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State Of Maryland



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Board of Regents

First Page of Catalog



**DR. WILLIAM E. KIRWAN, CHANCELLOR**



**THELMA B. THOMPSON, PRESIDENT**  
University of Maryland Eastern Shore

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### DISCLAIMER

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland Eastern Shore. At the time of the publication, every reasonable effort was made to attain factual accuracy in the material presented. The catalog is not intended to be a complete statement of all procedures, processes and regulations governing graduate or professional degree programs which may be covered in separate program and office manuals and handbooks. The University of Maryland Eastern Shore reserves the right to make changes in fees, course offerings and general regulations and academic requirements without prior notice. For the most up-to-date information on course offerings, program requirements and deadlines, please write, call, or e-mail the program or department to which you are applying.





## CAMPUS DIRECTORY

If calling from off-campus, prefix all extensions with (410) 651-

Academic Affairs, Vice President	6508
Academic Computing Center, Assoc. Director	6011
Academic Support Services	6457
Administrative Affairs, Vice President	6229
Administrative Computing, Associate Director	6689
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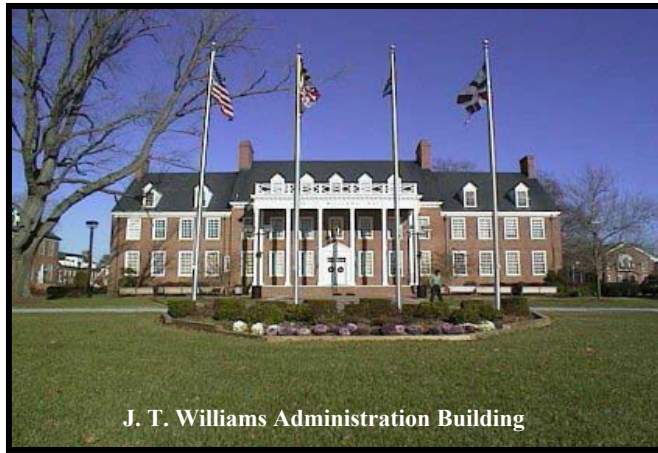



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### MAILING ADDRESS:

University of Maryland Eastern Shore  
Princess Anne, Maryland 21853-1299





J. T. Williams Administration Building

# THE UNIVERSITY

## **General Information**

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## **THE UNIVERSITY**

### **GENERAL INFORMATION**

Located in historic Princess Anne, the University of Maryland Eastern Shore (UMES) comprises a 745 acre expanse that is at once academic, international, and Arcadian. UMES is the only research and doctoral degree granting institution of the University of Maryland System on the Eastern Shore of Maryland. Its programs in Construction Management Technology, Aviation Sciences, and Hotel and Restaurant Management are unique to both the state and the region. Every graduate of its Physical Therapy and Dietetics programs has passed the licensure examinations since the programs were first offered. The campus location and facilities and the program offerings and opportunities afforded by the University of Maryland Eastern Shore provide a fitting atmosphere for study and growth not only for its young adult students but also for the mature and senior citizen student populations served by the University.

## **CATALOG NOTICE**

The purpose of this catalog is to provide information about the University of Maryland Eastern Shore. This catalog is neither a contract nor an offer to make a contract. While effort has been made to ensure the accuracy of the information contained in this catalog, the University reserves the right to make changes at any time with respect to course offerings, degree requirements, services provided or any other subjects addressed herein. Notices of such changes will be distributed through appropriate departments.

## **OVERVIEW OF THE UNIVERSITY**

### **The Past**

The University of Maryland Eastern Shore had its origin on September 13, 1886. Initiated under the auspices of the Delaware Conference of the Methodist Episcopal Church, it opened on that date with nine students and one faculty members as the Delaware Conference Academy in Princess Anne.

Records reveal that 37 students were enrolled by the end of the year. Subsequently, the institution held the title of Industrial Branch of Morgan State College, still under the influence of the Delaware Conference. As originally operated by Morgan State College under the control of the Methodist Church, the institution was known as Princess Anne Academy.

The State of Maryland, in operating its land-grant program at the Maryland Agricultural College at College Park, to which African Americans were not admitted as students, sought to provide a Land-Grant program for African Americans and assumed control of the Princess Anne Academy, renaming it the Eastern Shore Branch of the Maryland Agricultural College. The arrangement was effected in 1919.

In 1926, the College passed into complete control and ownership of the State, and the University of Maryland was designated as the administrative agency.

In 1948, the Eastern Shore Branch of the University of Maryland, popularly known as Princess Anne College, became officially Maryland State College, a division of the University of Maryland. On July 1, 1970, Maryland State College became the University of Maryland Eastern Shore.

### **The Present**

From its original building on campus known as "Olney," constructed in 1798 when George Washington was still alive, the University has grown to over 600 acres with 30 major buildings and 41 other units. The student population has increased to 4,500. With the strong support of the University of Maryland Board of Regents, Systems Administration, and the faculty, UMES has developed an academic program perhaps more impressive than any other higher education institution of its size in the East. Within the last decade, UMES has added 20 degree-granting programs to its academic roster. Graduates of these

programs often choose to remain on the Delmarva Peninsula, procuring careers in their areas of professional study to benefit the region, particularly the Lower Eastern Shore.

Today, the University offers major programs leading to the B.A. and B.S. degrees in 26 disciplines in the arts and sciences, professional studies, and agricultural sciences. In addition, UMES presents 13 teaching degree programs and eight pre-professional programs, as well as an Honors Program designed in cooperation with the University of Maryland at Baltimore and the Virginia-Maryland Regional College of Veterinary Medicine to prepare students for professional school study.

UMES offers graduate degrees in the following fields: Marine-Estuarine and Environmental Sciences and Toxicology are both offered at the M.S. and Ph.D. levels. The Ph.D. degree is offered in Food Science and Technology and in Organizational Leadership. The M.S. degree is offered in Agricultural and Extension Education, Applied Computer Science, Food and Agricultural Sciences, Criminal Justice and Criminology, and Rehabilitation Counseling. The M.Ed. degree is offered in Guidance and Counseling, Special Education, and Career and Technology Education. The M.A. degree is offered in Teaching. The MPT and DPT degrees are offered in Physical Therapy.

Today the University offers outstanding and well-constructed and varied academic programs on a beautiful campus. It provides today's students, through versatile student life activities, with opportunities to develop into well-rounded individuals who are able to assume leadership in today's society.

The newest programs on the UMES campus also look toward the current and future needs of the Eastern Shore. Airway Science, Law Enforcement, and Rehabilitation Services have all been recently added to the University's offerings. Greater course offerings during evening and weekend hours have also been developed, allowing a greater segment of the local population to enhance themselves and their communities through post-secondary education.

### **The Future**

As the University of Maryland Eastern Shore enters its second century, it proceeds with even greater vigor; the apexes of progress and quality continue to expand. Long-term plans include expanding the curriculum for graduate study and continued improvement of the physical plant, including new construction and renovation projects for classroom and administrative buildings.

As the Eastern Shore continues to gain in productivity and recognition, UMES will continue to serve the needs of the industries and people around it. UMES is the only four-year institution on the Shore to offer undergraduate and graduate degrees in computer science. The University has long been known for providing professional training in the key regional and local industries of hospitality management and

the management of commercial poultry and swine operations. The prediction is that this local enrichment will continue as more students enroll in the University's programs of business and economics, physical therapy, hotel and restaurant management, poultry technology and management, and computer science. Likewise, the outlook is good for the sciences, agriculture, liberal arts, and graduate programs.

### **ADMINISTRATIVE ORGANIZATION**

Under the administration of the President, The administrative organization of the campus is divided among six divisions: Division of Executive Vice President, Division of Academic Affairs, Division of Administrative Affairs, Division of Information Technology and Outreach, Division of Student Affairs, and Division of Institutional Advancement. Each division is headed by a Vice President who administers the policies, procedures, and directives of the President, the Chancellor, and the Board of Regents.

#### **Division of the Executive Vice President**

The Division of the Executive Vice President coordinates planning, policy-making, and management processes at the University. This division monitors matters of operational and strategic importance and develops protocols and technical reports to define procedures and summarize outcomes related to the achievement of the University's mission. The Division supervises the strategic planning process, development of the operational plan, and the implementation of goals and objectives of the University. The division prepares proposals for external support and routinely engages in review of all programs and services to ensure institutional accountability. The Office of Institutional Research, Evaluation and Assessment reports to the Division.

#### **Division of Academic Affairs**

The Division of Academic Affairs headed by a Vice President and two Associate Vice Presidents consists of seventeen (17) academic departments distributed among three undergraduate schools: Agricultural and Natural Sciences, the Arts and the Professions, and Business and Technology. Undergraduate students choose their programs of study from the University's departments located in the three schools. An academic Dean heads each school. Each school develops and administers its programs consistent with its own mission and goals, as well as in consort with the overall mission of the University.

There is also a graduate school headed by a Dean. Coordinators in the respective academic departments head the graduate programs. The exception is the Department of Physical Therapy, which is administered by its chairman. The Frederick Douglass Library, headed by the Dean of Library services is a major unit within the Division of Academic Affairs. The Library provides a wealth of resources to support the university's programs. As a member of the University System of Maryland (USM) Libraries, the library is linked with the university's eleven campuses and thirteen libraries via an automated integrated system. Therefore, patrons have access to the University System of Maryland's library collections and electronic

resources. The technology available continues to increase, thus allowing global access to collections, databases and/or resources.

Within the Division are also several academic support units headed by Directors, including Academic Support Services, Continuing and Distance Education, 1890 Extension, 1890 Research, The Honors Program, International Programs, Rural Development, Sponsored Research Programs, Teacher Education, and Upward Bound.

#### **Division of Administrative Affairs**

The Division of Administrative Affairs provides a leadership role in the administration of business processes. The division administers policies and procedures, plans and maintains facilities, manages the campus' financial affairs in a manner that is consistent with institutional, state and federal rules, insures safety and welfare, manages on-campus housing and improves and expands services offered.

#### **Division of Information Technology, Commercialization, and Outreach**

The Division of Information Technology, Commercialization, and Outreach coordinates and implements campus technology initiatives, organizes community outreach projects, and commercializes the intellectual capital of the institution. The Office of Information Technology is responsible for ensuring access and reliability for the campus telephone services, cable television, data network, Internet and Internet2 services, academic and administrative servers, campus-owned computers and peripherals, and the campus wireless network. The Office of Sponsored Research Programs provides faculty, research associates and students with assistance in the preparation and submission of proposals and in the administration of grants and contracts. The Office of Commercialization & Community Outreach provides a single point at which community organizations can identify opportunities to partner with the university and at which business entities can gain access to intellectual property and to faculty expertise. Each area is managed by a director, all of whom report to Division's Vice President.

#### **Division of Student Affairs**

Student Division of Student Affairs is an essential ingredient in the total educational process and is primarily responsible for administering a variety of student-centered services, which assist students, both individually and collectively, to make official use of their educational opportunities. Headed by a Vice President, the division is comprised of ten (10) student-centered departments including: Admissions and Recruitment, Office of the Registrar, Career Services and Cooperative Education, Counseling, Wellness, Retention and New Student Advising, International Student Services, Student Activities, WESM Radio and Student Health. The primary mission of each department is to serve and support students, the alumni, the administration, the staff, and the faculty of the University of Maryland Eastern Shore; providing a positive student-centered environment that

enhances student learning, development, diversity, service, retention, academic success and enduring loyalties to the University. Each department is managed by a director or coordinator, all of whom report to the Division's Vice President

#### **Division of University Advancement**

The Division of University Advancement combines the three traditional Advancement disciplines—Development (or Philanthropy), Public Relations (or Communications) and Alumni Relations—to advance the mission of the University consistent with the leadership's vision. Through private fund-raising campaigns the Division provides scholarships for students, research grants to faculty, international study opportunities for both students and faculty, and an assortment of other “margin of difference” resources not supported by public funding and tuition and fees. Communications strategies raise awareness, appreciation and recognition of the remarkable accomplishments of our students, faculty, staff and alumni. Through Alumni outreach programs and events, the division maintains and nurtures the lifetime relationship graduates enjoy with their Alma Mater.

#### **FACULTY**

There are 144 full-time faculty members at UMES, and 94 % of those with tenure hold a doctorate or terminal degree in their field of specialization. The student-to-faculty ratio is 14:1.

#### **STUDENTS**

The University serves a student population of 4,500 and constituencies that range from first generation college students to an international clientele. Students served by the instructional programs come from across the state of Maryland, around the nation, and from over 50 foreign countries. In keeping with the University's mission, other constituencies are served through inter-agency agreements and contracts with governmental agencies, business, and industry.

#### **STAFF**

There are more than 400 full-time employees who serve as members of the staff at UMES. These highly qualified, well-trained and experienced professionals include directors, coordinators, administrative assistants, secretaries, technicians, security specialists and technology experts.

#### **RESEARCH ENVIRONMENT**

UMES conducts research and creative endeavors in agricultural, environmental, and marine sciences; mathematics and computer applications; allied health; and other fields. State-of-the-art chemistry and biology laboratories, computer facilities supported by the latest software, and library research capabilities are available. Faculty and students work collaboratively with such organizations as ICF Kaiser Engineering; Kellogg Foundation; the National Institutes of Health; the Agency for International Development; the U.S. Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Interior, the National Science

Foundation, the National Aeronautics and Space Administration (NASA), and over 50 other external funding sources. Because of its status as an 1890 Land-grant institution, the University receives annual federal appropriations to support research in the food and agricultural sciences.

#### **ACCREDITATION AND PROFESSIONAL MEMBERSHIPS**

The University of Maryland Eastern Shore is accredited by the Middle States Association of Colleges and Schools, the Maryland State Board of Education, the American Council for Construction Education, the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, and the American Dietetics Association.

The University is recognized by the University Aviation Association and the Federal Aviation Administration. Membership is held by the University with the Maryland Association of Higher Education, the National Council of Educational Opportunity Association, the National Association for Equal Opportunity in Higher Education, the National Association of State Universities and Land-Grant Colleges, and the American Council on Education.

#### **THE CAMPUS**

Situated in the historic town of Princess Anne, the University of Maryland Eastern Shore is a 745 acre campus that is at once academic, international, and Arcadian, making it an inviting and fitting atmosphere for study and young adult growth. It offers students a tranquil retreat to pursue academic goals; yet it is only a two-hour drive from any one of several mid-Atlantic metropolitan areas- Norfolk/Virginia Beach, Washington, Baltimore, Philadelphia, and Wilmington- providing access to many urban amenities. In addition, the resort town of Ocean City, MD, is less than an hour's drive away.

The atmosphere of UMES has long been familial. Almost 60 percent of the students live on campus. The oval shaped mall is the hub of campus academic and residential activity. There students, faculty, and staff walk together to and from their daily activities in the classrooms, administrative departments, student activity, and residential life facilities. The campus is decidedly close-knit.

Behind the campus oval are 500 acres of farmland that complete the multifaceted research institution. Innovative agricultural research, serving both local and global economies, is conducted through the Small Farms Institute, noted for its aquaculture facility; the Swine Research Center -- the hub of all University of Maryland swine research; a poultry management operation; and crop and animal production programs.

The international elements of the UMES campus are evidenced by the flags of 50 plus nations that wave at the campus entrance around the federal, state, and University flagpoles. These flags symbolize various nationalities of students enrolled at UMES.

A recent ongoing capital improvement project reflects the University's emphasis on academic development. Combining the future with tradition, newer structures blend well with the Georgian-style architecture that defines the neighboring Ella Fitzgerald Center for the Performing Arts, the J.T. Williams administrative building, and the recently renovated Kiah Hall.

#### **CAMPUS BUILDINGS**

**Access and Success Building.** The Access and Success Building houses the Office of Retention. The building was constructed in 1999.

**Alumni House.** Initially the site of the Home Management Residence, this building was converted in 1992 to serve the alumni association. It was constructed in 1969.

**Benjamin Banneker Hall.** Banneker Hall was named for the noted Revolutionary Era surveyor, mathematician, and inventor. This building houses offices for faculty and teaching staff. It was constructed in 1959.

**Benjamin Oliver Bird Hall.** Built in the early 1940's and named for the first head of the institution, Bird Hall was renovated for the offices of Admissions, Recruiting, and Financial Aid.

**Center for Food Science and Technology.** The Center for Food Science and Technology houses

**Central Receiving.** The Central Receiving Building houses the office of Physical Plant. It also serves as the primary receiving dock for the campus. The building was constructed in 1970.

**Central Steam Plant.** The building was constructed in 1950.

**Charles Clinton Spaulding Hall.** This building bears the name of the noted black business leader from North Carolina. This one-story structure houses the Department of Education and Organizational Leadership. It was constructed in 1963.

**Charles R. Drew Student Health Center.** This building houses the medical center where students receive medical treatment, counseling, and educational services. It was constructed in 1964.

**Community Center/Office of Residential Life.** A cluster of student residences complements this 480-bed apartment complex. The complex was constructed in 1964. It was first constructed to house administration and staff.

**Crab Research Trailers.** The trailers were constructed in 1978.

**Crop and Aquaculture Swine Reproduction Facility.** The Crop and Aquaculture Swine Reproduction Facility houses The building was constructed in 1991.

**Early Childhood Research Center.** The Early Childhood Research Center houses the Deans of Agricultural and Natural Sciences, The Arts and the Professions, Business and Technology and Graduate Studies; Sponsored Research Programs, Regional Research Director, and Child and Family Development. The building was constructed in 1979.

**Ella Fitzgerald Center for the Performing Arts.** The PAC (Performing Arts Center) is home for the Department of Fine Arts. This stately building, constructed in 1973 is named for the internationally acclaimed vocalist and contains a 1200-seat auditorium with a thrust stage, classrooms, and a conference room.

**Farm Shop Houses.** The building was constructed in 1966.

**Food Science and Technology Building.** The Food Science and Technology Building houses Food Science and Technology.

**Frank Trigg Hall.** Trigg Hall is named for the fourth head of the institution. This four-story Colonial Revival structure houses the Department of Agriculture. It was constructed in 1954.

**Frederick Douglass Library.** Named for the self-educated abolitionist, orator, and author who was born on the Eastern Shore, the library boasts a computerized card catalog with links to the collection of other University of Maryland System libraries and a noted African American history collection. The three-story library structure has recently been doubled in size and has undergone renovation. It was constructed in 1969.

**George Washington Carver Hall.** Renovations in 1990 doubled this space for the Department of Natural Sciences. It was constructed in 1972.

**Greenhouse Academic Building.** The Greenhouse Academic Building houses The building was constructed in 1975.

**Greenhouse Research Building.** The building was constructed in 1977

**Harford Hall.** Harford Hall is a female student dormitory. The building was constructed in 1950.

**Hawk's Landing Apartment.** The building was constructed in 2001.

**Hawk's Landing House.** The building was constructed in 1900.

**Hawk's Landing Shop.** The building was constructed in 2001.

**Henry O. Tanner Hall.** The Airway Science program is located in this structure, which is named for the

accomplished black artist from Pittsburgh. The building was constructed in 1963.

**Housing Services Building.** The building was constructed in 1980.

**Hydroponics Facility.** The Hydroponics Facility is used to grow horticultural plants. The building was constructed in 1998.

**J. Milliard Tawes Gymnasium.** The building, constructed in 1996, was named for a former Maryland Governor, Milliard Tawes, who was born and raised in the nearby town of Crisfield. Millard Tawes was governor of Maryland 1959-1967. The adjoining Clifford "Cappy" Anderson track, named for a former coach, was renovated in 1992.

**John T. Williams Hall.** This building was renamed for one of the former chief executives of the University. It houses administrative offices to include the offices of the President, the Vice Presidents, the Comptroller's Office and Human Resources. Constructed in 1940, it was originally named Maryland Hall.

