solutions. In addition to its teaching role, the School feels a related responsibility to conduct strong research programs that contribute to the advancement of knowledge.

Engineers also occupy an intermediary position between scientists and the public because, in addition to understanding scientific principles, they are concerned with the timing, economics, and values that define the use and application of those principles. With this in mind the school fosters a close partnership with industry and government, and also reaches out to both the campus community and the community at large with its services.

## 62 A. James Clark School of Engineering

### Direct Admissions Requirements

1. Freshman applicants who have designated a major offered within the School of Engineering will be admitted directly to that major in the School if they have a Math SAT of 550 and either a combined SAT of 1100 or a GPA of 3.0 (out of 4.0)\* in their academic subjects during the 9th, 10th and 11th grades.

\*Minimum GPAs are subject to change each semester.

2. National Merit and National Achievement Finalists and Semifinalists, Maryland Distinguished Scholar Finalists, Chancellor, Presidential, or Banneker-Key Scholars, and students who have successfully completed a "Summer Program which guarantees admission to engineering" are admitted directly to the School.

### Conditional Admissions Requirements

1. Freshman applicants who do not meet the direct admission requirements can be admitted to the School of Engineering as conditional engineering majors. These students will be subject to two reviews. The first review will be conducted after the student has completed MATH 115 and at least 12 credits. A student must complete MATH 115 with a grade of "B" or higher and have a minimum overall GPA of 2.5 for automatic removal of the conditional status at the first review. Students who do not successfully complete the first review will be advised whether they can remain in the School, or to select another course of study.
2. The second review will be conducted for those students who failed the first review but were allowed to continue in the school. This review will be conducted after the student has successfully completed PHYS 161\* and at least 24 credits. In order to successfully complete the second review, the student must have an overall GPA of 2.2 and have completed ENES 100 and PHYS 161\* with a grade of "C" or higher in each. The students who pass the second review will automatically have the conditional status removed. Students who do not successfully complete the second review will receive advice concerning available options which could range from removal of the conditional status to selecting a non-engineering major.

### 45 Credit Review

All students who are admitted to the University as freshmen and become engineering students (direct or conditional) will be subject to a review when they complete 45 credits. The purpose of this review is to determine whether the student should remain in the School, or should be advised to select another, presumably more suitable course of study. In order to successfully complete the review, students must have an overall GPA of 2.0 and have completed MATH 141, PHYS 161\*, and CHEM 113\*\* with a grade of "C" or better.

### Transfer Admission

#### Direct Admissions Requirements

Students who matriculated at any college or university must meet the following competitive requirements:

1. cumulative GPA (to be set each year based on enrollment demands, currently 3.0)
2. completion of CHEM 113 \*\*, MATH 141, and PHYS 161\* with a grade of "C" or higher in each.

#### Special Notes

1. Students with a previous B.A. or B.S. degree will be admitted to the School of Engineering with a minimum GPA of 3.0 and completion of the five prerequisites (MATH 140, MATH 141, CHEM 103, CHEM 113\*\*, and PHYS 161\*) with a grade of "C" or higher in each.
2. UMBC and UMES students will be admitted to the School of Engineering with the official verification of their enrollment in engineering programs at their respective universities.
3. Maryland community colleges and Northern Virginia Community College students who meet the freshman admission requirements but choose to attend a community college have the following options:

- a. Remain at the community college in an articulated engineering program and complete at least 56 credits, after which the student will be admitted to the School on application provided he/she has at least a 2.0 GPA at the community college. The student must supply the high school transcript and SAT scores. In the event that the community college does not offer a 56-credit articulated engineering program, the student may transfer earlier.
- b. Transfer to the School upon completing the five required courses (MATH 140, MATH 141, CHEM 103, CHEM 113\*\*, and PHYS 161\* with a grade of "C" or better) and meeting the competitive GPA for the semester of intended enrollment on the College Park campus.