**Learning Resource Center.** The building was constructed in 1964.

**Lida M. Brown.** This building was named for a former Dean of Women at the institution. It was constructed in 1966.

**Marksman – East.** The building was constructed in 1978.

**Marksman – West.** The building was constructed in 1978

**MAS Poultry Environmental Research Laboratory.** The MAS Poultry Environmental Research laboratory houses. The building was constructed in 1985.

**Modulars 1-6.** These modulars were constructed in 2000.

**Murphy Hall.** Murphy Hall and Murphy Annex are traditional residence halls that house female freshmen. They are named for John Murphy, a former publisher of the Afro-American Newspaper, which was the first national African-American newspaper. Murphy Hall was constructed in 1943 and Murphy Annex was constructed in 1964.

**Nuttle Hall.** Nuttle Hall is named for a former member of the board of regents. Female freshmen are housed in this traditional residence hall. It was constructed in 1973.

**Office of Residence Life Community Center.** This center was constructed in 1990.

**Office of Residence Life Apartment Administration.** This building was constructed in 1964.

**Office of Residence Life Staff Housing Building.** This building was constructed in 1964.



**Physical and Health Education Center.** The Physical and Health Education Center houses This center was constructed in 1998.

**Plaza Residence Hall.** The Court Plaza Residence Hall houses male student dormitory and the Art Shell Plaza Residence Hall houses female students These buildings were constructed in 1996.

**Poultry Technology Management.** This building was constructed in 1985.

**Public Safety.** Public Safety houses University Police and Security. This building was constructed in 1962.

**Richard A. Henson Center.** This structure was completed in 1993 and contains classrooms as well as 24 guestrooms; the center also contains conference and dining facilities for the hotel/restaurant management program. It honors the Eastern Shore philanthropist and prominent aviation chairman, Richard A. Henson.

**Somerset Hall.** Somerset Hall houses information outreach programs and incubators. This building was constructed in 1949.

**Student Apartments.** These apartments house sophomore, junior, senior and transfer students. There are six apartment buildings in the complex, each containing four six-person apartment suites. The complex was constructed in 1980.

**Student Development, Cultural, and Recreation Center.** Simply called the SDC by students and staff, this building houses the Counseling Center, Academic Support Services/Basic Skills, Career Planning and Placement, Health and Wellness Center and Upward Bound. The SDC was constructed in 1976.

**Student Residential Complex.** This building was constructed in 1990.

**Student Services Center.** One of the newest structures on the campus, the building reflects the University's commitment to a student-centered campus. It houses the Hawk's Nest, a student dining room; a six-lane bowling alley; a five-hundred-seat movie theatre/auditorium; a grand ballroom; game rooms; lounge areas; and a host of student, staff, and administrative offices. The building houses the offices of the Student Government Association, the Counseling Center, Career Planning and Placement, Cooperative Education, and Basic Skills, as well as the chapel, the post office, and the campus bookstore. It opened July 2001.

**Swine Reproductive Facility.** This building was constructed in 1991.

**Swine Research Facility.** This building was constructed in 1994.

**Tanner Hall.** Tanner Hall houses the Airway and Engineering Sciences Department. This building was constructed 1963.

**Temporary Classrooms 1 & 2.** These classrooms were constructed in 1999.

**Theodore Briggs and Richard Thomas Arts and Technology Center.** The Arts Technology Center was named for two former department heads of industrial education. The departments of Technology and Art and Industrial Education are housed in the building. The building was constructed in 1984.

**Thomas R. Kiah Hall.** Formerly the Somerset Junior High and High School, a 1990 renovation converted this two-story building for the use of the Physical Therapy, Business and Economics, and Mathematics and Computer Science Departments. It is named for a former chief executive officer of the University.

**University Terrace.** University Terrace is a student dormitory.

**Waters Dining Hall.** Waters Dining Hall houses 24 hour computer laboratories and Administrative Computing offices. The building was constructed in 1950.

**WESM/93.1 FM Radio Station.** The university's 50,000-watt station has been broadcasting since 1986 and brings a welcomed jazz and contemporary music format to listeners within a 75-mile radius of the campus. This building was constructed in 1964.

**Wicomico Hall.** Wicomico Hall is a student dormitory. This building was constructed in 1966.

**William P. Hytche Athletic Center.** The Athletic Center was named for a former president of the University. It is a 115,000 square foot facility that houses two departments, Physical Education and Intercollegiate Athletics. Among its many amenities are an indoor 200 meter track, a National Collegiate Athletics Association basketball court, a six-lane - 25 meter swimming pool, a weight room, racquetball and volleyball courts, men's and women's locker rooms, and concession facilities - - all fitted with state-of-the-art equipment. This building was constructed in 1998.

**Wilson Hall.** This two-story Greek revival building is the home for the Department of English and Modern Languages and the Education Department. Named for one of the founders of the institution, the building is also the site of the new telecourse production studios. This building was constructed in 1949.

## OFFICE OF ADMISSIONS

The Office of Admissions, which also houses the Recruitment Office, serves prospective students, currently enrolled students, faculty, and staff relative to registration for classes, processing grades, and maintaining student academic records. The Recruitment Office engages in prescribed activities designed to identify, attract, and enroll prospective new students.

### Campus Tours

Prospective students and their parents are encouraged to visit the campus for an orientation tour and to discuss enrollment with University staff. Campus tours can be arranged by contacting the Recruitment Office at (410) 651-6410.

## FRESHMAN ADMISSIONS REQUIREMENTS

### General Policies

As a condition of admission, prospective freshmen will be expected to have graduated from an accredited high school and have successfully completed an academic program of study which includes the following minimum course requirements:

- Four Years of English;
- Three years of social science/history;
- Two years of laboratory-based science.
- Three years of mathematics, including Algebra I, II and Geometry;
- Two years of a foreign language.

Applicable courses pertinent to the above may include the following:

### Mathematics

Advanced Topics, Algebra I, Algebra II, Analysis (or Elementary Analysis), Analytic Geometry, Calculus, Computer Math, Functions, Geometry, Mathematics II, Mathematics III, Mathematics IV, Matrices, Probabilities, Modern Geometry, Probability and Statistics, S.M.S.G., Modern Math, Trigonometry, Computer Science (only with a prerequisite of at least two years of Algebra/Geometry).

### Science

Anatomy, Physiology, Biology, Chemistry, Earth Science, Physical Science, General Science, Genetics, Geology, Laboratory Science, Physics, Zoology, Botany, Environmental Science, and Astronomy.

### Social Studies

Afro-American Studies, American History, Ancient History, Anthropology, Civics-Citizens, Contemporary Issues (C.I.S.S.), Cultural Areas, Cultural Heritage, Economics, Ethics (if considered to be Religion, not counted), European History, European History and Survey,

Far East, Pan American, Geography, Government, Humanities, International Affairs, Medieval History, Modern History, Modern Problems, National Government, Philosophy, Political Science, Problems of Democracy, Problems of 20th Century, Psychology, Sociology, State History, U.S. History, World Civilization, World Cultures.

### High School General Equivalency Diploma (GED)

Applicants for admission, who have earned a GED, are accepted for admission provided they obtain an average standard score of 50 with no score under 40, or if all standard scores are above 45 on the exam.

### Graduates of Non-Accredited Maryland High Schools

Applicants are required to have competitive SAT/ACT test scores and commendable grades. Students who meet entrance requirements are admitted on condition. The conditional status is removed upon the completion of 24 semester hours and a GPA of 2.00 or higher.

### Admissions Procedures

Prospective students are required to complete an Application for Admission and pay a \$25.00 non-refundable application fee. Applicants must also have submitted official secondary and/or college transcripts and official SAT or ACT test scores.

### When to Apply

Applications must be received in sufficient time to be properly evaluated. The application priority date for the fall semester is July 15<sup>th</sup>. For the spring semester, December 1 is the application priority deadline. Applications can be processed over the web at [www.umes.edu](http://www.umes.edu). Applications received beyond these dates will be considered on a space available basis. Decisions for admission are made on a rolling basis throughout the year.

### Enrollment Deposit Fees

Applicants who receive an offer of admission are required to submit a \$25.00 enrollment deposit within a specified period after the offer is made. This fee is applied towards the students' fees for the upcoming semester. Deposit refunds are made upon written request received before June 1 for fall and December 1 for spring semesters.

### Senior High School Grades

Normally, cumulative grade point averages are based on grades earned through the eleventh grade. When it appears that mid-year grades for the senior year of high school may affect a student's admission status, the grades will be requested and considered before a final admission decision is made. Once admitted, all students must submit final transcripts verifying graduation.

## CATEGORIES OF UNDERGRADUATE ADMISSIONS

### Freshmen

#### Regular Admission:

Applicants must have scored competitively on the SAT or ACT test and must have earned commendable grades in high school academic subjects. Exception: Students with

these qualifications admitted from non-accredited Maryland high schools will be granted conditional admission.

#### Early Admission:

Although UMES generally requires applicants to earn a high school diploma prior to their first registration, UMES will admit well-qualified students without this documentation provided the student

- has a minimum "B"/(3.0) average in academic subjects;
- is within four semester courses (two Carnegie Units) of high school graduation, and
- has the endorsement of parents, the high school, and superintendent of schools, when appropriate.

#### Concurrent Enrollment Admission:

Local high school students who satisfy the requirements for an early admission, but wish to attend UMES while continuing to be enrolled at their high schools, may do so provided they have the approval of their parents and the high school principal. Fees are charged at the same rate as for undergraduate students.

#### **Special Students**

Applicants who qualify for admission but do not desire to work towards a baccalaureate degree may be admitted as non-degree seeking or special students. Special students who have received a baccalaureate degree are advised that no credit earned while enrolled as special students may be applied at a later date to a degree program. These post-baccalaureate students may enroll in undergraduate courses for which they possess the necessary prerequisites, but may not enroll in courses restricted to degree seeking students only. Non-degree seeking (special) students who do not have a baccalaureate degree must submit transcripts and meet regular admission standards. Applicants who do not qualify for admissions, but desire to take some skills courses may be allowed to enroll in such courses if prior permission from the chairperson of the department in which the courses are located is obtained.

#### **Veterans**

UMES is fully accredited for accepting veteran students and assists them in their certification. Credit is given for any work done during the period of service which is related to the major field of study.

A Certificate of Eligibility must be submitted to the Office of Admissions and Registration when the veteran reports for registration. Benefits to which veterans are entitled will be sent monthly directly to them by the Veterans Administration after proper certification has been obtained. Veterans are responsible for the payment of all fees and expenses at the same time as all other students. The Admissions Office coordinates veteran services, and veterans are advised to contact the office for further information on admissions, tutorials, and special programs.

#### **Transfer Students**

A student who has attended any accredited institution of higher education and has earned twelve (12) or more credit hours will be considered as a transfer student.

An official high school transcript is required of students who have earned less than 28 semester hours. SAT or ACT scores are required unless students have been out of high school two years or more.

A student must be in good judicial standing in order to be considered for admission to the University.

#### **International Students**

UMES is certified by the Immigration and Naturalization Service for acceptance and certification of international students, through the Student and Exchange Visitor Information System (SEVIS).

International students should apply well in advance (a six-month period is recommended) of the beginning of the fall or spring semester in the prescribed manner. The application must be completed in all respects and must be accompanied by proof of financial self-sufficiency and knowledge of English. Students from non-English speaking countries should forward the results of the Test of English as a Foreign Language (TOEFL). This test is administered by Educational Testing Service, Princeton, New Jersey 08450.

International students must request their high school, secondary school, and/or other institutions of higher education to forward copies of transcripts, mark sheets, diplomas, or degrees directly to the Office of Admissions. Documents attached to the application will not normally be accepted unless certified by United States Officials abroad. International students must receive permission from the Immigration and Naturalization Service in order to accept off-campus part-time employment in the United States. An international student will receive an I-20 Form only after acceptance to the University which will enable the securing of the proper visa from the Office of the American Consulates abroad. The twenty-five dollar (\$25.00) processing fee should be submitted with the application and should be in American check or currency.

#### **Direct Transfer and Articulation Agreements\***

UMES fully ascribes to the Maryland Higher Education Commission (MHEC) Articulation Agreement. UMES has direct transfer agreements with all Maryland community colleges, many out-of-state community colleges, and all University of Maryland System institutions. Direct transfer allows automatic admission and transfer of all college level credits of a "C" or better.

\*See [Appendix](#) for full text of applicable MHEC regulations.

## TUITION, FEES, AND EXPENSES

Fee charges are subject to change with approval by the Board of Regents. All charges are announced in advance. A schedule of charges is available from the Office of Administrative Affairs.

Notwithstanding any other provision of this or any other University publication, the University reserves the right to make changes in tuition, fees, and other charges at any time such charges are deemed necessary by the University and the University System of Maryland Board of Regents.

For the 2003-04 academic year, the fee structure will tentatively be as follows:

### FULL-TIME TUITION AND FEES

*Students enrolled for twelve (12) or more credit hours pay the full amount of fixed charges.*

#### Maryland Residents

	Per Semester	Per Year
<b>Fixed Charges</b>		
Tuition	\$1781.50	\$3563.00
Athletic	175.00	350.00
Student Activities	36.00	72.00
Recreational Activities	300.00	600.00
Student Union	200.00	400.00
Technology Fee	60.00	120.00
<b>Total Fixed Charges</b>	<b>\$2552.50</b>	<b>\$5,105.00</b>
Board (Meal Plan)	1,250.00	2,500.00
Lodging	1,565.00	3,130.00
<b>Total Maryland Resident</b>	<b>\$5,367.50</b>	<b>\$10,735.00</b>

#### Non-Maryland Resident

	Per Semester	Per Year
Tuition	4,449.00	8,898.00
Mandatory Fees	771.00	1,542.00
Board (Meal Plan)	1,250.00	2,250.00
Lodging	1,565.00	3,130.00
<b>Total Non-Maryland Resident</b>	<b>\$8,035.00</b>	<b>\$16,070.00</b>

**\*All Fees are subject to annual adjustments.**

### ADDITIONAL CHARGES

Residential Complex	150.00	300.00
Single Room Charge	50.00	100.00
HAWK Landing	150.00	300.00

Late Registration Fee 50.00 (PER REGISTRATION PERIOD)

**NOTE:** *Lodging is for students residing on-campus. Students living in the student Residential Complex efficiency units and Hawks landing add a \$300 fee per year. Students wishing to have a single room should add \$100 per year. Students residing in the traditional Residence Halls and the Student Apartments are required to board in the Dining Hall.*

## PART-TIME TUITION AND FEES

***Part-time students are required to pay the undergraduate Part-time rates per credit hour as listed below.***

Undergraduate rate per credit hour (eleven credits or less)  
**Maryland Residents**

Graduate	\$187.00 per credit hour
Undergraduate	
(11 cr. Hrs. or less)	148.00 per credit hour
Student Fee	30.00 per semester
Technology Fee	10.00 per semester

### Non-Maryland Resident (Part-time)

Graduate	\$339.00 per credit hour
Undergraduate	321.00 per credit hour
Student Fee	30.00 per semester
Technology Fee	10.00 per semester

**Note:** Notwithstanding any other provision of this or any other University publication, UMES reserves the right to make changes in tuition, fees and other charges at any time such changes are deemed necessary by the University System of Maryland Board of regents.

### Supplementary Charges/Fees (all students applicable)

Commencement Fee	\$35.00
Credit-by-examination Fee	
Per Semester Hour Credit	30.00
Application Fee	25.00
Enrollment Fee	25.00
Posted Check	25.00
Laboratory Fees (per course)	25.00
Library (varies)	
Lost Bar Code	0.50
Overdue Book (per day)	0.50
Lock Replacement Charge	
Lost Keys	100.00
Total Lock Replacement	250.00
Lost HAWK EXPRESS Card	15.00
Damaged HAWK EXPRESS Card	5.00
Motor Vehicle Registration	20.00
Late Registration Fee	50.00
Change in Registration (made after the end of the registration period)	1.00
Transcript of Academic Record*	FREE

\*No transcript of a student's record will be furnished to any student or alumni unless the student's financial obligations to the University have been satisfied.

## GENERAL REGULATIONS REGARDING PAYMENT OF FEES AND EXPENSES

### Payment by Check or Money Order

All checks and money orders should be made payable to UMES for the exact amount. In most cases, payment should be made at the Office of Student Accounts, unless otherwise instructed.

### **Returned Checks**

Any checks returned for any reason will result in a returned check fee of \$25.00. The student's account will thereafter be stamped "No Personal Checks" and all future payments must be paid by cash, money order, credit card (Visa, MasterCard), or cashier's check.

### **Payments from Scholarship Funds**

A student awarded a Legislative Scholarship and/or grant will have the amount of the award applied towards his/her account in the Office of Student Accounts. However, all fees not covered by the scholarship/grant must be paid by the scheduled dates of payment, or the student will be withdrawn from the University. This applies to veterans as well.

No student whose account is in arrears will be admitted to classes or to the Dining Hall. Any student indebted to the University is likewise prevented from having a degree conferred or a transcript released until the total debt is cleared.

### **Collection Procedures of Past Due Accounts**

In accordance with State of Maryland regulations, past due accounts are subject to a collection fee of 17% and are forwarded to the Maryland State Central Collection Unit for further action.

### **Refund of Fees for Change in Registration**

Students who officially change their enrollment status from full-time to part-time (eight hours or less) by dropping a course or courses will be eligible for a refund in accordance with the following.

1. If the change in enrollment status occurs during the first two weeks following the beginning of classes, fees will be assessed on the basis of the appropriate part-time fees plus 25% of the difference between the full-time and the appropriate part-time fees.
2. The effective date of the change in registration is the date the change is filed in the Office of the Registrar. No refund will be processed for changes in registration which occur after the first two weeks of classes.

### **Property Damage Fees**

Students will be charged for damage to property or equipment. Where the responsibility for the damage can be fixed, the student will be billed. Where responsibility can not be fixed, the cost of repairing the damage or replacing equipment will be prorated among all individuals held responsible.

## **IN-STATE STATUS**

### **General Policy**

It is the policy of the University of Maryland Eastern Shore to grant in-state status for admission, tuition, and charge-differential purposes as defined by the University of Maryland Policy on Student Residency Classification for Admission, Tuition, and Charge-Differential Purposes (see complete policy below).

### **Procedures for the Determination of In-State Status for Admissions, Tuition, and Charge-Differential Purposes**

An initial determination of in-state status for admission, tuition, and charge-differential purposes will be made at the time a student's application for admission is under consideration. The determination made at that time, and any determination made thereafter, shall prevail for each subsequent term until the determination is successfully challenged in a timely manner.

A student may request a re-evaluation of residency status by filing an Application for Change in Residency Classification (hereinafter referred to as Application). A student must meet the requirements for in-state status and submit a completed Application (including all documents therein) by the last day of late registration for the term the student wishes to be classified as in-state. No change in status requested by the student shall be given retroactive effect prior to the term for which a timely Application was filed. A student may file only one Application per term.

A determination of in-state status is valid only if a student actually enrolls in the term in question. Determinations which are made in cases where the student does not actually enroll are not valid for a subsequent term, with respect to which, requirements must be independently satisfied and a new and timely Application submitted.

### **Change of In-State Status**

Students classified as in-state for admission tuition and charge-differential purposes are responsible for notifying the Office of Admissions in writing within 15 days of any change in their circumstances which might in any way affect their classification.

## **University of Maryland Policy on Student Residency Classification for Admission, Tuition and Charge-Differential Purposes**

### *I. POLICY*

It is the policy of the Board of Regents of the University of Maryland System to recognize the categories of in-state and out-of-state students for purposes of admission, tuition, and charge differentials at those institutions where such differentiation has been established. The student is responsible for providing the information necessary to establish eligibility for in-state status.

A. Students who are financially independent or financially dependent, as hereinafter defined, shall have their residency classification determined on the basis of permanent residency. For purpose of this policy, a permanent residence is a person's permanent place of abode as determined by the following criteria. Such students will be assigned in-state status for admission, tuition, and charge differential purposes only if the student (if financially independent) or the student's parent, guardian or spouse (in the case of a financially dependent student):

1. Owns or rents and occupies living quarters in Maryland. There must exist a genuine deed or lease in

the individual's name reflecting payments/rents and terms typical of those in the community at the time executed. Persons not having such a lease may submit an affidavit reflecting payments/rents and terms as well as the name and address of the person to whom payments are made which may be considered as meeting this condition. As an alternative to ownership or rental of living quarters in Maryland, a student may share living quarters in Maryland which are owned or rented and occupied by a parent, legal guardian, or spouse;

2. Maintains within Maryland substantially all personal property;
3. Pays Maryland income tax on all earned taxable income including all taxable income earned outside the State;
4. Registers all owned motor vehicles in Maryland in accordance with Maryland law;
5. Possesses a valid Maryland driver's license, if licensed, in accordance with Maryland law;
6. Is registered in Maryland, if registered to vote;
7. Receives no public assistance from a state other than the State of Maryland or from a city, county or municipal agency other than one in Maryland; and,
8. Has a legal ability under federal and Maryland law to reside permanently without interruption in Maryland.
9. Is not residing in the State of Maryland to primarily attend an educational institution.

B. In addition to meeting all of the criteria set forth in the preceding section, to qualify for in-state status on the basis of permanent residence, a student or, if the student is financially dependent, the parent, legal guardian, or spouse, must have resided in Maryland for at least twelve (12) consecutive months immediately prior to and including the last date available for late registration or the forthcoming semester or session and must have continuously resided in Maryland during the period.

C. If a student is financially dependent as hereinafter defined, the permanent residence of the parent, guardian, or spouse on whom he/she is dependent shall determine in-state status. If a student is financially independent, the permanent residence of the student shall determine in-state status.

D. In-state status based on permanent residence is lost at any time a financially independent student establishes a permanent residence outside the State of Maryland. If the parent, guardian, or spouse through whom a financially dependent student has attained in-state status establishes a permanent residence outside the State of Maryland, the in-state status is lost. In each instance, the student will then be

assessed out-of-state tuition and charges beginning the next semester or session.

E. In addition, the following categories of students shall have in-state status:

1. A full-time or part-time (at least 50 percent time) permanent employee of the University of Maryland System;
2. The spouse or dependent child of a full-time or part-time (at least 50 percent time) permanent employee of the University of Maryland System;
3. A full-time active member of the Armed Forces of the United States whose home of residency is Maryland or one who resides or is stationed in Maryland, or the spouse or a financially dependent child of such a person; and
4. A Graduate Assistant.

Students not entitled to in-state status under the preceding paragraphs shall be assigned out-of-state status for admission, tuition, and charge-differential purposes.

## **II. PROCEDURES**

A. The date on which conditions for in-state classification must be met is the last published date to register for the forthcoming semester or session. In those instances where an entering class size is established and where an application deadline is stated, institutions may require that conditions for in-state classification must be satisfied as of the announced closing application date.

B. A change in status must be requested in writing by a student prior to the last published date of registration in order to be effective for the semester or session. A student applying for a change of in-state status must furnish appropriate documentation as required by the institution.

C. The student shall notify the institution in writing within fifteen (15) days of any change of circumstances which may alter in-state status.

D. In the event incomplete, false, or misleading information is presented, the institution may, at its discretion, revoke an assignment of in-state status, in addition to other disciplinary actions provided for by the institution's policy.

F. Each institution of the University of Maryland System shall develop and publish additional procedures to implement this policy. Procedures shall provide that on request the President or designee has the authority to waive any residency requirement as set forth in IA and IB, if it is determined that the student is indeed a permanent resident and application of the criteria creates an unjust result. Such procedures must provide for appeal to the President or designee of any residency determination using a system-wide petition form. These procedures shall be filed with the office of the Chancellor.

### **III. DEFINITIONS**

A. Financially Dependent: For purposes of this policy, a financially dependent student is one who is claimed as a dependent for tax purposes, or who receives more than one-half of his or her support from a parent, legal guardian, or spouse during the twelve (12) month period immediately prior to the last published date for registration for the semester or session. If a student receives more than one-half of his or her support in the aggregate from a parent and/or legal guardian and/or spouse, the student shall be considered financially dependent on the person providing the greater amount of support.

B. Financially Independent: A financially independent student is one who (1) declares himself or herself to be financially independent as defined herein; (2) does not appear as a dependent on the Federal or State income tax return of any other person; (3) receives less than one-half of his or her support from any other person or persons; and (4) demonstrates that he or she provides through self-support one-half or more of his or her total expenses.

C. Parent: A parent may be a natural parent, or, if established by a court order recognized under the law of the State of Maryland, an adoptive parent.

D. Guardian: A guardian is a person so appointed by a court order recognized under the law of the State of Maryland.

E. Spouse: A spouse is a partner in a legally contract marriage.

- a. Support: (1) Except as set forth in (2) below, support shall mean financial or material support, including gifts, services, and trusts, including income or benefits derived from one's family. (3) Support shall not include grants, stipends, awards, and benefits (including Federal and State student aid, grants, and loans) received for the purpose of education or by virtue of an individual's status or prospective status as a student. Such resource shall not be considered in calculating a student's financial dependence or independence.

An initial determination of in-state status for admission, tuition and charge-differential purposes will be made by UMES at the time a student's application for admission is under consideration. The determination made at that time, and any determination made thereafter, shall prevail in each semester until determination is successfully challenged. The deadline for meeting all requirements for in-state status and for submitting all documents for reclassification is the last day of late registration for the semester the student wishes to be classified as an in-state student.

### **STUDENT LIFE**

#### **OFFICE OF STUDENT ACTIVITIES**

The Office of Student Activities manages and implements a number of student activities based on student interest and input, both on and off campus. These activities include dances, intramural sports and recreation, plays, movies, lectures, bus trips, leadership training, homecoming, ethnic festival, and SpringFest.

#### **STUDENT SERVICES CENTER**

The Student Services Center or SSC is the hub of campus life on the UMES campus. The Center offers a variety of recreational and educational activities and employment opportunities for UMES students and student organizations. Standing 147,000 square feet, the length of two football fields, the two-story building is the home of the Student Government Association, twenty-five registered student organizations, bookstore, game room, bowling center, dining hall, snack bar, lounges, resource center, ballroom, theatre, and campus post office. In addition, several administrative and support offices are located in the facility, including offices for the Vice President for Student Affairs, Assistant Vice President for Administrative Affairs, Student Activities, New Student Advising, International Students Services, Career Services, and Auxiliary Enterprises. The SSC is filled with activity during a typical day and is the site for a number of student organization meetings, lectures, plays, and movies. The Center is also equipped with an Automatic Teller Machine (ATM), sponsored by the State Employees Credit Union of Maryland.

#### **Facilities and Services in the Student Services Center**

Automatic Teller Machine (ATM)  
Ballroom  
Bookstore  
Career Services and Testing Center  
Conference and Meeting Rooms  
Counseling Center  
Food Vending Services  
Gameroom  
Bowling Center  
Student Government Suite  
Student Organization Office Suite  
Theatre  
Student Lounges  
University Chapel  
Dining Hall  
Snack Bar  
Resource Center  
Auxiliary Enterprises

#### **Student Organizations**

All official extra-curricular organizations, activities, and enterprises of students on the UMES campus operate under the broad guidance of the Director of Student Activities. The following are many of the organizations currently functioning on the UMES campus:

Beta Kappa Chi  
Campus Pals Organization  
Caribbean International Club  
Criminal Justice Society  
Drama Society  
Education Club  
Eta Rho Mu  
Engineering Technology Society  
Groove Phi Groove Social Fellowship  
Human Ecology Club  
Industrial Arts Club  
International Students Organization  
Math and Computer Science Club  
Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS)  
NAACP  
National Association of Black Accountants  
National Student Business League  
Panhellenic Council  
Physical Education Club  
Physical Therapy Association  
Physical Therapy Club  
Pom-Pom Squad  
Poultry Science Club  
Recruitment Club  
Rehabilitation Services Student Association  
Social Work Student Association  
Student Activity Advisory Board  
Wesley Foundation

#### **Student Government Association (SGA)**

Made up of elected student officers and advised by the Office of Student Activities, the SGA is the official undergraduate student governing body on the UMES campus. The SGA promotes the interests and welfare of the university community and encourages student participation in the solution of student concerns, while cooperating with the faculty and staff in the regulation and promotion of student activities and development.

#### **Student Publications**

The Student Newspaper, *The HAWK'S Message* and the *Yearbook* are generated through student fees, appropriated by the SGA. The *HAWK'S Message* is published monthly, while the *Yearbook* is an annual publication. Students volunteer as editors, photographers, and writers on both publications. For information on how to volunteer for either publication, contact the SGA or the Office of Student Activities.

#### **The Panhellenic Council**

The Panhellenic Council is made up of representatives of the National Greek Letter Organizations of UMES. The Council makes recommendations to the administrative bodies of the UMES campus regarding the activities of the National Greek Letter Organizations on the campus. One of its chief functions is to stimulate and guide each individual

Greek Letter Organization so that the best interests of the University community will be served.

#### **Fraternities and Sororities**

National Greek Letter fraternities and sororities are represented by chapters of the following organizations on the UMES campus:

Alpha Kappa Alpha  
Alpha Phi Alpha  
Delta Sigma Theta  
Omega Psi Phi  
Phi Beta Sigma  
Sigma Gamma Rho  
Zeta Phi Beta

Any sorority or fraternity which permits any type of activity incidental to the initiation of pledges during the stated period will be suspended.

#### **SERVICES**

##### **University Counseling Center**

The University Counseling Center provides individual counseling to all students who seek its services. The Counseling Center is committed to helping college students in many different ways, from assisting them in solving social and personal adjustment problems, to counseling students unsure about choices of majors and careers, but mental health counseling is its primary function. The counseling staff is made up of experienced professionals.

All discussions between a student and a counselor are kept confidential. Testing is provided when appropriate. Services are provided at no cost to all currently enrolled students at UMES (student fees paid at the same time as tuition cover Counseling Center services).

##### **Career Services/Cooperative Education**

The Office of Career Services/Cooperative Education assists undergraduate and graduate students, as well as alumni, with all aspects of career development. The staff provides individualized career counseling, career assessment, gathering of occupational information, utilization of computerized career guidance programs, preparation of resumes, interviewing techniques, and other job search strategies.

Within the Career Services Office are maintained computerized job listings of current employment, employment directories, lists of prospective employers, and many other career related resources. Referrals and on-campus interview services are also available to students and alumni registered with this office. The Office also supplies information about internships, summer jobs, and graduate/professional assistance. In addition, the Office provides information about and administers for the University the following tests: Graduate Record Examination (GRE), Law School Admission Test (LSAT), (MAT) Miller Analogy Test, Professional Assessments for Beginning Teachers (PRAXIS), (MCAT) Medical College Association Test, and the College Level Examination



Program (CLEP). All students are strongly encouraged to register with the Office prior to graduation in order to establish a Credential Portfolio file and become eligible for the services provided by the Office of Career Services and Cooperative Education. **For further information please call 410-651-6447.**

### **Services for Students with Disabilities**

The Office of Disabled Student Services (DSS) assures the commitment of the University of Maryland Eastern Shore to providing access and equal opportunity to students with disabilities. Integration into the mainstream of campus life and empowerment are top priorities of DSS. Although there is no special curriculum for students with disabilities, DSS is designed to assist students in maximizing their academic potential. DSS focuses on supporting the positive development of students with disabilities. **For further information please call 410-651-6461**

### **The Student Health Center**

The Student Health Center provides basic health care for all students, residents and commuters, currently enrolled at UMES. The Health Center staff includes a physician, nurse practitioners, and nursing staff that provide diagnosis, treatment, counseling, and referral for all health needs.

There is no charge for office visits or for tests and treatment done at the Health Center. Students who are referred off campus to other medical facilities (for x-rays, more extensive testing, etc.) are responsible for any expenses incurred. Likewise, costs for prescriptions are the responsibility of the student.

The University does not provide health insurance for UMES students. The Student Health Center provides information about special student-rate insurance plans for those needing health insurance coverage. It is highly recommended that all students have health coverage.

Hours for the Health Center during the fall and spring semesters are 8:00 AM to 5:00 PM Monday through Friday. For medical emergencies after these hours, students may seek assistance through Public Safety or Residence Life staff members.

### **AUXILIARY ENTERPRISES**

The Auxiliary Enterprises office issues the HAWK EXPRESS Card, maintains the HAWK EXPRESS Accounts, accepts payments for the HAWK EXPRESS Phone Service, and encodes the HAWK EXPRESS card for use at the HAWKMAT and the library.

### **Hawk Express Card**

The HAWK EXPRESS Card is the official UMES ID card. Faculty, staff and students are issued their first card at no cost. The HAWK EXPRESS Card allows students access to athletic events, the library, and The Plateau (boarding students). Students must carry their HAWK EXPRESS Card at all times for prompt identification. It is a permanent card and is not transferable. A penalty fee of \$25.00 is charged to individuals who allow another person to use

their card. The HAWK EXPRESS Card is the property of the University of Maryland Eastern Shore and must be returned upon request. The HAWK EXPRESS Card is available in the Auxiliary Enterprises Office located on the second floor, Student Services Center.

### **Hawk Express Account**

The HAWK EXPRESS Card can be used as a declining balance or debit card. When a student places money on the card, it can then be used to make purchases, pay room deposits, pay parking tickets and give boarding students access to The Plateau. When used as a debit card, the HAWK EXPRESS Card can be used at The Plateau, HAWK'S Nest, OASIS, Office of Residence Life, University Police, University Print Shop, Student Development Center, Bookstore, Health Center and the HAWK CENTER.

### **Hawk Express Phone Service**

The HAWK EXPRESS Phone System (HEPS) is a debit-based system that requires students to place funds into their HEPS account before making local or long distance calls. Before each call is made, the system tells the student how much money is available in his/her HEPS account. If a HEPS account is nearing depletion, the system will advise the caller during an active call. When all funds are exhausted, the call will end.

Currently, HEPS charges for local calls at the rate of 15 cents for the first hour and a penny for each additional hour. Long distance calls are 14 cents per minute.

### **HAWKMATS Laundry Facilities**

Modern card operated laundry facilities are available throughout the residential areas. The HAWK EXPRESS Card must be used at HAWKMATS laundry facilities; coins are not accepted in the machines.

### **Student Check Cashing**

The HAWK CENTER functions as an agent for the Office of Student Accounts and administers check-cashing services for registered UMES students. Services are provided throughout the academic term, in the HAWK CENTER located on the second floor of the Student Services Center. Registered students may cash one or more checks or money orders, per service day, of which the totals may not exceed \$50.00; there is a (\$1.00) service charge on all checks and money orders. Students who have had checks returned for insufficient funds will lose check-cashing privileges indefinitely. Contact the HAWK CENTER at 410-651-7747 for detailed information regarding check cashing and service hours.

### **The Bookstore**

All textbooks for college courses are available from the UMES Bookstore, located on the first floor in the Student Services Center. The store sells a wide selection of merchandise that a college student may need: notebooks, computer disks, office supplies, greeting cards, posters, toiletries, gift and novelty items, and official UMES sportswear and paraphernalia. Used textbooks are also available. The bookstore accepts most major credit cards, and the Hawk-Express Card.

### **Post Office**

The campus post office handles mail and parcel post packages that come to campus via the U.S. postal system and mail sent between offices and persons on-campus. The post office does sell postage stamps, but because it is not an official U.S. Post Office, money orders cannot be cashed or purchased there. All students residing on campus may sign up for a mailbox during registration or at the campus Post Office that is located in the Student Services Center. Students must report to the Post Office within 3-days following registration to claim their box assignments. The lobby hours for access to mailboxes are 8:00 a.m. – 5:00 p.m., Monday through Friday; Saturday 8:00 a.m. – 12 noon. There is no window service on Saturdays. During the summer, Saturday hours are subject to change starting in the month of May. Students are held responsible for all communications sent to them by UMES.

### **Student Security**

The University regularly hires and trains students to assist in campus security. Students work at dances, athletic events, pool parties and the library. They also monitor parking areas and provide escorts services as needed. Students may work a maximum of 20 hours a week when school is in session. For more information, contact the Office of Auxiliary Enterprises at (410) 651-7744.

### **Escort Services**

Escort services can be provided students during the evening hours by Student Security.

### **Vending Services**

Food, drink, ice, and laundry vending is available in each housing community. These services are reasonably priced and well maintained with up-to-date machinery.

### **University Dining Services**

All students living in a traditional residence hall or the Student Apartments (except those in efficiency units) must purchase the board plan (meals) with the campus food service. Students living off campus can purchase a meal plan also. University Dining Service offers three meals daily Monday through Saturday and two meals (brunch and dinner) on Sunday. When students subscribe to the meal plan, their student HAWK EXPRESS Cards are validated and used for entry into the The Plateau. Guests may also eat in the The Plateau on a cash basis. Meals at the The Plateau are prepared by qualified personnel, and there are many food options available. Lunches and dinners offer several entrees and deli-bar foods, as well as a salad bar with a variety of items. During the week, many specialty bars are offered as well.

## **UNIVERSITY HOUSING/RESIDENCE LIFE**

There are eight (8) residential communities in the University's array of housing options. Combined, these facilities accommodate 2100 residents. Housing options range from traditional double loaded corridor type to

apartments with single bedrooms. Also available as a unique option are apartments with full kitchens. Students who reside in the efficiency apartment communities are not required to purchase a meal contract. The Office of Residence Life (ORL) oversees the operation of all university housing and strives to promote a living environment which respects the privacy and security of on-campus residents and perhaps more importantly, encourages the creation of good academic and social habits. All residential facilities have policies which incorporate quiet hours for the purpose of study and rest and hours when non-disruptive group activities may take place.

In order for students to acquire on-campus lodging, a completed application, room deposit, and housing contract must be filed with Residence Life preceding the upcoming semester in which housing is sought. The deposit is applied towards the student's account to assist in covering future charges. It is refundable by notifying the ORL in writing by August 1 for the fall semester and January 1 for the spring semester. Failure to notify the ORL prior to these dates will result in a forfeiture of the deposit. Information about University housing and how to reserve an accommodation may also be obtained from the UMES website at [www.umes.edu/reslife](http://www.umes.edu/reslife).

The Housing Contract obligates students to the conditions set forth in the Residence Life Contract Booklet. This agreement basically states that as campus residents, students are responsible for the room, furnishings, and good citizenship policies while residing in a University housing facility. A complete copy of the Residence Hall Agreement is available from the ORL or on-line. Failure to follow these terms may result in fines, university judicial sanctions, or eviction from the residence halls.

Residence Hall visitation policy varies according to class status, residence halls, day of the week, and time. Freshmen may only have inter-room visitation by the opposite sex on weekends during specified hours; weekday visitation is allowed in common areas of each residence hall. For upperclassmen (sophomores, juniors and seniors), room visitation is allowed every day from noon to midnight, with extended hours on weekends. Overnight guests of the same sex are permitted in each hall. Overnight guests of the opposite sex are not permitted. All overnight guests must be registered with the residence hall management office which serves the specific housing area being visited.