### Conditional Admissions Requirements

1. Transfer applicants who do not meet the direct admission requirements may be admitted to the School of Engineering as conditional engineering majors. These students will be subject to two reviews. The first review will be conducted after the student has completed at least 12 credits. In order to successfully complete the review and have the conditional status automatically removed, a student must have an overall grade point average of 2.5, grades of "C" or better in all engineering courses completed, and have, when appropriate, completed MATH 141, PHYS 161\*, and CHEM 113\*\* with a grade of "C" or better. Students who do not successfully complete the first review will be advised whether they can remain in the School, or to select another course of study.
2. The second review will be conducted for those students who failed the first review but were allowed to continue in the School. Again, a student must have an overall GPA of 2.2, have completed engineering courses with a grade of "C" or better, and have, when appropriate, completed MATH 141, PHYS 161\*, and CHEM 113\*\* with a grade of "C" or better. Students who do not successfully complete the review will receive advice concerning available options which could range from removal of the conditional status to selecting a non-engineering major.

\* Biological Resources program requires CHEM 103, MATH 141 and PHYS 141 with a grade of "C" or higher in each.

\*\*Biological Resources Engineering students are not required to take CHEM 113.

### Appeal

Students denied direct admission to the School who feel that they have extenuating circumstances may file a written appeal in the Office of Undergraduate Admissions, Mitchell Building. Appeals will be reviewed by the School of Engineering.

### Graduation Requirements

Structure of Engineering Curricula: Courses in the normal curriculum or program and prescribed credit hours leading to the degree of Bachelor of Science (with curriculum designation) are outlined in the sections describing each department in the Clark School of Engineering. No student may modify the prescribed number of hours without special permission from the Dean of the School. The courses in each curriculum may be classified in the following categories:

1. Courses in the CORE Liberal Arts and Science Studies Program.
2. Courses in the physical sciences, mathematics, chemistry, physics.
3. Related technical courses, engineering sciences and other courses approved for one curriculum but offered by another department.
4. Courses in the major department. A student should obtain written approval for any substitution of courses from the department chair and the Dean of the School. The courses in each engineering curriculum, as classified below, form a sequential and developmental pattern in subject matter. In this respect, curricula in engineering may differ from curricula in other colleges. Some regulations which are generally applicable to all students may need clarification for purposes of orderly administration among engineering students (see the Academic Regulations section of this catalog). Moreover, the Clark School of Engineering establishes policies which supplement University regulations.



### School Regulations

1. The responsibility for proper registration and for satisfying stated prerequisites for any course must rest with the student as does the responsibility for proper achievement in courses in which the student is enrolled. Each student should be familiar with the

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At the present time the participating institutions in Maryland and the District of Columbia are American University, Bowie State University, Columbia Union College, Coppin State College, Frostburg State University, Morgan State University, College of Notre Dame of Maryland, St. Mary's College of Maryland, Salisbury State University, Towson State University, Western Maryland College, Trinity College, and Washington College. Also participating in the program are Kentucky State University, King College in Tennessee, Shippensburg State University in Pennsylvania, and Xavier University in Louisiana.

### **Dual Degree Program in Engineering and German**

The Clark School of Engineering and the Department of German and Slavic Languages have established a dual degree program in Engineering and German in which students can simultaneously earn two baccalaureates in both disciplines. The program provides eight weeks in Germany studying intensive technical German at the Carl Duisberg Sprachcolleg and a four-to-six-month paid internship in German industry.

For further information about this program, students should contact the Engineering Student Affairs Office, 405-3855, or the Department of German and Slavic Languages and Literature, 405-4091.

### **The Japan Technological Affairs Program**

The Japan Technological Affairs Program offers students in the Clark School

## **Undergraduate Research Programs**

Undergraduate research programs allow qualified undergraduate students to work with research laboratory directors in departments, thus giving students a chance for a unique experience in research and engineering design. Projects in engineering allow undergraduate students to do independent study under the guidance of faculty members in an area of mutual interest. For more information contact your designated engineering department.

## **Undergraduate Research Participation Award**

### **Institute for Systems Research**

A. V. Williams Building, 405-6613

The Institute for Systems Research (ISR) has available Undergraduate Research Participation Awards (URPA) for full-time engineering students who have a minimum grade point average of 3.0. The total URPA stipend is \$4,000 for a one-year period. Interdisciplinary research is conducted in Chemical Process Control, Systems Integration, Manufacturing Systems, Communication Systems, Signal Processing, and Intelligent Servomechanisms. Applications and supporting documents must reach the ISR by April 1 for the summer/fall semesters and November 1 for the spring semester.

### **Academic Computing**

1131 Engineering Classroom Building, 405-3872

Director: Jayanta (Joy) K. Sircar

Recognizing that state-of-the-art technological developments in computing provide a significant contribution to the advancement of engineering

### Research and Service Units

#### Center on Aging

2367 HLHP Building, 405-2469

Director and Professor: Dr. Laura B. Wilson

Associate Professor: Dr. Mark R. Meiners

The Center on Aging stimulates and supports aging-related activities within existing departments, colleges, and schools throughout all of the various institutions of the University of Maryland. The Center coordinates the Graduate Gerontology Certificate (master's and doctoral levels), the University's first approved graduate certificate program. The Center assists undergraduate and graduate students interested in the field of gerontology and helps them to devise educational programs to meet their goals. It is a research center working in physiology, economics and policy. It also conducts community education programs, assists faculty in pursuing research activities in the field of aging, conducts conferences on adulthood and aging-related topics, and provides on- and off-campus technical assistance to practitioners who serve older adults.

For further information on any of the center's activities call, write or visit the Center on Aging.

Course Code: HLHP

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### COLLEGE OF JOURNALISM (JOUR)

Journalism Building, 405-2399

Professor and Dean: Reese Cleghorn

Assistant Deans: Callahan, Stewart

Professors: Beasley, Blumler, Gomery, Gurevitch, J. Grunig, Hiebert, Holman, Levy, Martin (Emeritus), Roberts, Robertson (Visiting Professor)

Associate Professors: Barkin, Ferguson, Geraci (Emeritus), L. Grunig, Paterson, Stepp, Zanot

Assistant Professors: Keenan, McAdams, Newhagen, Roche

Instructors: Fibich, Harvey, Rhodes

Howard Bray, Director of Knight Center for Specialized Journalism

William J. Eaton, Curator, Humphrey Journalism Fellows

Frank Quine, Director of Advancement

Olive Reid, Director of Undergraduate Programs

Kathy Trost, Casey Journalism Center

Carroll Volchko, Director of Business Administration

Located just nine miles from the nation's capital and 30 miles from the bustling commercial port of Baltimore, the College of Journalism at the University of Maryland is one of only six comprehensive journalism schools in the 10 states stretching from New York to Virginia—the nation's most populous region. But the College has a lot more than geography going for it. The National Assessment of Journalism Education by the Freedom Forum of Media Studies Center of Columbia University conducted recently designated the College one of "Eleven Exemplary Journalism schools" nationwide: those that surpass others in criteria including teaching, research, facilities and job placement.

Founded in 1947, the College has been accredited for close to three decades by the Accrediting Council on Education in Journalism and Mass Communication. Since it is within easy reach of the offices of Washington and Baltimore newspapers and the Washington bureaus of news organizations such as The New York Times, the Associated Press and the major networks, it is an ideal place for the study of journalism and mass communication. Students have internship opportunities at a variety of media, nonprofit, government and international agencies. Select students can also participate in a public affairs reporting semester in the College's Annapolis or Washington, D.C., bureaus of Capital News Service. Talented adjunct faculty members are also tapped from these organizations to enhance curriculum offerings.