### **Housing Options**

There are three types of University housing available: traditional halls, apartment suites, and efficiency units. The residents of traditional halls are all same sex and have a similar class standing. An apartment suite has five single rooms, a common living room and a bath facility. An efficiency unit has two- three double bedrooms, a common living room, kitchen and bath facilities.

## **HOUSING COMMUNITIES**

### **Traditional:**

Murphy Hall - freshman females.  
Murphy Annex – upperclass co-ed Honors.

Nuttle Hall - freshman males or females (placement changes upon need).

Wicomico Hall - freshman males.

Court Plaza Hall – freshman males.

University Terrace – freshman females.

Harford Hall – freshman females.

#### **Apartment Suites:**

Student Apartments - upperclass, males/females.

#### **Efficiency Units:**

Student Residential Complex - upperclass, males/females.

Hawks Landing - upperclass, males/females.

#### **Rooms**

Rooms in each residence hall are equipped with basic furnishings: beds, dressers, desks, chairs, and closets. Cable TV, plus HBO, telephone and computer connections are in each room. Telephone service connects students to all campus extensions at no cost. Long-distance service (including international dialing) is available from residence hall room phones by Hawk Express phone service. Students must maintain money in their Hawk accounts to use the service and must supply their own telephone. UMES supplies active telephone and internet connections in each room.

#### **End of Semester Check-out**

Students must move out of the residence halls at the end of each semester. There are many established local storage companies which offer reasonable rates for short and long-term storage in the surrounding community. Where students are permitted to leave personal property in the residence hall between fall and spring semester, it is not advised to do so.

#### **Area Directors**

Professional staff with bachelor's and/or master's degrees manage University housing and facilitate educational and social programming to strengthen the on-campus experience. The Assistant Director and Director are housed in the central housing office and are responsible for effectively administering all aspects of the campus housing operation.

#### **Residential Resource Centers**

The Residential Resource Center program is the academic component of the Office of Residence Life. The centers concentrate on providing the space, tools, equipment, and personal assistance needed for students to become academically successful. Statistically, students spend the majority of their on-campus time in residence halls; therefore, the need exists for academic support areas in each residential complex. The location of each center lends itself well to convenient service and liberal hours of operation. The idea of Resource Centers in residence halls enables all housing facilities to become places for living and learning.

Services such as computers, printers, typewriters, media equipment, desktop publishing, tutorials, educational seminars, keyboard training, software application

workshops, and document editing are provided for the student population. These services play a major role in the academic and personal development of our students.

#### **Conferencing**

Residence Life also assumes the leadership role of marketing University facilities to outside groups for workshops, conferences, reunions, sports, and other enrichment camps. These ventures require close coordination of services provided by other campus units, i.e. recreational, health, food, and multi-purpose meeting spaces. Income derived from these off-season ventures significantly assists Residence Life with its operational expenditures.

#### **Judicial System**

A secondary activity facilitated from the Residence Life operation is the administering of the University's Judicial System. Enforcement of good behavior policies and the laws of "Due Process" are the primary focus of this student service function.

The UMES Judicial System is designed to assure due process, with the speedy and constructive resolution of cases and controversies. A humanistic approach to discipline is employed whenever possible. It is intended that this judicial system will operate on the principle that justice will best be served by promoting the development of self-knowledge and self-discipline, expressed in socially desirable ways rather than harmful, destructive or immature attitudes or behaviors.

The Student Code of Conduct outlines rules and regulations relative to student conduct and housing, and is applicable to all students, as well as to recognized and registered student and Greek-letter organizations.

The authority to administer the Student Code of Conduct and its judicial system is delegated to the Chief Student Affairs Officer (CSAO), the Vice President for Student Affairs. The Campus Judicial Board adjudicates disputes over complaints of violations of these rules and regulations.

#### **UMES Code of Student Values**

The University of Maryland Eastern Shore claims certain foundational principles of values upon which its entire existence stands. All students at the University of Maryland Eastern Shore have the duty to observe, uphold and accept these values as standards of conduct. These include honor, personal and academic integrity, respect for the personal and property rights of others, justice, freedom, diversity, leadership, civility, spirituality, and loyalty to the University. We have established this Code of Student Values, which forms the model of conduct for student members of our academic community.

#### **IMPORTANT UNIVERSITY REGULATIONS WHICH APPLY TO ALL STUDENTS**

The following behavior may result in referral to the UMES campus Judicial System for appropriate action. Typically, disciplinary sanctions will be imposed not only for

individual misconduct that demonstrates a disregard for institutional behavior standards, but also for conduct that indicates disregard for the rights and welfare of others as members of an academic community. Such conduct may ultimately call into question the student's membership in the university community, either because he/she has violated elementary standards of behavior necessary for the maintenance of an educational milieu or because his/her continued presence at the University adversely affects the ability of others to pursue their educational goals.

- **Violation of Fire Regulations** - This includes failure to comply with evacuation procedures, tampering with fire-protection apparatus, use or possession of fireworks or firearms, use of open-flame devices or combustible materials which endanger the safety or well-being of the University community, or unauthorized use of electrical equipment.

- **Behavior Which Jeopardizes the Safety or Well-Being of Other Members of the University Community or Persons Coming onto University Property** - This includes physical harassment of, or interference with, fire fighters, police officers, or other persons engaged in the performance of their official duties; physical abuse or threatening physical abuse of any person on University property; and/or forcible detention of any person on University property.

- **Unauthorized Possession, Use, or Distribution of Alcoholic Beverages on or in University Property** - University policy, consistent with State and County Laws, restricts on-campus use of alcoholic beverages in specified areas.

- **Possession, Use, Sale or Distribution of Illegal Drugs or of Drugs for Which the Required Prescription Has Not Been Obtained** - This includes possession, use, distribution, sale, manufacture of, or processing of, illegal or un-prescribed narcotics, drugs, and/or hallucinogenic substances.

- **Destruction, Theft, Attempted Theft or Impairment of Personal or University Property** - Disciplinary action may include a requirement of restitution.

- **Unauthorized Possession or Use of University Keys** - Keys to rooms or buildings on the university campus may be obtained only through official channels.

- **Unauthorized Entry into or Presence in a University Building or Facility** - Except for properly scheduled use, classroom, administration, and recreation buildings are closed to general student use on holidays, Saturday afternoons, Sundays, and after 12:00 midnight during the week. Students may use a building or facility for a specified purpose upon written permission from a member of the faculty, with approval of the academic or administration officer normally having control over such building or facility. Such permission may also be revoked or withdrawn.

- **Plagiarism, Cheating and Other Academic Irregularities** - A student who violates accepted academic procedure may be referred to the Department Chairman or to an Ad Hoc Committee on Academic Dishonesty.

- **Falsification, Forgery or Modification of Any Official University Record** - Identification card, absence excuses, parking stickers, transcripts, examinations, grade cards, admission applications, etc. are all Official University records. Tampering with any of these records may invoke judicial actions.

- **Actions on the Part of Students Which Substantially Obstruct, Disrupt, or Interfere with Non-Academic Activities on University Premises by Members or Authorized Non-Members of the University Community.**

- **Obstruction of, Disruption of, or Interference with Any University Activity of an Academic Nature** - Discipline in the classroom is the responsibility of the faculty member in charge of the class. Misbehavior of a type that interferes with the educational efficiency of a class will be considered sufficient cause for suspending a student from the class. If a student is suspended from class for disciplinary reasons, he/she should report immediately to the Department Chairman. The Department Chair will investigate the incident and will report it to the Academic Dean, who will in turn report it to the Vice President for Academic Affairs to determine whether or not past disciplinary action has been taken against the student. The Department Chair will then write a letter to the student indicating the disposition of the case. The student will be required to present this letter to the instructor who suspended him/her before he/she can be readmitted to class. A copy of this letter will be sent to the Chair of the Student Judiciary Council.

- **Failure to Meet Financial Obligations to the University** - This includes refusal to pay delinquent accounts and use of worthless checks or money orders in payment to the University for tuition board, fees, library fines, traffic penalties, etc.

- **Violations of University Housing Regulations.**

- **Violations of University Campus Traffic Rules and Regulations.**

#### **Suspension of Students and Organizations from University Activities and/or Facilities**

Suspension from University activities and facilities occurs when a student breaks the University's Code of Student Conduct. The person in charge of a unit of the University directly related to the code violation (the person in charge of a department, division, organization building, facility, or unit such as the Dining Hall, Student Union etc.) may recommend suspension of any student or organization from a facility, pending action by the Student Judicial Board, which adjudicates all such incidents and notifies the student(s) of the disposition of the case. A file of such actions is kept in the office of the judicial administrator.

#### **PUBLIC SAFETY**

The Department of Public Safety is responsible for the safety and security of the university community, buildings, vehicles, and equipment on campus. It is the goal of Public Safety to provide a safe and wholesome environment to facilitate the educational mission of the University. The Department is operational 24 hours a day, seven days a week.

#### **Prevention Education**

The Department of Public Safety distributes materials recommended by the National Crime Prevention Council and by Maryland Crime Watch on various topics. Additional information is provided to the university community through lectures, videos, bulletins, and workshops.

#### **Emergency Services**

There are thirteen "blue light" emergency telephones strategically located throughout the university, directly connected to the Department of Public Safety for immediate police response. Elevators have similar emergency phones that are also connected to the Department.

#### **Motor Vehicle Registration**

All motor vehicles operated on campus by UMES students, faculty, and staff must be registered with the Department of Public Safety, regardless of ownership. Motorcycles and motor scooters are included in the policy. Each registered vehicle is issued a parking permit that is valid for one academic year. A small fee is charged for each permit. The 1992 Maryland General Assembly passed legislation requiring all out-of-state students attending the University to secure a Non-Resident permit for the vehicle which is to be operated in the State of Maryland for more than 30 days. There is a fee associated with the permit. Contact the Maryland State Motor Vehicle Administration for details.

#### **Campus Parking**

There is ample parking at UMES; all students living on campus may have their own vehicle. Everyone with a registered vehicle is responsible for knowing the policies for operating motor vehicles on campus and is expected to park in designated areas only. Failure to do so can result in ticketing or towing, depending on the violation. Fines must be paid within 15 days of occurrence, or a late fee will be incurred. Violators who do not pay parking fines will have their tickets forwarded to the State's Motor Vehicle Administration.



## **ATHLETICS**

### **DEPARTMENT OF INTERCOLLEGIATE**

#### **ATHLETICS**

The University of Maryland Eastern Shore is a Division I member of the National Collegiate Athletic Association (NCAA) and a member of the Mid-Eastern Athletic Conference (MEAC). The University sponsors the following sports:

#### Men

Baseball  
Basketball  
Cross Country  
Tennis  
Track & Field

#### Women

Basketball  
Bowling  
Cross Country  
Softball  
Tennis  
Track & Field  
Volleyball

Athletic scholarships are available to qualified student-athletes. All full-time students and prospective full-time students are eligible to try out for teams. Freshmen interested in participating must be cleared by the NCAA Clearinghouse prior to competition. Students can secure the proper forms at their high school counselor's office or by contacting the Compliance Coordinator on campus. Continuing students must meet university progress requirements before being allowed to participate.

#### **Department of Intercollegiate Athletics**

##### **Mission Statement**

The Department of Intercollegiate Athletics has a long history of excellence in promoting athletic competition, academic achievement, and personal development in a supportive environment. The Department strives to maintain this legacy by producing championship caliber teams while providing student-athletes the opportunity and resources to reach their highest potential in all areas of their lives. The University and the Department of Intercollegiate Athletics are committed to the equitable and fair treatment of all student-athletes without regard to race or gender. Emphasis is placed on opportunities for full participation of women in the athletics program.

Through team sports, the faculty and staff seek to develop the student-athlete's interpersonal skills and self-esteem. It is the philosophy of the Athletics Department that self-esteem is key to success in any endeavor and should be fostered in all Departmental activities. Pride in oneself, respect for teammates, and pride in the Institution are actively promoted.

The University of Maryland Eastern Shore's Department of Intercollegiate Athletics emphasizes academics as the primary focus in any student-athlete's life, and assists student-athletes in developing a balance in their social, athletic, and academic pursuits. It is the goal of the Department to produce graduates who are personally and professionally prepared to meet the challenges of the future.

## FINANCIAL AID

The University is particularly sensitive to the financial needs of its student body. Operating on the premise that no student should be denied an education solely because of a lack of financial resources, the University's Office of Student Financial Aid renders assistance to as many students as possible in the form of employment, scholarships, grants, and student loans. Qualifying students may receive funds from one or more of the programs administered by the University and funded from federal, state, and institutional sources. Since student financial aid *is not* automatically renewed, *students must re-apply each year* in order to be considered for assistance.

Since it is the students who gain the benefits of a higher education, it is reasonable to expect students to contribute to the cost of their education to the fullest extent possible.

### How to Apply for Financial Assistance

There are essentially two types of financial assistance: *need-based*, which is determined by personal and/or family income levels, and *merit scholarships*, which are based on special achievements of the student rather than income.

Students applying for need-based financial assistance from federal, state, or institutional sources must submit the Free Application for Federal Student Aid (FAFSA) in order to qualify for the widest range of financial assistance. The Free Application for Federal Student Aid (FAFSA) should include the **UMES school code (002106)**. The priority deadline is March 1<sup>st</sup> of each year for the upcoming fall semester. It is very important that all students seeking financial assistance contact the Office of Student Financial Aid and submit all necessary forms. Missing the priority deadline can seriously impact eligibility for financial assistance. Other information may be required on a case by case basis. If the Office of Student Financial Aid does not electronically receive information from the federal government, a hard copy of the Student Aid Report (SAR) must be submitted to the Office of Student Financial Aid.

### Scholarships, Grants, and Loan Opportunities

There are several types of scholarships, grants, loans, and other awards available to students at the University of Maryland Eastern Shore. Currently, more than 80 percent of all UMES students receive some degree of financial aid. Each type of aid has its own criteria, and award amounts vary from partial to complete financial aid. Scholarship and grant awards are funding sources that do not require repayment. Loans require repayment, usually at a reduced interest rate, and payments are usually deferred until six (6) months after graduation.

The following is a listing of current scholarships, grants, loans, and other awards that are available to students:

## GRANTS

### Federal Pell Grant

Source: Federally funded

Award: variable (\$400-\$4,050 annually)

Criteria: Award amount is based on a federal formula according to need and enrollment status (full-time: 12 or more credits, three quarter time: 9-11 credits, half time: 6-8 credits). Open to U.S. citizens, residents, and permanent residents. Must reapply each year.

Contact: UMES Office of Student Financial Aid

### Federal Supplemental Educational Opportunity Grant (FSEOG)

Source: Federally funded

Award: variable (\$200-\$2,000)

Criteria: Available to undergraduates enrolled in degree-seeking programs. Award amounts are based on enrollment status, need, and availability of funds. Students must reapply each year.

Contact: UMES Office of Student Financial Aid

### University Grant

Source: Institutionally funded

Award: variable (\$50-\$1,400)

Criteria: Available to degree-seeking undergraduates. Amount varies according to enrollment status, need, and availability of funds. Students must reapply each year.

Contact: UMES Office of Student Financial Aid

### Diversity Grant

Source: Institutionally funded

Award: Variable (\$200 - \$1,400)

Criteria: Available to Maryland residents enrolled in an undergraduate degree-seeking program. Award amounts are based on need and other criteria. Students must re-apply each year.

Contact: UMES Office of Student Financial Aid

## UNIVERSITY SCHOLARSHIPS

### Alliance for Minority Participation Scholarship

Source: National Science Foundation

Award: Room, board, and tuition

Criteria: Freshman minority student majoring in biology, chemistry, nutrition, animal science, plant science, mathematics, or computer science; competitive SAT and high school GPA

Contact: Coordinator, AMP Program

### Honors Program Scholarships

Source: University funded

Award: Variable; renewable for three years provided student maintains 3.3 minimum GPA each semester

Criteria: Admission to The Honors Program. Priority given to students pursuing a major in a health/science area.

Contact: Director, The Honors Program



**Thurgood Marshall Scholarship Award**

Source: Thurgood Marshall Foundation

Award: \$4,000 per year

Criteria: Entering freshman with competitive SAT and GPA; must maintain 3.0 to be eligible for scholarship renewal

Contact: Director, The Honors Program

**Maryland State Scholarship Programs**

Source: State funded

Award: Varies

Criteria: need-based

Contact: A complete listing and information on current grants is available from the Maryland State Scholarship Administration (410) 979-5370 or online ([www.mhec.state.md.us](http://www.mhec.state.md.us)).

**University of Maryland Eastern Shore Scholars Program**

Source: University funded

Award: Varies

Criteria: 3.5 GPA and competitive SAT scores. Must maintain 3.30 GPA per semester

Contact: Director, The Honors Program

**USDA Achievement Scholarships**

Source: United States Department of Agriculture

Award: Tuition and fees

Criteria: Competitive GPA and SAT scores; entering freshman; priority given to students pursuing a major in an agriculture science

Contact: Campus USDA Liaison Officer

**UNIVERSITY ENDOWED SCHOLARSHIPS**

UMES has many partial scholarships from endowments established by alumni, faculty and distinguished individuals associated with the University. Scholarship amounts vary each year according to the interest generated by the endowment. Specific information can be provided by the contacts for each scholarship.

**Agricultural Centennial Scholarship**

Award: Varies

Criteria: Major in Agriculture

Contact: Department of Agriculture

**Agri-business Advisory Council Scholarship**

Award: Varies

Criteria: Major in Agri-Business; 900 SAT and 3.0 GPA.

Contact: Department of Agriculture

**The Dr. and Mrs. Imtiaz Ahmad Business Scholarship**

Established by business and economics professor Dr. Imtiaz Ahmad and his wife to assist business students at UMES.

Award: Varies

Criteria: Open to all UMES business students. Candidates are selected by a committee appointed by the Vice and Assistant Vice President for Academic Affairs, and Dr. and Mrs. Imtiaz Ahmad. Selection is made on the basis of need, character and scholarship and potential services in some

area of business Contact: Department of Business, Management and Accounting.

**American Hotel Foundation Scholarships**

Award: Varies; many scholarships available

Criteria: Must be full-time student enrolled in the HRM Program. Student notification of eligibility and forms providing guidelines for application are available from a departmental committee. Awards are usually for the following academic year. Complete scholarship information is available from the Department of Hotel and Restaurant Management.

Contact: Department of Hotel/Restaurant Management

**American Hotel and Motel Association Maryland Chapter Award**

Award: \$250/semester (2 semester limit)

Criteria: Must be a junior/senior HRM major with a 3.0 or higher GPA who has graduated from a Maryland high school. (Many state chapters have similar AH&MA awards.)

Contact: Department of Hotel/Restaurant Management

**American Hotel and Motel Association Statler Award**

Award: \$275 - \$350

Criteria: Must be a full-time enrolled student in the HRM program. Candidates are selected by a department committee that then submits five names to Statler headquarters for final approval.

Contact: Department of Hotel/Restaurant Management

**Associated Builders and Contractors (ABC) Scholarships Funds**

Baltimore Chapter Associated Builders and Contractors Fund

Michael G. Calla Endowed Scholarship Fund (established by the Cumberland Valley ABC Chapter)

Contact: Department of Technology

**Theodore Briggs Student Support Grant**

Established in memory of the late Mr. Theodore Briggs, who started UMES' building construction program and served as its coordinator until 1975.

Award: \$500 annually

Criteria: Sophomore or junior level Construction Management Technology major in good academic standing who demonstrates a strong sense of dedication to construction education.

Contact: Department of Technology

**Alethia Elps Scholarship Fund**

Established in the memory of former Human Ecology faculty member, Alethia Elps.

Award: \$500 (awarded in two installments of \$250 dollars)

Criteria: Student must be an incoming freshman Fashion Merchandising major with a 3.0 GPA. Student must maintain a semester average of 3.0 to receive the second semester installment.

Contact: Department of Human Ecology

**Charles Milton Epenshade Scholarship Fund**

Established by the Eastern Shore ABC Chapter



Award: \$600-\$700 annually for all ABC scholarships. Contingent upon endowment interest.

Criteria: Awarded to junior or senior level Construction Management/Technology student based on academic standing and need. Students must reapply each year.

Contact: Department of Technology

#### **Dr. Claude Marion Scholarship Fund**

Established by Agriculture Alumni in memory of Dr. Claude Marion, former Director of the 1890 Extension Program.

Award: Partial scholarship, variable according to endowment interest.

Criteria: Open to agriculture majors. Award based on scholarship and need.

Contact: Department of Agriculture

#### **Charlotte Newcombe Scholarships**

Award: \$50-\$600

Criteria: Scholarships given to career women returning to school to pursue a second career who have completed one-half of the credits toward their undergraduate degree.

Contact: Office of Student Financial Aid or the Counseling Center

#### **The Daniel J. Pinkett Award in Mathematics**

Established by Mrs. Alice P. MacLeod.

Award: Cash prize given at commencement exercises

Criteria: Recipient must be a graduating Mathematics or Computer Science major who has excelled in the field, as selected by the Mathematics/Computer Science faculty.

Contact: Department of Mathematics and Computer Science

#### **The Ella Fitzgerald Scholarship Fund**

Established by the renowned jazz vocalist, this scholarship is given annually to Music Education majors.

Award: Variable, dependent upon endowment interest

Criteria: Available to upper level music education majors who demonstrate potential for advancement in the field, as selected by the Music Education faculty.

Contact: Department of Fine Arts

#### **Henson Leaders Scholarship**

Award: One-half the cost of room, board and tuition; laptop computer and software.

Criteria: Incoming freshmen with a minimum GPA of 2.5; commitment to community service, demonstrated ability to act as a positive role model, commitment to positive values, interest in developing leadership skills, willingness to devote time and effort outside the classroom to activities that enrich learning experiences. Financial need is also considered.

Contact: Director, The Honors Program

#### **Honors Scholarships**

Students accepted into the Honors Program are automatically eligible for Honors Merit Scholarships. Maryland Distinguished Scholars, National Merit Finalists and National Achievement Finalists receive Merit-Plus Scholarship Awards. No separate application is required.

Awards to entering freshmen are based strictly on merit and academic promise. Financial need is not considered. Scholarships vary in amount, but may include the full cost of room, board and tuition. Awards are renewable for three additional years provided good academic standing in the program is maintained. Applications should be submitted early for scholarship consideration.

CONTACT: Director, The Honors Program

#### **Hotel Restaurant Management Academic Scholarships**

Award: \$250/semester (2 semester limit)

Criteria: Open to incoming freshmen and transfer students. A minimum 3.0 GPA, or 1000 or better SAT score. The HRM department notifies qualifying students of their eligibility.

Contact: Department of Hotel/Restaurant Management

#### **Richard A. Henson Scholarship**

Award: Four-year full scholarship (tuition, fees, room and board, including books and educational fees).

Criteria: Open to students who have demonstrated exceptional academic achievements and leadership potential. Complete criteria are available from The Honors Program Office.

Contact: Director, The Honors Program

#### **Thomas H. Kiah Scholarship Award**

Established in memory of Thomas H. Kiah, fifth Headmaster of the institution.

Award: Partial scholarship, variable with endowment interest

Criteria: Good academic standing and judged to have been most effective in the improvement of interpersonal and human relationships during the year.

Contact: Office of the Vice President for Academic Affairs

#### **The J. Vinton Schaefer Endowed Scholarship Fund**

Established in memory of Baltimore area contractor, J. Vinton Schaefer.

Award: \$300-\$500 annually (variable)

Criteria: Must be upper level Construction Management and Technology student who demonstrates outstanding potential. Recipients selected by Construction Management and Technology staff.

Contact: Department of Technology.

#### **The Seidel Award**

Established by prominent Salisbury, Maryland businessman, Samuel W. Seidel

Award: Variable, dependent upon endowment interest.

Criteria: Open to academically talented upper-level Computer Science (and selected other) majors. Nomination made by the Computer Science, Mathematics, Technology, and Business faculty.

Contact: Department of Mathematics and Computer Science

#### **Otis and Dorothy B. Strozier Scholarship Fund**

Award: Partial scholarship, amount varies

Criteria: Need-based, student must submit a letter of application.

Contact: Office of Student Financial Aid

### **The Samuel S. Trott Scholarship Fund**

Established by UMES alumnus and noted educator, Samuel Trott of Henry County, Virginia. The UMES Scholarship Committee, in consultation with the Samuel S. Trott Scholarship Committee, determines selection of recipient. The recipient must be a resident of Martinsville, Virginia. Contact: Office of Student Financial Aid

### **Winslow Foundation Scholarship**

Award: variable

Criteria: Awards based on academic performance, personal dedication to the field of Poultry Technology and Management General Agriculture, or Nutrition, and/or financial need. Provided only to Maryland, District of Columbia, Virginia, and North Carolina residents. Applications should be filed by March 1 to receive full consideration.

Contact: Department of Agriculture

## **LOANS**

### **Perkins Loan Program**

Open to both undergraduates and graduates who are United States citizens or permanent residents who demonstrate a need. The interest amount is deferred until six months after the student ceases to be enrolled at least half time. The minimum monthly payments are determined by the amount borrowed. Award amounts are contingent upon student need (as determined by federal formula) and the availability of funds. Deferments and cancellations are available to those students who meet established criteria. Contact: UMES Office of Student Financial Aid

### **William D. Ford Direct Loan Program**

Open to both undergraduates and graduates who are United States citizens or permanent residents. Funds for this loan program are made available through the U.S. Department of Education. The federal government guarantees these loans. Students must complete the Free Application for Federal Student Aid (FAFSA) to apply for these loans. Eligibility is determined by information submitted on the FAFSA. These loans must be repaid and the interest rate is variable with the maximum rate being 8.25%. Both the principal and interest are deferred until six months after the student ceases to be enrolled at least half-time or graduates.

**Subsidized** loans are awarded on the bases of financial need. Interest is not charged on these loans while the student is enrolled at least half-time or during periods of deferment. Award amounts vary based on need and classification levels. Annual maximum amounts are as follows: freshman - \$2,625; sophomore - \$3,500; junior/senior - \$5,500.

**Unsubsidized** loans are not need-based. Interest is charged on this loan while the student is attending school and also during grace periods and deferments. Annual maximum loan amounts are as follows: **Dependent undergraduate:** freshman - \$2625; sophomore - \$3500; junior/senior - \$5500. **Independent undergraduate:** freshman - \$6625 (only \$2625 of this amount may be subsidized loans);

sophomore - \$7500 (only \$3500 of this amount may be in subsidized loans); junior/senior - \$10,500 (only \$5500 of this amount may be in subsidized loans). **Graduate:** \$18,500 (only \$8,500 of this amount may be in subsidized loans). **All first time borrowers at UMES must attend loan counseling.** Loan funds will not be credited to first time loan borrowers' student accounts until 30 days after the semester begins. **An origination fee of 3% of the loan is deducted from all William D. Ford Direct Student Loans.**

Contact: UMES Office of Student Financial Aid

### **Parent Loan for Undergraduate Students (PLUS)**

This loan is for parents of dependent students who wish to borrow to help pay for their child's education. Applicants must be United States Citizens or permanent residents and the student must be in a degree program. Parents may borrow up to budget (as determined by the UMES Office of Student Financial Aid) for each student who is enrolled at least half-time. The parent must not be in default of any student loan, and the student must maintain satisfactory academic progress according to the policies of the Office of Student Financial Aid. An insurance premium of up to 4% of the loan principal is charged and deducted for each disbursement. Repayment for both the loan and interest begins sixty (60) days after disbursement. The lender may defer the principal, if requested.

Contact: UMES Office of Student Financial

## **STUDENT EMPLOYMENT OPPORTUNITIES**

There are many opportunities available for students to work part-time on the UMES campus. Work schedules are centered around the student's class schedule for the semester, with a maximum of twenty (20) hours per workweek. Like scholarships, funding is generated from many sources; therefore, pay rates and procedures may vary.

**College Workshop Program:** - This is a state-funded program that employs students in various departments of the University. Student job opportunities depend on the availability of state funds. Hourly wage rates vary according to job duties and department, but are at or above minimum wage.

Contact: UMES Office of Human Resources

**College Work-Study Program:** - This is a federally funded, need-based, program open to U.S. citizens or permanent residents who meet financial need guidelines and the priority deadline. Awards are based on need and availability of funds. Students are placed both on and off campus. (Off-campus sites are at a public or private non-profit agency with which the University has entered into an agreement). The rate of pay is at or above minimum wage. An award amount is granted, and students earn payment for work up to twenty (20) hours per week; however, most awards average seven (7) to ten (10) hours per week.

Contact: UMES Office of Student Financial Aid

**Resident Assistant Program:** - The Office of Residence Life regularly hires student assistants for the residence halls. This employment offers stipends that are deposited into the student's account with the University. Entry level payment is to equal approximately the housing cost each semester (this does not include meal costs). To qualify, a student must live in a residence hall for at least one semester and file a FAFSA. Selections are made by the Office of Residence Life. For more information, contact the Office of Residence Life.



**The Residence Center**



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M.S., Ed.D., Oklahoma State University



*“Learning and Leadership It!”*

# ACADEMICS



## UNDERGRADUATE STUDIES

### ACADEMIC HONESTY

Academic honesty and integrity lie at the heart of any educational enterprise. Students are expected to do their own work and neither to give nor to receive assistance during quizzes, examinations, or other class exercises. One form of academic dishonesty is plagiarism. Plagiarism is intellectual larceny: the theft of ideas or their manner of expression. Students are urged to consult individual faculty members when in doubt. Because faculty and students take academic honesty seriously, penalties for violation may be severe, depending upon the offense, as viewed by the Student Judicial System. The minimum sanction for cases of proven cheating is automatic failure of the course. Instructors will gladly explain procedures for taking tests, writing papers, and completing other course requirements so that students may understand fully their instructor's expectations.

One of the objectives of the University of Maryland Eastern Shore is to promote the highest standards of professionalism among its graduates. The integrity of work performed is the cornerstone of professionalism. Acts of falsification, cheating, and plagiarism are acts of academic dishonesty which show a failure of integrity and a violation of our educational objectives; these acts will not be accepted or tolerated. To avoid ambiguity, the following guidelines should be followed:

1. **Falsification** is unacceptable. Falsification includes but is not limited to
  - a. creating false records of academic achievement;
  - b. altering or forging records;
  - c. misusing, altering, forging, falsifying or transferring to another person, without proper authorization, any official University record;
  - d. conspiring or inducing others to forge or alter any official University record.
2. **Cheating** is also unacceptable. Cheating includes but is not limited to
  - a. giving answers to others in a test situation without permission of the tester;
  - b. taking or receiving answers from others in a test situation without permission of the tester;
  - c. having possession of test materials without permission;
  - d. taking, giving, or receiving test materials prior to tests without permission;
  - e. having someone else take a test or perform an assignment for you;
  - f. submitting as your own work, work done by someone else;
  - g. permitting someone else to submit your work under that person's name;
  - h. falsifying research data or other research material;
  - i. copying, with or without permission, any works, e.g., essays, short stories,

j. poems, etc., from computer hard drive or discs and presenting them as your own.

3. **Plagiarism** as a form of cheating is also unacceptable. Plagiarism is the act of presenting as your own creation works actually created by others. Plagiarism consists of
  - a. taking ideas from a source without clearly giving proper reference that identifies the original source of the ideas and distinguishes them from your own;
  - b. indirectly quoting or paraphrasing material taken from a source without clearly giving proper reference that identifies the original source and distinguishes the paraphrased material from your own compositions;
  - c. directly quoting or exactly copying material from a source without giving proper reference or otherwise presenting the copied material as your own creation.

Ideas taken from another person's notes or published work without giving that author proper credit according to an established style of documentation, such as MLA (Modern Language Association) or APA (American Psychological Association), constitutes plagiarism. Acts of falsification, cheating, and plagiarism are grounds for automatic failure of a course if not a more severe penalty, which may include a hearing before the Student Judicial Council and dismissal from the University.

Students and faculty should be thoroughly familiar with the appropriate forms of documentation required among the various academic departments on the University campus.

### Summing Up

It is expected that students will be honest, exhibiting the highest standards of personal integrity. The University also expects to penalize severely acts of dishonesty, academic or otherwise, and urges students to be of good conscience and conduct as they pursue their careers at the University of Maryland Eastern Shore.

Students should be aware of the University System of Maryland (USM) Policy on misconduct. In no way does the UMES statement conflict with the System Policy. Please refer to System Policy No. III - 1.10. Faculty should be familiar with related policies as found in the UMES Faculty Handbook. Please refer to UMES Policy, Section IV-I.

### UMES POLICY FOR CLASS ATTENDANCE

1. The University expects all students to take full individual responsibility for their academic work and progress. All students must meet the qualitative and quantitative requirements of each course in their curricula to progress satisfactorily. They are expected to attend classes regularly, for consistent attendance offers the most effective opportunity open to all students to gain command of the concepts and materials of their courses of study. Absences (whether excused or unexcused) do not alter what is expected of students qualitatively and quantitatively.

2. In many courses, such as those requiring group discussion, laboratories, clinics, public speaking or language conversation, or performance of particular skills, in-class participation is an essential part of the work of the course. In other courses, occasional in-class assessments may occur without prior notice.

3. The University will excuse the absences of students that result from instances such as: *illness* (where the student is too ill to attend class), *death in the immediate family* (family members are defined as being one or more of the following persons: father, stepfather, grandfather, or legal guardian, mother, stepmother, grandmother, sister, brother, stepsister, stepbrother, any person living as an integral member of a student's home), *religious observance* (where the nature of the observance prevents the student from being present during the class period), *participation in University activities* at the request of University authorities, and *compelling circumstances* beyond the student's control. Students requesting excused absences must furnish acceptable documentation to their course instructors to support their assertion that absences were the result of one of these causes. However, the nature of some courses will preclude makeup of assessments missed. In these cases, students will not be penalized for excused absences; grades will be computed on actual assessment as explained in the course's syllabus. Otherwise, students with excused absences will be given an opportunity to make up missed assessments. The responsibility for granting excused absences and determining which assessments can be made up lies with the instructor of each individual course. Absences (whether excused or unexcused) do not relieve the students of their responsibility to complete the course assessments. Instructors are especially understanding in cases related to health and/or death, provided the student provides proper documentation.

4. Students must notify their instructors of the reason for any absence as soon as possible. Where the reason for an absence from a scheduled assessment is known in advance (for example, in cases of religious observance or participation in University activities at the request of University authorities), students must inform their instructors two weeks prior to the absence, if known that far in advance, or immediately upon discovering the impending absence. Prior notification is particularly important in connection with examinations and other major assessments, since failure to reschedule them before conclusion of the final examination period may result in loss of credits during the semester. When the reason is not known in advance (for example, in cases of health related emergencies or compelling circumstances beyond their control), students must inform their instructors as soon as possible after its development.

5. Each department and school may develop a general policy for class attendance as long as it conforms to this **UMES Policy for Class Attendance**.

6. Each instructor is responsible for distributing to each student a written statement as part of the course syllabus at

the beginning of the semester in order to inform each class of the nature of in-class participation and assessments expected and what effect absences will have on the evaluation of the student's work in the course. This statement must include any department and school policies, which are applicable to the course. The instructor in accordance with this statement, the general policy of his or her department and school, and this UMES Policy for Class Attendance shall handle absences.

7. In cases of dispute, the student may appeal to the chair of the department offering the course within one week from the date of the refusal of the right to a make-up assignment. In those instances where the instructor is the chair, the appeal may be made to the dean. The dean's decision will be final in all cases. When permitted, a makeup assessment must be given on campus unless the published schedule or course description requires other arrangements. The makeup assessment must be held at a time and place mutually agreeable to the instructor and student. The makeup assessment must not interfere with the student's regularly scheduled classes. In the event that a group of students requires the same make-up assessment, one make-up assessment time may be scheduled at the convenience of the instructor and the largest possible number of students involved, and a second make up for the remaining group.

8. All students are expected to attend all classes. Excessive unexcused absences for any reason may result in either a low grade or course failure. All students will be considered excessively absent from a class if they miss a class more hours during the semester or term than the class meets each week. For example a student should not miss (unexcused absence) a class that meets three hours per week more than three hours during the semester or term nor be absent from a class that meets one hour per week more than once during the semester or term. At the beginning of each semester or term, the class instructor will distribute this written policy and other relevant information as part of the course syllabus, regarding his/her expectations on absenteeism, attendance, warnings, requests for withdrawal, and make-up privileges.

9. Instructors are to document students' class attendance through the process of taking and maintaining daily attendance during each semester.

#### **NEW STUDENT ORIENTATION**

New Student Orientation is a weeklong summer program designed to familiarize new students to the academic life at UMES. The program is generally offered in late August of each year and is sponsored by the New Student Orientation Committee. Students accepted into the University for the fall semester receive detailed information about the program and registration materials from the Committee in early summer. There is a minimal fee for the program that is separate and apart from the fall semester charges. All new and transfer students with fewer than 24 credit hours are required to participate in the University-wide New Student Orientation. Other students, such as transfer students with more than twenty-four (24) credits and



Special Students, are encouraged to attend, but are not required to do so.

### **HONOR SOCIETIES**

There are currently several active chapters of national Greek Letter Honor Societies for students who are outstanding in their major areas of study. Among them are:

*Alpha Eta Rho* is a professional college fraternity founded to bring together those students having a common interest in the field of aviation. AHP serves as a contact between the aviation industry and educational institutions. It bands together into one organization outstanding students, interested faculty, and industrial leaders for the purpose of studying the problems of everyday life, as influenced by modern industry. Membership is by application and election.

*Alpha Lambda Epsilon* is the new Local Chapter of the Honor Society of Delta Tau Apha. The University of Maryland Eastern Shore is the first HBCU and land grant institution to receive a charter in Delta Tau Alpha. Under the leadership of Ms. Larisha Thomasec and Ms. Stephanie Gilbert, ALPHA LAMBDA EPSILON officially inducted its first members in the Spring semester of 2003. For information regarding membership in Alpha Lambda Epsilon, please contact Larisha, Stephanie or the Chapter Advisors, Drs. M. Morant and T. Mollett in the Department of Agriculture.

*Alpha Kappa Mu* is a national honor society open to eligible students in all academic areas. Students must complete at least five (5) semesters of academic work at a 3.3 GPA to be eligible for election to the Alpha Kappa Mu National Honor Society.

*Alpha Tau Alpha* is a professional honorary and education fraternity which seeks to develop a professional spirit among teachers and teacher trainees in vocational agricultural education.

*Beta Kappa Chi* is a scientific honor society which embraces the areas of biology, chemistry, physics, and mathematics. Beta Kappa Chi encourages and advances scientific education through 1) original investigation, 2) dissemination of scientific knowledge, and 3) the stimulation of high scholarship in pure and applied science.

*ETA Sigma Delta* is an international honor society that recognizes exceptional academic achievement among hospitality and tourism students at the baccalaureate level. The Council administers ETA Sigma Delta on Hotel, Restaurant and Institutional Education (CHRIE), the leading international association devoted to hospitality and tourism education.