After successful completion of a series of basic writing and editing skills courses, majors are provided the following sequences in which to focus their remaining journalism curriculum: news-editorial, public relations, broadcast news, advertising. Within the news-editorial sequence, emphases are provided in the areas of news and magazine.

### Admission to College of Journalism

See the Admission chapter in this catalog for general LEP admissions policies.

**Freshman Admission and the 45-Credit Review.** Most first-time entering freshmen will gain admission to the College of Journalism directly from high school, as allowed by space considerations within the College. Because space may be limited before all interested freshmen are admitted to the program, early application is encouraged. Freshmen admitted to the program will have access to the necessary advising through their initial semesters to help them determine if Journalism is an appropriate area for their interests and abilities.

Freshmen who are admitted directly to Journalism will be subject to a performance review by the time they have completed 45 credits. To meet the provisions of the review, these students must complete: (1) Fundamental Studies; (2) 60% of Distributive Studies; (3) ENGL 101 and JOUR 201 with grades of C; and (4) a minimum cumulative GPA of 2.0. Enrollment in JOUR 201 requires proof of grammar skills competency through attainment of a minimum score of 52 on the Test of Standard Written English (TSWE), 61 on the Test of Language Skills (TLS), or 12 on the ACT English usage subsection. Students who do not meet these requirements will not be allowed to continue in the LEP and will be required to select another major.

**Transfer Admission.** These requirements affect new transfer students to the University as well as on-campus students hoping to change majors to the College. Admission of transfer students may be severely limited, and capacity is determined each year in accordance with the success of incoming freshmen.

**Note: No more than 12 transfer credits of communications courses from an accredited journalism program may be approved by the College to be applied toward the degree. Transfer students who wish to receive credit for JOUR 201 based on work done in a non-accredited journalism program must pass a proficiency exam.**

In order to be admitted to Journalism, transfer students will be required to meet the following set of gateway requirements: (1) completion of Fundamental Studies; (2) completion of 60% of Distributive Studies; (3) completion of ENGL 101 and JOUR 201 with grades of C; and (4) attainment of a minimum cumulative GPA for all college-level work attempted. Enrollment in JOUR 201 requires proof of grammar skills competency through attainment of a minimum score of 52 on the Test of Standard Written English (TSWE), 61 on the Test of Language Skills (TLS), or 12 on the ACT English usage subsection. The required GPA is set each year and may vary from year to year depending upon available space. Contact the College of Journalism or the Office of Undergraduate Admissions for the current GPA standard.

**Appeals.** Students who are unsuccessful in gaining admission to Journalism at the freshman or transfer level, and believe they have extenuating or special circumstances which should be considered, may appeal in writing to the Office of Undergraduate Admissions. The student will be notified in writing of the appeal decision once it is made.

Students admitted to Journalism as freshmen who do not pass the 45-credit review but believe they have special circumstances which should be considered may appeal directly to the College.

For further information, contact the Counselor for Limited Enrollment Programs at 314-8378.

### Degrees

The College of Journalism offers the B.A., M.A., and Ph.D. degrees. At the undergraduate level, students are required to specialize in one of the four sequences offered. All diplomas are in Journalism.

### Graduation Requirements

Students are required to earn a minimum of 121 credits. Accrediting regulations require three-fourths of a student's course work (a minimum of 90 credits) be in areas other than mass communication (such as speech) or journalism. A minimum of 65 of those 90 credits must be earned in liberal arts designated courses. A grade of C or better must be earned in JOUR 201 and JOUR 202 prior to taking courses for which they serve as prerequisites. Students must have a C average in their major.

Students are also required to demonstrate abstract thinking skills. As a measure, majors are offered either a language option, a mathematics option, or a combination of the two. Language skills must be demonstrated by taking coursework through the intermediate level. The Math option requires that students complete the following courses: statistics, calculus, and computer science.