*Kappa Delta Pi* is an international honor society that recognizes excellence in education. Elected to membership in the Sigma Nu chapter at UMES are undergraduate and graduate students who exhibit ideals of scholarship, leadership, service, and high personal standards, and who show promise in teaching and the allied professions. Kappa

Delta Pi encourages improvement, distinction in achievement, and contributions to education.

*Kappa Omicron Nu* is a national Family and Consumer Sciences Honor Society which recognizes those who have declared a major in family and consumer sciences or one of the specializations. KONU promotes scholarship, advances intellectual development, and encourages leadership development. To be eligible for membership, the student must have completed 45 semester hours and have a minimum GPA of 3.0 on a 4.0 scale.

*Phi Kappa Phi* is dedicated to unity and democracy in education and selects its membership from all fields of university study. The society's sole purpose is to recognize and encourage superior scholarship. New members are elected from all schools of their respective universities and are chosen from the upper ten percent of their graduating class.

*Sigma Beta Delta* is a national scholastic honor society in business, management, and administration. To be eligible for induction, students must rank in the upper 10 percent of their junior or senior class with a minimum overall GPA of 3.3. Students must be Business Administration and/or Accounting majors in the Department of Business and Economics or related majors in other departments on campus. Juniors are eligible for induction the semester after they have earned 75 credits at UMES. Graduating seniors are eligible for induction the semester they are enrolled in their final course at UMES, provided they meet all other requirements.

*Sigma Lambda Chi* is a National Honor Society which gives recognition to outstanding students majoring in Construction Management Technology. To qualify for membership, students must be at the Junior or Senior level of study and rank in the top 20 percent of their construction class.

*Sigma Tau Delta* is a national English honor society. Members must be juniors with 3.0 averages in their majors. The Psi Mu chapter at UMES sponsors two major projects annually, the Poet of the Month and Poet/writer Award.

*Upsilon Pi Epsilon* is an honorary society whose membership consists of outstanding undergraduate and graduate students in computer science. It is the first and only existing national honor society in computer science. The minimum standards for undergraduate students are a grade point average of at least 3.0 and rank in the highest thirty-five percent of their major in general scholarship, provided they have completed at least eighteen semester hours in computer science and sixty-four semester hours overall.

### UNDERGRADUATE DEGREE PROGRAMS

UMES offers the Bachelor of Science (B.S.) and the Bachelor of Arts (B.A.) degrees in the programs listed below. In addition there are many options and specialties which are described in the catalog sections pertaining to each academic program. The university also offers the Bachelor of General Studies (B.G.S) degree and academic concentration that offer both the bachelor's degree and teacher certification.

- Accounting
- African American/African Studies
- Applied Design
- Aviation Sciences
- General Agriculture
- Agribusiness
- Art Education
- Biology
- Business Administration
- Business Education
- Chemistry
- Computer Science
- Construction Management Technology
- Criminal Justice
- Engineering Technology
- English
- Environmental Science
- Exercise Science
- Human Ecology
- Hotel and Restaurant Management
- Mathematics
- Music Education
- Physician Assistant
- Rehabilitation Services
- Sociology
- Sociology/Social Work
- Special Education
- Technology Education

#### Teacher Education

UMES offers teacher education programs in the following areas:

#### Specialty Programs

- Art (Pre-K-12)
- Music (Pre-K-12)
- Special Education (1-8); (6-12)

#### Secondary (7-12)

- Agriculture Education
- Biology
- Business Education
- Chemistry
- English
- Family and Consumer Sciences
- Mathematics
- Social Studies
- Technology Education

UMES also offers Pre-Professional Tracks, which include:

- Pre-Dentistry
- Pre-Medicine
- Pre-Nursing
- Pre-Pharmacy
- Pre-Physician Assistant
- Pre-Physical Therapy
- Pre-Radiology Technology
- Pre-Veterinary Medicine

### DEGREE REQUIREMENTS

It is the responsibility of departments to publish clearly defined degree requirements. *Responsibility for knowing and meeting all degree requirements for graduation in any curriculum rests with the student.* Students should check with the departmental academic advisor to ascertain their standing in this respect no later than the close of the junior year. For this purpose, the student should be sure to preserve the copy of the semester grade report issued by the Office of Admissions and Registration at the close of each semester.

In order to earn a baccalaureate degree, the last 30 semester credits of any curriculum must be taken in residence at the UMES Campus. Academic requirements for graduation are a minimum of 120 semester credit hours, (some programs **may require** additional credit hours) with a "C" (2.00) cumulative average, **excluding Fundamentals courses and MATH 101.**

### SECOND AND DOUBLE BACCALAUREATE DEGREE REQUIREMENTS

A student who has already received one baccalaureate degree may receive a second degree from UMES by completing 30 credits at UMES, provided the total number of credits of the first and second degrees combined is 150 credits. In no case will a second baccalaureate be awarded to a student who has not completed the last 30 hours at UMES.

A student who wishes to receive two baccalaureate degrees from UMES simultaneously must complete the regularly prescribed degree requirements of each program and complete a minimum of 150 credits. Candidates for a double degree must file a formal program outline with the departments involved and the Vice President for Academic Affairs. The program outline must include a showing of the courses required to fulfill each major and supporting area, as well as the general education and elective requirements of both curricula. If the double degree involves two

different departments, the student must designate which department is responsible for maintenance of records.

No course in either curriculum used to satisfy a major or supporting area requirement may be used to satisfy the General Education Requirements.

## GENERAL EDUCATION REQUIREMENTS

(Acronym: GER CURR. AREA)

(Note: A minimum of 40 credits is required.)

See [Appendix](#) for complete MHEC Regulations.

All students are expected to complete a common body of academic course work. The General Education Requirements are designed to promote the development of a comprehensive educational base which will effectively support a student's choice of a major concentration. Deviations from the General Education Requirements may occur in certain areas owing to specific requirements of the major. Therefore, students should consult with their freshman or departmental advisors when making course selections. See *Course Descriptions* for descriptions of courses in General Education. **Fundamentals courses and MATH 101 do not meet the General Education Requirement.** General Education Requirements are distributed as follows:

**Curriculum Area I Arts and Humanities — Total = 9 Credits** (Students must select ENGL 203 plus one course in each of two disciplines).

### Discipline A: Arts

ARTS 101, ARTS 310, MUSI 100, MUSI 109, MUSI 310H

### Discipline B: History

HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360

### Discipline C: Language

FREN 101 or FREN 102  
SPAN 101 or SPAN 102

### Discipline D: Literature

ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 328, ENGL 329, ENGL 401

### Discipline E: Speech

ENGL 203 (Students must take and pass ENGL 101 and ENGL 102 with a grade of "C" or above before taking ENGL 203).

**All students must take ENGL 203**

## Curriculum Area II

**Social and Behavioral Sciences — Total = 6 Credits**

(one course in each of two disciplines) *Students must select one course from each discipline:*

### Discipline A: Social Sciences

ECON 201 or ECON 201H  
ECON 202 or ECON 202H  
GEOG 201 or GEOG 202  
HIST 101 or HIST 111H

HIST 102 or HIST 112H  
POLI 200 or POLI 200H,  
POLI 220H or POLI 342  
SOC 101 or SOC 111H

## Discipline B: Behavioral Sciences

CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 200,  
SOC 201, SOWK 200 or SOWK 200H

## Curriculum Area III

**Biological and Physical Sciences — Total = 7 - 8 Credits**

(Two science courses; one must be a laboratory course)

*Students must select from the following:*

- **Student must have a strong background in Chemistry and Biology to take CHEM 111 and CHEM 112 or BIOL 111 and BIOL 112.**

- **Students CANNOT take CHEM 111 if they are currently taking Math 101.**

ANPT 114, ANPT 114H, BIOL 101, BIOL 103 (lab), BIOL 111, **BIOL 113 (lab)**, BIOL 112, **BIOL 114 (lab)**, CHEM 101, CHEM 102, CHEM 103 (lab), CHEM 104 (lab), CHEM 111, CHEM 113 (lab), ENVS 101, NUDT 210, PHYS 121, PHYS 121H, PHYS 122, PHYS 161, PHYS 182H, PHYS 263, PLSC 184, PLSC 185 (lab).

## Curriculum Area IV

**Mathematics — Total = 3 - 8 Credits**

(one course at or above the level of College Algebra)

MATH 102, if student needs MATH 101, **he/she** must take that before MATH 102;

MATH 109, if students need MATH 101, they must take that before Math 109;

MATH 110, MATH 111H, MATH 112.

**NOTE: MATH 101 does not satisfy the General Education Requirement.**

**\*Most majors require MATH 109 or higher.**

## Curriculum Area V

**English Composition — Total = 9 Credits**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

**A grade of "C" or above is required to pass the courses above.**

ENGL 305H or ENGL 310

## Curriculum Area VI

**Emerging Issues — Total = 1-7 Credits**

(courses identified as being essential to a full program of general education for UMES students)

This course is required of all students:

GNST 101 First Year Experience — 1 credit

(or departmental orientation course)

In addition, students must consult with their departmental advisor for any additional Emerging Issues course requirement (up to 6 additional credits).

EDHE 111 – Personalized Health Fitness — 3 credits

Students may select from the following courses:

ENGL 412 - Commonwealth Literature – 3 credits

ENGL 413 - The Novel, East and West – 3 credits

HUEC 230 - Multicultural Perspectives on Families in the U.S. – 3 credits

TMGT 306 – Ecology and Cultural Tourism

### **Total Required for General Education = 40-47 Credits**

### **GENERAL REQUIREMENTS FOR ACADEMIC MAJORS AND MINORS**

The University's individual departments have set forth requirements that must be met in order to complete a major in a given area of study. For specific major requirements, students should consult the appropriate departmental section of this catalog and their academic advisors.

Each major and minor has its own minimum number of required hours. To fulfill a major generally involves a minimum of 36 credit hours of course work. To earn a minor in a subject, a minimum of 18 semester hours, according to departmental specifications, must be met. For courses completed outside the major or minor, an overall grade point average of "C" is necessary for graduation. PSYC 305 and HUEC 203 are similar courses, taught in different departments for their majors. Students may have credit for one or the other but not both courses.

### **MAJOR CORE REQUIREMENTS**

A grade of "C" or better is required in every course counted toward the major and/or minor.

### **SUPPORTING AREA REQUIREMENTS**

A grade point average of "C" or better is required for the group of courses representing the supportive area requirements.

### **SELECTING A MAJOR**

In selecting a major or a minor, students must consult with the chairs of the department(s) involved no later than the beginning of their junior year.

Students may declare a major at any time up to the beginning of their junior year. At that time they will be assigned a faculty advisor and fill out an official Declaration of Major form. Declaring a major does not in any way bind a student permanently to that program.

### **CHANGING A MAJOR**

It is not unusual for a student to change a major after entering college. Students are encouraged to explore several programs within the disciplines involved before deciding upon their major programs and to consult with faculty members and counselors concerning their future plan. A student may change a major at any time simply by completing a new Declaration of Major Form. Major changes are processed prior to the beginning of the fall and spring semesters. These forms may be obtained from the Office of the Registrar.

### **FRESHMEN WHO DO NOT DECLARE A MAJOR**

For those students who enter as freshmen and do not declare a major, General Education Requirement courses can be taken during their freshman and sophomore years. It is highly recommended that students become familiar with the requirements for different majors which interest them, and be aware of all the introductory level courses needed, and the frequency which departments offer these and other courses for those majors. Schedules should be planned strategically and in consultation with the academic advisor.

### **ENGLISH PROFICIENCY EXAM**

The English Proficiency Examination is a two-hour examination required by the University of Maryland Eastern Shore to meet a University System of Maryland (USM) requirement to assure that all undergraduate students are able to write at an acceptable level. In order to graduate, every student who enrolls at the University for the first time, beginning fall 1998, must pass the English Proficiency Examination. No student will be exempt. Subsequently, students entering on or after fall 1998 will be eligible to take the examination only after successful completion of English 101 and must have a C average in English 102 prior to taking the English Proficiency Examination. *ENGL 001 is a Co-Requisite for ENGL 102. ENGL 002 is a Co-Requisite for ENGL 102 for Transfer Students; and, ENGL 003 is the Co-Requisite for ENGL 102H Honor's Students.*

### **CREDIT BY EXAMINATION**

Credit towards the bachelor's degree may be established by examination under the following conditions:

- The applicant must have completed at least 12 semester credits at UMES with an average grade of "C" or better before making application for an examination to establish credit. The Department Chair and Dean may waive this regulation for entering freshmen who wish to pursue the examination to establish credit based on previous training.
- The total number of credits that may be established by examination cannot exceed 60 semester credits. "Credit by Examination" cannot be used for a course in which the student has previously earned a letter grade (A, B, C, D, or F); or in which the student received a W or an I grade.. Additionally, credit by examination can not be awarded for a course which was audited during a previous semester. Usually credit by examination will not be accepted for any part of the final thirty (30) semester credits, which must be completed in residence. However, if permission is granted by the Vice President for Academic Affairs, six (6) semester hours of the final thirty (3) may be established by examination. However, in no case does this permission waive the minimum residence requirement of 30 semester credits.
- The fee for credit by examination is \$30.00 per semester credit hour for full-time students. A grade of "C" or higher must be obtained in order to establish credit by examination.

- Applications for examination to establish credit by examination must be approved on an individual course basis. Approval will not be granted at the same time for examinations in a sequence of courses. Approval to take an examination in any course will depend upon the student having established credit in all prerequisites or having received the approval of the Department Chair, the Dean and the Vice President for Academic Affairs. Application for credit by examination is equivalent to registration for a course with the following conditions:

1. A student may cancel an application at any time prior to completion of the examination with no entry on the permanent record. The examination instructor will make the results of the examination available to the student prior to formal submission of the grade. A student may elect not to have the grade recorded. In this case, a symbol of "W" will be recorded. No course may be attempted again in this manner.
2. Grades earned on examination to establish credit will be posted on the student's transcript and used in computing the student's grade point average. Such credits shall be accompanied by the phrase, "By Exam" or "By CLEP," whichever is applicable.
3. The instructor must certify on the report of the examination that copies of the examination questions and the student's answers have been filed in the Office of the Registrar.

#### **College Level Examination Program (CLEP)**

CLEP is a national program of credit-by-examination that offers students the opportunity to obtain recognition for college-level achievement. CLEP credits are treated as transfer credits.

CLEP offers two types of tests: General Examinations and Subject Examinations.

- No more than thirty (30) hours of credit can be received through CLEP tests for both general and subject examinations combined.
- Credit may be granted to students achieving scores of 50% or more on the general exams.
- In accordance with the recommendations of the Council of the College Level Examination Program, UMES accepts for college credit scores equal to or above the mean score achieved by students in the national norm groups if UMES students have earned grades of "C" in comparable courses.
- No credit may be granted for CLEP tests which are repeated. If a student takes the test once and fails it, then retakes the test, the student may not receive credit, even if the subsequent score meets criterion.

- The amount of credit to be awarded is to be determined through approval by the student's major department or the department in whose discipline the test falls.
- CLEP credit will be granted on a pass-fail basis and so entered on the student's record.
- An official, original CLEP score report must be sent from the College Board directly to the UMES Office of Admissions and Registration. Duplicates of examinee's copies of score reports received in any other manner, with the exception of a CLEP examination administered at UMES, are not acceptable.

#### **REGISTRATION**

In order to attend classes at UMES, all students must process an official registration. Instructions concerning registration are given in the Schedule of Classes issued at the beginning of each new semester or term.

Current UMES students will be registered late in the semester preceding the semester for which they are registering. The dates for this registration are listed in the Schedule of Classes for each semester or term and in the Academic Calendar. The signature of the designated faculty advisor must appear on the registration schedule.

Entering freshmen and transfer students will be registered for their first semester's courses during the regular registration period. No student is permitted to attend a class if his or her name does not appear on the official class roster.

#### **Late Registration**

A late registration fee will be charged to any student who fails to complete registration within the specified registration period. The late registration period is published each semester or session in the Academic Calendar.

#### **Adding and Dropping Classes**

Students who are properly registered may add courses during the first week of instruction each semester. Students may drop courses during the first ten weeks of the current semester. Only in exceptional cases, and with the permission of the Dean, will a student be permitted to enter a class later than one week after the beginning of instruction or drop a course later than the end of the drop or withdrawal period.

The change in registration is effective on the date the form is submitted to the Office of the Registrar. Section changes are considered to be changes in registration and must be made through the Office of the Registrar. Students must have the approval of the Department Chair and advisor for all transactions regarding registration or change in registration.

### **Dropping a Class**

Should a student officially exit a class prior to the end of the drop period, no grade will be recorded on the transcript. The end of the drop period is published in the Schedule of Classes for each semester or term and in the Academic Calendar.

### **WITHDRAWALS**

#### **Withdrawing from a Class**

Should a student officially exit a class after the drop period, but before the end of the withdrawal period, a grade of "W" will be recorded on the transcript. The end of the withdrawal period is published in the Schedule of Classes for each semester or term and in the Academic Calendar.

#### **Withdrawing from the Institution**

If a student desires or is compelled to withdraw from UMES for any cause at any time during the academic year, the student should complete an application for withdrawal from the Office of the Registrar, obtain the proper signatures as indicated on the form, and file it with the Office of the Registrar. The Office of the Registrar will record a grade of "W" for all courses.

Withdrawal grades are not included in the computation of grade point averages or in the determination of the level of the total hours attempted.

In the case of a minor, withdrawal will be permitted only with the written consent of the student's parent or guardian.

#### **Penalties for Unofficial Withdrawal**

A student who fails to withdraw in the required manner will not be entitled to an honorable dismissal, will forfeit the right to any refund to which he/she might otherwise be entitled, and will receive marks of failure in all courses being carried.

### **WITHDRAWAL AND REFUND OF FEES**

Any student who desires or is compelled to withdraw from the University for any cause at any time during the academic year should secure an application for withdrawal from the Office of the Registrar, obtain the proper signatures and file it in the Office the Registrar.

The effective date for withdrawals, with regard to refunds and grades, is the date the form is filed at the Office of Admissions and Registration. No student may withdraw after the last scheduled day of classes in a given semester. Exceptions will be referred to the Academic Appeals Board.

Students withdrawing from the University during a semester will be credited for all academic fees charged to them, in accordance with the following schedule.

<u>Period from First Day of Instruction</u>	<u>Refundable Percentage</u>
Two weeks or less	80
Between two and three weeks	60
Between three and four weeks	40
After four weeks	No refund

No part of the charges for room and board is refundable, except when the student officially withdraws from the University or is given permission by the appropriate officials of the University to move from the residence facility and/or to discontinue dining hall privileges. When permission is given to discontinue dining hall privileges, the meal card must be turned in to the Office of the Vice President for Administrative Affairs. In these cases, the room refund will be computed by deducting ten percent (10%) of the charge for the semester as a service charge and the remainder will be prorated on a weekly basis. Refunds to students for board (dining hall) charges will be calculated in the same manner. No room and/or board refunds will be made after the fourteenth week of the semester. Weekly basis shall be defined as a complete week or any fraction thereof.

### **Withdrawal and Refunds of Fees for Title IV Recipients *Refunds and the "Return of Title IV Funds" Policy University of Maryland Eastern Shore***

If a student withdraws or is expelled from UMES, then the school or the student may be required to return some of the federal funds awarded to the student. The student may also be eligible for a refund of a portion of tuition, fees, and room and board paid to UMES for the semester. If the student received financial assistance from outside of the student's family, then a portion of the refund will be returned to the grant, scholarship, or loan source from which the assistance was received.