A support area consisting of four upper-level courses in a concentrated field is also required of Journalism majors. Students must also complete a minimum of 57 credits at the upper level of which no more than 24 can be Journalism or Mass Communications credits. Finally, in addition to University graduation requirements, Journalism majors must complete additional liberal arts course work with one course each in government and politics, public speaking, psychology and economics and one course in sociology, anthropology or history.

## Journalism Academic Programs

### I. Required courses for all Journalism majors:

#### A. Non-journalism course requirements

##### 1. Abstract thinking skills requirement:

Completion of a minimum of nine credits through one or a combination of the following options. Should a student choose to combine the options, at least one language course must be at the intermediate level:

- a. Language—any skills language course(s). Up to three courses with at least one course at the intermediate level and no more than one course at the introductory level. (High school equivalency does not satisfy this requirement.)
- b. Math/Statistics/Computer Science—Up to three courses including no more than one course from each category.
  - i. One of the following math courses: MATH 111, 113, 115, 140 or 220 or any course for which any of these serves as a prerequisite.
  - ii. One of the following statistics courses: AREC 484, BIOM 301, BMGT 230, CNEC 400, ECON 321, EDMS 451, GVPT 422, PSYC 200, SOCY 201, GEOG 305, TEXT 400, URBS 350, or a more advanced statistics course.
  - iii. One of the following computer science courses—CMSC 103, 104 or any higher-level CMSC course.

2. A course in public speaking chosen from SPCH 100, 107, 200 or 230.

3. One of the following:  
 A. Sociology 100 or 105  
 B. Anthropology 101  
 C. HIST 156 or 157.

4. PSYC 100 or 221.

5. ECON 201, 203 or 205.

6. GVPT 100 or 170. (For news-editorial students, GVPT 260 or 460 is also required.)

7. Four upper-level (numbered 300 or higher) courses for a minimum of 12 credits in a supporting field (may not be in Speech).

#### B. Journalism course requirements:

	Credit
JOUR 101—Professional Orientation.....	1
JOUR 201—Writing for the Mass Media .....	3
JOUR 202—Editing for the Mass Media .....	3
JOUR 400—Law of Mass Communication.....	3

### II. Required courses for Journalism sequences:

#### A. Advertising

JOUR 340—Advertising Communication .....	3
JOUR 341—Advertising Techniques .....	3
JOUR 342—Advertising Media Planning.....	3
JOUR 346—Supervised Internship .....	3
JOUR 477—Mass Communication Research .....	3
JOUR 484—Advertising Campaigns.....	3
At least one additional upper-level journalism course numbered 410-480 .....	3

#### B. Broadcast News

JOUR 360—Broadcast News 1 .....	3
JOUR 361—Broadcast News 2 .....	3
JOUR 365—Theory of Broadcast Journalism .....	3
At least one additional upper-level journalism course numbered 410-480.....	3
Journalism and Radio-TV-Film electives.....	9
(chosen with permission of advisor: 366 recommended)	

#### C. Public Relations

JOUR 330—Public Relations Theory .....	3
JOUR 331—Public Relations Techniques.....	3
JOUR 336—Supervised Internship .....	3
JOUR 477—Mass Communication Research .....	3
JOUR 483—Senior Seminar in Public Relations .....	3
Additional Writing Course (320, 332* or 360) .....	3
Upper-Level Journalism Electives (333, 334 recom- mended or an second additional writing course: 320, 321, 332, 360, 361, 371, 380*, 481)	3

\*Recommended for students preparing for science writing positions in the public relations department of a scientific or technical organization.

#### D. News-Editorial

(GVPT 260 is a News-Editorial Sequence requirement for all specializations.)

##### i. News Specialization

JOUR 320—News Reporting.....	3
JOUR 373—Graphics.....	3
JOUR 321—Public Affairs Reporting or .....	3
JOUR 322—Beats and Investigations	
Advanced Writing and Reporting Course .....	3
(323, 324, 328, 371 and 380 recommended)	
Elective Journalism course.....	3
(between 410 and 480)	
Upper-Level Journalism Electives (326 recommended).....	6

##### ii. Magazine Specialization

JOUR 320—News Reporting .....	3
JOUR 371—Feature Writing.....	3
JOUR 373—Graphics.....	3
JOUR 326—Supervised Internship.....	3
One of the following.....	3
JOUR 380—Science Writing for Magazines and Newspapers	
JOUR 481—Writing the Complex Story	
JOUR 487—Literary Journalism	
Upper-Level Elective Journalism course .....	3
(between 410 and 480)	
Upper-Level Journalism Elective.....	3

## Advising

### Field Work and Internship Opportunities

Supervised internships are required for the Public Relations and Advertising sequences along with the Magazine specialization within the News-Editorial sequence. Other students may take advantage of an internship as a journalism elective. No more than four mass-communication internship credits, regardless of the discipline in which they are earned, may be applied toward a student's degree. Dr. Greig Stewart is the Coordinator of the Journalism Internship Program, 1118 Journalism Building, 405-2380.

The Annapolis and Washington bureaus of the Capital News Service are staffed by students and supervised by College instructors. Through curricular programs, students cover state and legislative news for client papers around the region. Students are required to report breaking news by afternoon deadlines, write profiles and cover state agencies. This is a full-time, semester-long program, on site at the two bureau locations.

For students in the Broadcast News Sequence, opportunity to gain experience with a cable news program entitled "Maryland Update" is presented within the curriculum.

Campus media opportunities abound. The campus radio station is WMUC. Student newspapers of interest to special populations include The Eclipse, Black Explosion and Mitzpeh.

Co-op and volunteer experiences are available to Journalism students through the University's Office of Experiential Learning in Hornbake.

### Student Organizations

The College sponsors student chapters of Alpha Epsilon Rho, the Society for Professional Journalists, the Public Relations Student Society of America, the National Association of Black Journalists, the Radio and Television News Directors' Association and the Advertising Club. These organizations provide students with opportunities to practice skills, establish social relationships with other students both on and off campus, and meet and work with professionals in the field.

For information on the organizations listed, contact the Student Services Office, 1117 Journalism Building, 405-2399.

### Accreditation

The College of Journalism became accredited in 1960 by the Accrediting Council on Education in Journalism and Mass Communications. Standards set by the council are generated from professional and academic ethics and principles. This accrediting body underscores the liberal arts foundation of a journalism curriculum, limiting professional and skills courses to one-fourth of a student's academic program.

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## COLLEGE OF LIBRARY AND INFORMATION SERVICES (CLIS)

4105 Hornbake Building

Professor and Dean: Ann E. Prentice

The College of Library and Information Services offers degree programs for individuals interested in careers in information services and management. At the master's level, students may specialize in several fields, including archival studies, geographic information systems, health information services, school library media services, and science and technology information systems. Graduates pursue careers in a wide range of information agencies and positions. The College has dual degree programs with the History Department, Geography Department, and a joint program with the College of Education. The master's degree is accredited by the American Library Association.

The Ph.D. degree prepares students for careers in research and teaching in the information field and in management of large information organizations.

While the College does not have an undergraduate major, it offers some courses at the undergraduate level. These courses are suggested for students wishing to develop skills in locating, analyzing, and evaluating information and students seeking to learn more about career opportunities in the information field.

## COLLEGE OF LIFE SCIENCES (LFSC)

1224 Symons Hall, 405-2080

Professor and Dean: Paul H. Mazzocchi

The College of Life Sciences offers educational opportunities for students in subject matters relating to living organisms and their interaction with one another and with the environment. Programs of study include those involving the most fundamental concepts of biological science and chemistry and the use of knowledge in daily life, as well as the application of economic and engineering principles in planning the improvement of life. In addition to pursuing the baccalaureate degree, a number of students in this College engage in pre-professional education in such fields as pre-medicine, pre-dentistry, and pre-veterinary medicine.