If a student will be withdrawing, then the student should visit the Office of the Registrar and complete a "Notification of Withdrawal" form to begin the withdrawal process. This procedure will enable UMES to refund the maximum possible institutional charges. ***The withdrawal will not be complete until the student has returned the Notification of Withdrawal form (with all appropriate signatures) to the Office of the Registrar.***

UMES' refund policy exists for calculating the refund of institutional charges. The federal "Return of Title IV Funds" formula dictates the amount of Federal Title IV aid that must be returned to the federal government by the school and the student. The federal formula is applicable to a student receiving a federal pell grant or federal aid other than Federal Workstudy, if that student withdraws on or before the 60% point in time in the semester. The student may also receive a refund of institutional charges through UMES' refund policy (see above). Room and/or Board charges will be pro-rated according to the policy of the Office of Residence Life.

The federal formula requires a return of Title IV aid if the student received federal assistance in the form of a Pell Grant, Supplemental Educational Opportunity Grant (SEOG), Federal Direct Student Loan or PLUS Loan and withdrew on or before completing 60% of the semester. The percentage of Title IV aid to be returned is equal to the number of calendar days remaining in the semester divided

by the number of calendar days in the semester. Scheduled breaks of more than four consecutive days are excluded.

If any funds are to be returned after the return of Title IV aid, they will be used to repay UMES funds, state funds, other private sources, and the student in proportion to the amount received from each non-federal source, as long as there is no unpaid balance at the time of withdrawal. If there is an unpaid balance, then all aid sources will be repaid before any funds are returned to the student.

**NOTE:** If funds are released to a student because of a credit balance on a student's account, then the student may be required to repay some of the federal grants if the student withdraws. A work sheet used to determine the amount of refund or Return of Title IV Aid is available upon request.

### CHANGE OF GRADES

Grades that have been submitted to the Office of the Registrar can be changed only by submitting the official change of grade form certifying that an error was made in recording the grade, the grade was omitted on the official grade roster, or work has been completed to remove the grade of 'I'. Courses in which students officially withdraw and the grade of 'W' has been recorded do not qualify for the change of grade process.

Grade changes must be initiated by the instructor on the required change of grade form available in the Office of the Registrar. Such petitions require the approval of the department head and the dean of the instructor's school before the Registrar will make changes on the student's record.

Any grade change must be received in the Office of the Registrar no later than 60 calendar days immediately following the beginning of classes in the semester succeeding the one in which the grade was given or omitted. For a summer term, the changes are due in the Office of the Registrar no later than 60 calendar days immediately following the beginning of classes in the succeeding Fall semester. If a student is not enrolled in the succeeding semester, then the grade change is due 60 calendar days following the beginning of classes in the next regular semester. For courses in which the grade of 'I' (Incomplete) has been awarded, the change of grade must be submitted within one year of the 'I' being awarded. After one year the 'I' will automatically be changed to a 'F'.

### REGISTRATION AT OTHER INSTITUTIONS

Written permission must be obtained from the Department Chair and the Dean before students advance their hours earned toward a UMES degree through study at another institution of higher learning or at another campus of the University of Maryland. The appropriate forms may be obtained from the Office of the Registrar. After having obtained the approval of the Department Chair and the Dean, the permission form should be filed in the Office of the Registrar. The same rule applies for both the fall and

spring semesters and for any summer or winter sessions. Credits earned at institutions other than the University of Maryland campuses do not carry quality points and have no effect on the student's grade point average. The cumulative grade point average is based solely on credits attempted at the University of Maryland campuses.

No student with 60 or more credits may receive credit for a course taken at a two-year community or junior college.

Students requesting permission to register in the summer or winter program of another school will not be permitted to take more semester hours than there are weeks in that school's summer or winter session.

A student who earns a grade of "F" or "D" in residence at UMES may not advance credit hours earned toward a UMES degree by repeating the course at another institution.

Ordinarily, all students must take their final thirty (30) credit hours at UMES. Under extraordinary circumstances, the Dean may grant permission to take a maximum of six hours of the final thirty (30) hours on another campus. However, in no case does this permission waive the minimum residence requirement of 30 semester hours.

### TRANSFER CREDIT

#### Transfer of General Education

Students transferring from Maryland institutions of higher education who have completed the General Education requirements at the sending institution shall have met the general education requirements at UMES. In cases where the general education requirements at UMES exceed those of the sending institution, the transfer student will be required to take no more than the same number of general education credits required of the native student. The additional courses will be according to the distribution requirements of UMES.

For a detailed explanation on course transfer policy, see the [appendix](#) of the *Undergraduate Catalog*.

#### Transfer from Colleges and Universities

UMES does not limit the number of credits transferable for work completed at four-year colleges. However, in order to graduate, a student must complete the last 30 semester hours at UMES.

#### Maryland Community College Articulated Programs

An articulated transfer program is a list of community college courses that best prepare the applicant for a particular course of study at the University of Maryland Eastern Shore. If the applicant takes appropriate courses that are specified in the articulated program guide and earns an acceptable grade, he/she is guaranteed transfer with no loss of credit. Articulated career program guides help students plan their new programs after changing career objectives. The guides are available at the Office of Undergraduate Admissions at the University of Maryland Eastern Shore and in the transfer advisor's office at each of

the community colleges. Applicants can eliminate all doubt concerning transfer of courses by following programs outlined in the guide.

### Other Universities and Colleges

In most cases credit will transfer from institutions of higher education accredited by a regional accrediting association (e.g., Middle States Association of Colleges and Schools; New England Association of Schools and Colleges; North Central Association of Colleges and Schools; Northwest Association of Schools and Colleges; Southern Association of Colleges and Schools; Western Association of Schools and Colleges), provided that the course is completed with at least a grade of C and the course is similar in content and level to work offered at UMES. The applicability of these courses to the particular course of study at UMES will be determined by an academic advisor/evaluator in the office of the appropriate department.

### Students Planning to Transfer, or Attend Graduate or Professional School

Anyone planning to transfer from UMES should discuss transfer plans with a counselor or academic advisor. This consultation should begin as soon as the decision to transfer has been made so that any requirements the receiving institution demands of its students during the first two-years of school can be met.

Students intending to enter a professional school or graduate school should familiarize themselves with the requirements for admission to these schools and plan their programs with their academic advisors, accordingly.

### NON-TRADITIONAL LEARNING

UMES grants college credit for non-traditional learning experiences, either from credit by examination, or a **combination of examination, and credits earned on a Satisfactory/Unsatisfactory** basis. There are two ways to obtain credit by examination: one is by taking an examination administered by the appropriate department within the University and the other is by taking an appropriate examination administered through the College Level Examination Program (CLEP).

#### Advanced Placement Exam Credit

Based on a student's performance on the CEEB Advanced Placement Board Examinations, students may earn advanced placement and college credit. These examinations are usually given to eligible high school seniors during the month of May.

#### Other Accepted Sources of Non-traditional Learning Credit

Complete information regarding acceptable sources for non-traditional learning credit is available from the Office of Admissions and Registration. Elective and required credit can be earned utilizing the following sources:

CLEP\*

Dantes\*

Departmental Exams from other colleges\*

Military credit\*

Portfolio Credits from other colleges\*

Proprietary School, Public Agencies, etc. with articulation agreements\*

Other types of experience may apply. Check with the Office of Admissions and Registration.

\*Some restrictions apply.

### ACADEMIC STANDING

Class standing for purposes of taking upper level courses, voting in S.G.A. elections, selective service reports, etc., is determined on the following scale:

Earned Credit Hours	—	Level
0.27	—	Freshman
28-55	—	Sophomore
56-83	—	Junior
84 and above	—	Senior

Students should complete the general education courses and earn 56 academic hours before they enroll in upper level courses.

### GRADES AND QUALITY POINTS

The academic achievement of a student for a specific course is rated as follows:

Letter Grade (percentage)	—	Quality Points Per Hour
A (90-100)	—	4.0
B (80-89)	—	3.0
C (70-79)	—	2.0
D (60-69)	—	1.0
F (below 60)	—	0.0

Any deviation from the above grading scale must be included as part of the course syllabus distributed by the faculty member at the beginning of each semester.

A student who receives a grade of "D" in more than fifteen (15) semester hours of academic work must remove the excessive "Ds" by repeating courses. Grades of "D" in major and minor courses, English 101 and 102 or Teaching Internship do not count toward fulfilling the requirements for a degree.

In certain specified courses, the grading system involves only Pass or Fail ("P" or "F"), Satisfactory or Unsatisfactory ("S/U").

### AUDITING OF COURSES

A student who wishes his record to show that he has attended a course regularly but does not wish credit for that course may register as an auditor. No grade is given for a course audited, nor are any credits attempted or earned. No quality points are calculated. Any student may change his initial registration in a course for credit to audit during the add period only. He or she may drop an audited course during the drop period.



Fees for an audited course will be based on the regular credit value of the course. Once a student has audited a course, he or she cannot establish credit by examination in that course.

### INCOMPLETE GRADES

The grade of "I" (incomplete) is to be given only to students whose work in a course has been qualitatively satisfactory, when because of illness, or other circumstances beyond their control, they have been unable to complete the requirements for the course. In no case will the grade of "I" be recorded for a student who has not completed satisfactorily the major portion of the course work. In cases where this grade is given, the student may not re-register for the course until the "I" is removed by completing work assigned by the instructor. Work must be completed by the end of one year, otherwise the "I" becomes "F." When a student receives a terminal grade, he may repeat the course, as provided for any course where repeats are authorized. The student's Department Chairman and Dean may grant exception to the time period cited above on a written request by the student if circumstances warrant further delay. An "I" cannot be removed by earning "credit by examination."

In the computation of the cumulative grade point average, the course hours in which the grade of "I" is assigned are not included as hours attempted. When the grade of "I" is removed, the course hours are then included as hours attempted, and the Office of the Registrar makes an appropriate entry in the cumulative grade point average.

### REPEATING OF CLASSES

Any course may be repeated, but if a student repeats a course in which he or she has already earned a passing grade, the subsequent attempt shall not increase the total hours earned toward the degree. Credits for repeated courses will be counted only once toward graduation requirements and in computation of the cumulative grade point average. Only the highest grade will be used in the computation of the cumulative grade point average; however, all grades earned remain on the permanent record with repeated courses identified. Repeat credits and corresponding grades are used when computing the semester grade point average. If a course a student wishes to repeat has been discontinued or has not been offered for two semesters, the student should request the department Chairman and Dean to designate a substitute course, which when taken, will remove the grade of the discontinued course. The course so named and the student involved should be reported in writing to the Office of the Registrar.

Academic departments have the prerogative to limit the number of times a student may attempt to successfully complete core major courses.

### INTERCAMPUS COURSE REPEATS

If students wish to repeat a course which they originally completed at another campus in the University System of Maryland, they should consult the department chairs at both institutions to determine course equivalency. Written

statements verifying that the courses are equivalent should be sent by the Chairman to the Registrar at the student's present campus, who will see that the appropriate adjustment is made in the student's permanent record after the course has been repeated.

### GRADE POINT AVERAGE

To compute the grade point average (GPA), the number of credits for each course is multiplied by the quality points of the corresponding grade. The total number of quality points is divided by the total number of credits attempted to obtain the grade point average for the semester.

<b>Example</b>			
ENGL 101	(3)	B =	9
MATH 101	(3)	A =	12
HIST 101	(3)	A =	12
BIOL 101	(4)	C =	8
EDHE 104	(2)	F =	<u>0</u>
	15		41
	<u>41</u>	=	2.73 GPA
	15		

The cumulative grade point average is computed in a similar manner by including all courses attempted at the University of Maryland. Courses transferred from other institutions are not included in the grade point average. The following courses are not included in computing the grade point average: Zero credit hours, pass/fail, satisfactory/unsatisfactory courses.

An instructor may change a grade submitted to the Office of the Registrar only on certification, approved by the Department Chairman and the Dean, that an error was made in computing or transcribing the grade. The request for change in the grade must be initiated no later than the semester following the issuance of the grade.

### HONORS CONVOCATION

Full-time undergraduate students completing a minimum of 12 semester hours of credit with a grade point average (GPA) of at least 3.5 are eligible for participation in the university's annual Honors Convocation ceremony. The Honors Convocation is held the first Thursday in April as a public recognition for exemplary scholastic achievement (GPA of at least 3.5).

### UMES POLICY ON ACADEMIC PROBATION AND DISMISSAL

#### Good Academic Standing

Students are considered to be in good academic standing and performing satisfactorily at UMES if their cumulative GPA is at least 2.0.

**Unsatisfactory Performance:**

<b>Attempted GPA Is</b>	<b>Total Hours Academic Dismissal</b>	
	<b>If Cum. Academic Probation</b>	<b>If Cum. GPA Is In The Range</b>
<b>1-24</b>	<b>1.549 or below</b>	<b>1.550 to 1.999</b>
<b>25-48</b>	<b>1.699 or below</b>	<b>1.700 to 1.999</b>
<b>49-73</b>	<b>1.799 or below</b>	<b>1.800 to 1.999</b>
<b>74 and above</b>	<b>1.949 or below</b>	<b>1.950 to 1.999</b>

All credit hours transferred to UMES are included in the Total Hours Attempted in the first column of the above table when determining the category of academic performance. The cumulative GPA is computed by using

- the number of credit hours attempted at UMES and corresponding grades earned, and
- the credit hours attempted elsewhere within the University System of Maryland and the corresponding grades earned, when the grades also transfer to UMES. If the grades do not transfer, the hours are not used in computing the GPA.

**Academic Probation**

Any student will be placed on academic probation if he/she

1. fails to maintain the cumulative grade point average consistent with the number of credit hours attempted, or
2. has been reinstated to the University following academic dismissal.

Students on academic probation are restricted to no more than thirteen (13) credit hours per semester and are required to repeat all courses in which deficiencies have been received, as scheduling allows.

Students on academic probation are required to participate in prescribed academic crises intervention programs and activities provided by the major department and/or UMES Student Support Services.

Students must abide by ALL regulations during the entire period of academic probation.

**Academic Dismissal**

Students matriculating as first time freshmen will not be academically dismissed at the end of their first semester regardless of cumulative grade point average or number of credit hours earned. Beginning with their second semester, such students will be subject to the standards given in the table above.

A student, other than a first semester freshman, will be academically dismissed if he/she

1. fails to maintain the cumulative grade point average consistent with the number of credits attempted, or

2. falls in the category of Academic Probation for two consecutive semesters.

A student who has been academically dismissed and who is reinstated will still be subject to the standards set forth in the table above. For example, a student will be academically dismissed again at the end of the first semester after reinstatement, if he/she remains in the Academic Dismissal category.

**READMISSION AFTER VOLUNTARY WITHDRAWAL**

A student who voluntarily withdraws or who is administratively withdrawn from the University for reasons such as medical, judicial, personal, financial, lack of interest, and employment may apply for readmission to the University by completing and filing an Application for Readmission with the Office of the Registrar. Applications for Readmission must be filed by the following deadlines:

November 1<sup>st</sup> – Students wanting to return for the Winter or Spring Session.

April 1<sup>st</sup> – Students wanting to return for the Summer and Fall Session

Applications may be obtained by writing to  
Office of the Registrar  
University of Maryland Eastern Shore  
Princess Anne, MD 21853

**ACADEMIC DISMISSAL AND REINSTATEMENT**

When a student is academically dismissed from UMES, he/she is not eligible to register with any campus or program of the University System of Maryland. To become eligible for registration once again, he/she must complete the Application for Reinstatement prior to the desired date of reinstatement. Applications for Reinstatement must be filed by the following deadlines:

**April 1<sup>st</sup>** Students who have been out one or more semesters and want to return for the Fall Semester.

**November 1<sup>st</sup>** Students who have been out one or more semesters and want to return for the Spring Semester.

**January 5<sup>th</sup>** Current semester students on dismissal at the end of the Fall Semester and want to return for the Spring Semester.

**June 15<sup>th</sup>** Current semester students on dismissal at the end of the Spring Semester and want to return for the Fall Semester.

Applications received after the deadline indicated above will be considered for the next session. Applications may be obtained by writing to Office of the Registrar University of Maryland Eastern Shore Princess Anne, Maryland 21853.

A student wishing to transfer to another program at UMES must wait until reinstatement has been granted before applying for admission to that program. The UMES Academic Appeals Board will not normally grant reinstatement until at least one semester has elapsed from the time of the student's dismissal.

A student who is reinstated after academic dismissal will be on academic probation. The same conditions of probation may be imposed on any student who seeks admission by transfer from another university or college and whose record at the previous school warrants this action.

Any appeal concerning the regulation governing academic probation or academic dismissal shall be directed to the Academic Appeals Board, which is empowered to grant relief in unusual cases if the circumstances warrant such action.

No student on academic probation is permitted to register for more than fourteen (14) semester hours. The student on academic probation should carry twelve (12) academic semester hours in order to absolve academic probation in one semester. Students on probation are urged to work with a faculty advisor before registering in order to take full advantage of the exceptions and special provisions

#### **CREDIT UNIT AND LOAD**

The semester hour, the unit of credit, is the equivalent of a subject pursued one 50-minute period a week for approximately 14-15 weeks. Two or three periods of laboratory are required for each credit hour in any course. In order for students to complete most curricula in four calendar years, their semester credit load must average 15 credits each semester or 30 hours each year toward their degree. A student registering for more than 18 hours per semester must have special approval from the Dean of his/her school. Normally, students having a cumulative grade point average of 3.0 or above may request permission from their Dean to register for more than 18 semester hours. The Office of Admissions and Registration will not accept the Registration Schedule if an overload of credit hours is requested without such approval. Under no circumstances will a student be allowed to carry more than 21 credit hours per semester.

Semester hour credit may be converted to quarter hour credit by dividing by two-thirds.

#### **FINAL EXAMINATIONS**

A final examination shall be given in every course. Exceptions may be made with approval of the department Chairman and Dean. Normally the final examination, additional tests, quizzes, term papers, and reports are used to determine a student's comprehension of a course. The order of procedure in these matters is left to the discretion of the department and should be announced to the class at the beginning of the course. All final examinations must be held in conformity with the Official Final Examination Schedule. No final examination shall be given at a time other than that scheduled in the Official Examination

Schedule without written permission of the department Chairman and Dean.

Generally no more than **three** final examinations a day is considered a normal test load for students. The department Chairman and Dean must keep a file of all final examinations.

#### **COMMENCEMENT**

Commencement exercises are held twice each year in May and December. It is the policy and practice of the University of Maryland Eastern Shore that all participants in its commencement exercises must have completed all academic requirements as outlined in the catalog in effect at the time of initial enrollment at the University as a degree-seeking student. Once students interrupt their program for five years or more, it will be necessary to satisfy the degree requirements as outlined in the University catalog or published curriculum in effect during the time following the student's readmission as a degree-seeking candidate. Students who have approved registration at other institutions during the semester of anticipated graduation will receive their degree once an official transcript is received by the Registrar's Office and all academic and financial obligations are met. Students are approved for graduation when the appropriate academic division and the Registrar's Office complete an official graduation audit.

#### **Application for Degree**

Students planning to graduate in December must complete their academic program requirements by the end of the fall semester; program requirements must be completed by the end of the spring semester for those planning to graduate in May. Students who expect to complete the degree requirements at the end of a semester should make application for degree during the pre-registration period prior to the semester of the expected graduation. Pre-registration dates are published in the Academic Calendar. Students who expect to graduate and are not enrolled at the University must file the application for degree by January 30<sup>th</sup> for spring semester commencement and September 30<sup>th</sup> for the fall semester commencement. Students will be charged a non-refundable diploma fee after the receipt of the application for degree. This fee and all financial obligations to the university must be satisfied in order to participate in commencement activities and prior to the release of the degree.