The student may obtain a Bachelor of Science degree with a major in any of the departments and curricula listed below. Students in pre-professional programs may, under certain circumstances, obtain a B.S. degree following three years on campus and one successful year in a professional school. For additional information on combined degree programs, see the entry on pre-professional programs in this catalog.

The College of Life Sciences includes the following departments and programs:

- a. Departments: Chemistry and Biochemistry, Entomology, Microbiology, Plant Biology, Zoology.
- b. Program: General Biological Sciences

### Admission

Students desiring a program of study in the College of Life Sciences should include the following subjects in their high school program: English, four units; college preparatory mathematics (algebra, plane geometry), four units; biological and physical sciences, two units; history and social sciences, one unit. They should also include chemistry and physics.

### Advising

A faculty advisor will be designated to help select and design a program of courses to meet the needs and objectives of each entering student. As soon as a student selects a major field of study, an advisor representing that department or program will be assigned. All students must see their advisor at least once each semester.

Students following pre-professional programs will be advised by knowledgeable faculty. For further information on the pre-professional programs offered at College Park, see the entry in this catalog.

### Area Resources

In addition to the educational resources on campus, students have an opportunity to utilize libraries and other resources of the several government agencies located close to the campus. Research laboratories related to agriculture or marine biology are available to students with special interests.

### Degree Requirements

Students graduating from the College must complete at least 120 credits with an average of 2.0 in all courses applicable towards the degree. Included in the 120 credits must be the following:

1. CORE (40 credits)
2. College Requirements:  
As of Fall 1988, all students in the College of Life Sciences must complete the following:
  - CHEM 103, 113, or 103H, 113H
  - CHEM 233, 243 or 233H, 243H
  - \*MATH 220, 221 or 140, 141
  - PHYS 121, 122 or 141, 142
  - †BIOL 105 and 106

\*Chemistry and Biochemistry majors must take MATH 140, 141.

†Chemistry and Biochemistry majors complete BIOL 105.

•Chemistry and Biochemistry majors must take CHEM 143 and 153.

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## Honors

Students may apply for admission to the honors programs in Botany, Chemistry, General Biological Sciences, Microbiology, Plant Biology, and Zoology. On the basis of the student's performance during participation in the Honors Program, the department may recommend candidates for the appropriate degree with (departmental) honors, or for the appropriate degree with (departmental) high honors. Successful completion of the Honors Programs will be recognized by a citation in the Commencement Program and by an appropriate entry on the student's record and diploma.

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## SCHOOL OF PUBLIC AFFAIRS (PUAF)

2101 Van Munching Hall, 405-6330

Professor and Acting Dean: Dr. I.M. (Mac) Destler

The School of Public Affairs provides graduate-level, professional education to men and women interested in careers in public service. Five disciplines are emphasized: accounting, statistics, economics, politics, and ethics. Students specialize in issues of international economics and trade policy, national security and arms control, public sector financial management, environmental policy, or social policy.

The School offers separate degrees for pre-career and mid-career college graduates. Recent college graduates may enroll in the 48-credit Master of Public Management (MPM) program which can be completed in two years by full-time students. This program combines a rigorous applied course of study with practical, hands-on experience. The School also offers joint degree programs with the College of Business and Management (MPM/MBA) and the School of Law (MPM/JD), and accepts a small number of Ph.D. candidates each year.

Public sector employees with a minimum of three years' work experience seek the Master of Public Policy (MPP) degree. This is generally a part-time, three-year, 36-credit program, but individuals wishing to complete the program more quickly may do so by attending full time.

Individuals who wish to improve their analytical and management skills without pursuing a degree may enroll in an 18-credit certificate program which mirrors the areas of specialization found in the master's degree programs.

For further information, call or write the School of Public Affairs.