#### **Participation in Commencement Exercise**

Commencement exercises are held twice each year, in May and December. It is the policy and practice of the University of Maryland Eastern Shore that all participants in its commencement exercises must have completed all academic credit hour requirements as set forth by the departmental faculty for the appropriate degree. In addition, students must complete all financial obligations to the university in order to participate in Commencement activities. **For additional information, please call 410-651-6413.**

### Graduation With Honors

The faculty of UMES may recommend candidates for graduating with honors in a particular curriculum under the conditions listed below to be fulfilled prior to the last semester. Ordinarily, the "prior to" semester would be the fall or winter semester and the "last" semester would be the subsequent spring semester. To be considered for honors at the Spring Commencement exercises, for purposes of the Commencement Program, the diploma printing, and ceremonial announcement, a student must have earned in residence at UMES a minimum of 60 semester hours prior to the semester of graduation. Any student recommended by the faculty to graduate with honors but who does not meet the 60 hours in-residence requirement prior to the semester of graduation will have his/her final transcript *only* so designated with the appropriate distinction notation:

- a. For the honor of Cum Laude (with distinction), the student must have earned an average of not less than 3.3 in all courses pursued which are counted toward graduation.
- b. For the honor of Magna Cum Laude (with great distinction), constituting a recognition of work of exceptional merit, a student must have earned an average of not less than 3.5 in all courses pursued.
- c. For the honor of Summa Cum Laude (with highest distinction), constituting a recognition of work of superior merit, a student must have earned an average of not less than 3.7 in all courses pursued.

### SPECIAL CURRICULUM PROGRAMS

#### Academic Support Services

The University is cognizant of the need for and the value of support services as a key factor in the academic success and retention of students. In particular, academic support services are designed and implemented as extensions of the overall academic program at the University of Maryland Eastern Shore.

The Testing and Placement Program is designed for all first time students (including transfer students who have not earned satisfactory grades in college-level English and math). The Accuplacer computerized tests in reading comprehension, sentence skills, and math assess the students' strengths and weaknesses for placement purposes in college-level English, math, and reading-laden courses. Placement scores are given to the student and the advisor as the basis of course selection and placement during the advising process.

The Student Support Services Program (SSS) is a federally funded program designed to provide educational opportunities for low income, first generation, and disabled students to the extent that they will obtain a postsecondary education. The primary goal is the retention of eligible students through graduation. The services offered include tutoring, counseling and advising (personal, academic,

graduate school, and career), developmental skills classes, and individualized instructional assistance by the professional staff.

Eligible participants follow a closely monitored academic program, especially during the first year, and continue as long as the services are needed until the student graduates. The SSS Program strongly supports and encourages graduate and professional school enrollment.

The Tutoring Program is designed to provide instructional assistance to students in all lower level courses. The tutoring is conducted in the Center for Academic Support Services (Basic Skills).

In general, students may receive tutoring one-on-one or in a small group setting. The tutors are trained in instructional methodology, planning, record keeping, etc. They serve as a liaison between the students and the faculty. The tutoring services are free.

Developmental Skills Classes are designed as an outgrowth of the overall academic evaluation of students. Students are required to enroll in these classes as indicated by the Accuplacer test scores. Other students may enroll because of their own desire to improve their skills and/or upon recommendation from their instructors. The classes are taught by trained skills specialists (instructors) in small classes, as well as one-on-one. The instructional activities are designed to bridge the gaps in students' skills levels and to enable them to be successful in their postsecondary classes. Another goal is to enable students to enter majors and career paths that would be impossible without instructional support, especially in math.

Computer Assisted Instruction (CAI) provides a fully equipped computer lab with a wide variety of instructional software in basic skills and selected academic subjects. The lab is designed to assist students in acquiring new skills and information, as well as in reinforcing existing skills via a self-paced individualized mode.

Developmental Skills Tutorials (classes) are extensions of the University's academic program. At some point in their educational careers, students may find themselves in need of planned instructional assistance in reading, study skills, math, and writing skills. These tutorials are taught and directed by professional staff specialists. The emphasis will be on assisting students to master college-level basic skills as required in their academic programs.

#### Access And Success

The Access and Success program is funded by a grant from the Maryland Higher Education Commission to foster students' access to and successful completion of their university education. The program supports activities for students which assist in the achievement of this goal. The Office of Retention oversees the operation of the program.

**The office may be contacted at 410-651-6215.**

### **Child And Family Development Center**

The UMES Child and Family Development Center (CFDC), located in the Early Childhood Research Center, is a Maryland licensed preschool environment for thirty children ages two through five. One director, two full-time classroom teachers and supporting staff of UMES students manage the full-day program that is in operation year-round and serves both the University and local community. The CFDC is committed to facilitating each child's growth and development in an enriched, supportive environment. A hands-on thematic based curriculum encourages children to direct their own learning experiences within a proactive environment. **The office may be contacted at 410-651-6056.**

### **Continuing and Distance Education Program**

The Continuing and Distance Education Program at UMES provides an organized learning experience built around students' needs and interests. In accordance with its mission, the University of Maryland Eastern Shore is committed to providing maximum educational opportunities to the members of the surrounding community. UMES offers highly diversified and flexible courses and programs for those adults who are interested in career development and self-enrichment.

The Office of Continuing and Distance Education offers "non-credit" courses for those who are interested in self-improvement and upgrading their educational and technical background for business and industry. The office also provides professional academic counseling to every continuing education student who wishes to discuss curricula, careers, and matters of professional development. **The office may be contacted at 410-250-1088.**

### **Elderhostel Program**

Elderhostel is an educational program for senior citizens over 60 years of age who want to continue to expand their intellectual horizons and develop new interests and enthusiasms.

The concept provides for a weeklong educational program which allows for academic instruction accompanied by social activities. A modest fee covers the week's expenses including lodging, meals, educational programs, field trips and social activities.

The campus is extensively involved in these programs which are usually located in hotel facilities in Ocean City, Maryland. There are approximately 55 programs scheduled from September through April with a wide variety of non-credit courses constituting the curriculum. During the participants' five night, six-day stay, three unrelated classes are conducted by campus and adjunct faculty. **The office may be contacted at 410-250-1088.**

### **General Studies Program**

The Bachelor of General Studies Degree Program is designed to meet the needs of an expanding diverse population of students. The objectives of the program are as follows:

- Build a foundation for students to pursue further study in higher education.
- Afford greater access to a baccalaureate degree for the community and the nontraditional student.
- Provide students an avenue for the self-fulfillment that comes with an academic degree.
- Provide students an opportunity to explore a wide variety of career options.

The program permits the students to experience a broad liberal arts background with a high degree of competency in a selected area of concentrated study. Declared concentrations may be taken in all areas in which there are other traditional majors except education, business, or rehabilitation services. The academic program is individualized in that the student and the advisor design the scope and sequence of courses that will reflect the student's ability, interests, background experiences (including work), career goals, time constraints, etc.

General Studies is especially appropriate for the non-traditional adult (older) learner who has had a variety of work-related experiences or who has had "time out" periods in his/her educational background.

General Studies is recommended for the transfer student who has a number of transferable credits in a variety of disciplines or for the students who desire to change from a more restricted traditional major program to one that is more flexible and that will meet the needs of the student more appropriately.

Although students may enroll in the General Studies Program at any time, junior and senior level students must be officially enrolled as General Studies majors at least two semesters prior to the expected date of graduation.

1. The student must be in the University's database as an official General Studies major during the semester of the date of graduation.
2. A minimum of 120 total credits must be earned with a cumulative grade point average of at least 2.0.
3. A minimum of 34-35 credits of lower level courses in the 100-200 range may be applied toward graduation. These courses may be electives or prerequisites for upper level courses.
4. At least 45 credits must be earned at the upper level (courses in the 300-400) range. Of the 45 total upper level credits, 27 must be in one declared area of concentration. A grade of at least "C" must be maintained in all courses in the area of concentration.

5. Students (including transfer students) must complete the 40-47 credit hour general education requirements. Students who are exempted from the required physical activity must take three approved credits in an elective.
6. The General Studies Program is designed to enable transfer students to apply up to 70 credit hours earned at other institutions toward meeting the requirements of the General Studies degree at UMES. **The office may be contacted at 410-651-6457.**

Degree Requirements (Minimum)	Credit
General Education Requirements.....	40-47
Lower Level Credits .....	35
Upper Level Credits.....	45
Credits in the Concentration.....	27
Free Electives.....	18
Total Credits =	120 (minimum)

### DISCLAIMER FOR GENERAL STUDIES

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland Eastern Shore. At the time of the publication, every reasonable effort was made to attain factual accuracy in the material presented. The catalog is not intended to be a complete statement of all procedures, processes and regulations governing graduate or professional degree programs which may be covered in separate program and office manuals and handbooks. The University of Maryland Eastern Shore reserves the right to make changes in fees, course offerings and general regulations and academic requirements without prior notice.

For the most up-to-date information on course offerings, program requirements and deadlines, please write, call or e-mail the program or department to which you are applying.

### International Programs

The Office of International Programs (OIP) is designed to facilitate campus-wide internationalization of research, teaching, and outreach activities in order to promote cross-cultural knowledge and understanding among students, faculty, and staff. Its goals are to broaden faculty and staff involvement in international research and development activities; provide opportunities for student experiential learning and academic exchange programs; assist faculty and staff members to participate in exchange programs; and broaden cultural diversity at the University. **The office may be contacted at 410-651-6543.**

### New Student Advising

The University of Maryland Eastern Shore is strongly committed to the intellectual, emotional, social and spiritual development of students. New Student Advising and Freshman Advisors are available for discussion and assistance regarding programs of study and career option, proper selection of courses, information on the University's

policies and procedures, the use of the catalog, and academic and registration schedules.

Advisors are responsible for guiding and counseling students. However, students are responsible for seeking their own guidance and counsel. The Center is located in the Student Services Center, Room 2158. For questions about advising services, contact the New Student Advising Center at **(410) 651-6455 or e-mail at: [rlbright@mail.umes.edu](mailto:rlbright@mail.umes.edu).**

### Pre-Professional Programs

UMES offers pre-professional programs in physical therapy, dentistry, medicine, nursing, pharmacy, physician assistant, radiology technology, and veterinary medicine.

Students in the pre-professional programs may complete work at UMES and then transfer to the college offering the appropriate professional degree in order to complete the requirements for the particular program. With the exception of medicine, law, and dentistry, which require a baccalaureate degree prior to admission, all the pre-professional programs require two to three years of work at UMES. The Pre-Physician Assistant and Pre-Physical Therapy programs may lead to completion of the B.S. in Physician Assistant and the Doctorate in Physical Therapy at UMES.

Transfers may be made either to the appropriate colleges within the University System of Maryland or to any other institution.

### Rural Development Center

The Rural Development Center (RDC) was organized to support the economic development efforts of the lower Eastern Shore region including Somerset, Worcester, and Wicomico counties of Maryland. The RDC assists public and governmental agencies with respect to projects that

carry out their approved overall development plans and strategies. A multi-county advisory board assists in policy development and in determining programmatic needs in the tri-county area.

The RDC is part of the Cooperative Extension Service. External financial support comes from federal and county agencies and organizations. The RDC also acts as a mechanism to involve faculty and students in development projects.

The RDC goals for the Eastern Shore are to increase wages and salaries, stabilize and diversify the economy, increase the tax base, and reduce unemployment and underdevelopment in the area. Associated with these goals are the RDC objectives: maximizing human resources, expanding tourism and recreation, assisting industrial retention and expansion, and providing assistance in research and development. **The office may be contacted at 410-651-6183.**

### **The Collaborative Programs With Salisbury University**

Full-time students may register for approved courses at nearby Salisbury University (SU) and receive credits earned for the courses at full value. The same is true for SU students who wish to enroll in courses offered at UMES. Registration must be completed at the student's home campus according to scheduled dates. Copies of the Salisbury University schedule and/or information concerning the collaborative programs are available from the Office of Admissions and Registration.

### **The Cooperative Education Program**

The Office of Career Services administers the Cooperative Education program. This program is designed to combine educational training and practical work experience. The program provides students with planned and supervised work experiences related to their chosen field. All eligible and qualified students shall have access to the benefits of a cooperative education work experience through the availability of credited undergraduate and graduate cooperative academic course offerings and the provision of course enrollment opportunities.

Credit may be awarded contingent upon approval of the Cooperative Education Office only. The grading system for all Cooperative Education courses shall be pass/fail. Students may be awarded one to twelve (1-12) credits per course, which are designated as non-additive free elective credits that are applied, in accordance with the applicable academic major criteria for graduation, towards the completion of a baccalaureate, master's or doctoral degree.

### Cooperative Education Eligibility

In order to participate, the student must

- possess a minimum 2.0 GPA,
- have completed a minimum of 24 semester hours,
- be a sophomore or junior enrolled in a degree seeking program,
- have full-time status, and
- file an application with the Cooperative Education Office.

To remain in the program, the student must:

- register for each semester of cooperative education assignment,
- satisfactorily perform the work assignments for each work semester,
- submit and complete all required reports to the Cooperation Education Office on time, and
- attend Cooperative Education orientation workshops and seminars.

Once enrolled in this program, students will receive assistance in developing Learning Objectives, which outline the responsibilities and expectations of the Cooperative Education Program. The listing of objectives is intended to be flexible and individualized. It establishes readiness for learning and identifies relevant job-related information and specific requirements for credit. **The office may be contacted at 410-651-6447.**

### Cooperative Education Courses

Co-Op Ed. 300 Cooperative Work Experience 1-12 credits  
 Co-Op Ed. 301 Cooperative Work Experience 1-12 credits  
 Co-Op Ed. 400 Cooperative Work Experience 1-12 credits  
 Co-Op Ed. 401 Cooperative Work Experience 1-12 credits

### **The Golden (ID) Identification Program for Senior Citizens**

The purpose of the GOLDEN IDENTIFICATION CARD Program at UMES is to make available various courses and services to retired citizens who are 60 years old or older, and who are residents of the State of Maryland. Once application to the program is made and the applicant has a GOLDEN IDENTIFICATION CARD, the Maryland resident will be eligible to register for credit courses as a regular or as a special student. Tuition and fees will be waived. The GOLDEN IDENTIFICATION CARD will entitle the participant to all academic and student services on a space available basis. **The office may be contacted at 410-651-6436.**

### **The Honors Program**

The Honors Program of the University of Maryland Eastern Shore has been designed in cooperation with the professional schools at the University of Maryland at Baltimore and the Virginia-Maryland Regional College of Veterinary Medicine as an effort to prepare students for professional school study while providing them with a sound liberal arts education. Specific pre-professional tracks in medicine, dentistry, law, pharmacy, nursing, and social work and veterinary medicine are available to students admitted into the program. Upon successful completion of all pre-professional track and professional school admission requirements, program graduates are assured of admission into the corresponding professional school at the University of Maryland or Virginia Tech during the academic year immediately following.

A General Honors Program is designed for students interested in pursuing graduate school, preferably the doctorate, immediately following graduation from UMES. The same entry and retention requirements apply for General Honors Program students as for those pursuing a professional school track curriculum. General Honors is open to students pursuing any major course of study at UMES, provided the department in which the student is located has developed a sufficient number of honors courses as part of its curriculum.

Entry into The Honors Program is competitive. Students must have earned a cumulative grade point average of at least 3.30 to be eligible for admission. Outstanding SAT scores above 1100 are also necessary if the applicant is entering the program from high school. While these are the minimum criteria, to be competitive, successful applicants usually have scores considerably above the minimum. Three letters of recommendation from faculty who have taught the applicant academic subjects in high school (or college) are required. In addition, applicants should include as part of their submitted materials a list of extra school and community activities, honors and awards. An essay in

which the applicant explains why he/she is seeking admission into the program and what contributions to the program/university he/she can make is also expected.

Freshmen and sophomores enrolled at UMES may apply for entry into The Honors Program. While the grade point average required is the same as stated above for those entering from high school, to be competitive, successful applicants generally have earned a cumulative grade point average of at least 3.50.

Students enrolled in The Honors Program must maintain a grade point average of at least 3.3 on *both* a semester and cumulative basis. Students earning a semester and/or grade point average of at least 2.50 but less than 3.3 will be placed on probation. Students on probation are ineligible to receive merit scholarship awards from The Honors Program while on probation. Students have a total of two semesters and a summer to raise their grade point average(s) to at least 3.30. Any student not maintaining the required grade point average in the required time frame will be dismissed from the program. Students failing to earn at least a semester and/or cumulative grade point average of 2.50 are automatically dismissed from the program.

Any scholarship funds the student enjoyed before the probationary period *are not* automatically returned to the student after the probationary period has been completed. Funds are restored ***if money is available*** at the conclusion of the probationary period. **The office may be contacted at 410-651-6083.**

#### **The Preparation and Adjustment for College Entry (PACE) Summer Program**

The PACE Summer Program is a six-week residential program designed to provide basic skills enhancement and college orientation for applicants whose high school grade-point averages and/or SAT scores do not meet the criteria for regular (unconditional) admission to the University. For those with conditional admission, participation in the

PACE program is mandatory as a preliminary step to admission to the University. PACE will enable students to acquire the academic and other behaviors necessary for a successful entrance into postsecondary education.

Students who are selected to participate in PACE must have a 2.20 grade point average, a SAT total score of 650, and a grade of C or better in algebra I and II (high school).

PACE offers students an opportunity to enhance their proficiency in the fundamental skills areas in math and communication skills (reading, study skills, English/Composition). In addition, students must participate in other activities such as tutoring; library orientation/ research; academic, social and cultural seminars; and career assessments, etc.

Upon the successful completion of the PACE Program, students are offered regular admission to the University. The evaluation of each student's performance is based on the level of academic performance in all classes and on

social and psychological factors. **The office may be contacted at 410-651-6457.**

#### **The Upward Bound Program**

Upward Bound is a pre-college program that provides fundamental support to high school students in their preparation for college entrance. The program provides opportunities for students to succeed in pre-college performance and, ultimately, in higher education pursuits. Upward Bound is a year-round program and serves students in Somerset, Wicomico, and Worcester counties. The ultimate goal of Upward Bound is to increase the rates at which students enroll in and graduate from institutions of postsecondary education.

Upward Bound provides instruction in mathematics, laboratory sciences, English, literature, and foreign language. College students are employed as tutors during both the academic year and summer session. **For additional information, please call 410-651-6458.**

#### **The University Library Services**

The Frederick Douglas Library is a modern functional open stack library near the center of the campus that houses over 1,77,000 book volumes, 30,000 bound periodicals, over 500,000 microfiche and microfilm, and 19,000 micro book volumes. The library currently subscribes to more than 1,000 scholarly journals and newspapers and is a repository for many U.S. Government document files. Official publications of some United Nations special agencies are also in the collection. The library is an official depository of Maryland State Documents. As a member of the University System of Maryland's Information Management System, the library is linked with the University's eleven campuses and thirteen libraries via an automated integrated system.

A professional staff of librarians offers lectures and tours of the library as a segment of the University Orientation and the Bibliographic Instruction Program.

There are nine departments within the library, including: Acquisitions/Collection Development/ Automation, Cataloging, Circulation, Interlibrary Loan, Media Services, Reference, Serials/Documents, and Special Collections. More than thirty competent and courteous individuals with a variety of skills, knowledge, and training provide quality services to all patrons of the library. The technology available continues to increase, thus allowing UMES to have global access to collections, databases and/or resources to support information needs.

Please visit our web site [www.fdl.umes.edu](http://www.fdl.umes.edu) for further information about the library.

#### **The University Shoppe**

The University Shoppe is the Department of Human Ecology's student-operated business on the campus. The University Shoppe provides students with on-the-job experience and hands-on applications of buying, marketing, merchandising, and advertising concepts. The University Shoppe carries a variety of gift items, including jewelry,



home furnishings, glassware, ceramic figurines, stationery, and miscellaneous craft items. Amenities for guests of and visitors to the Richard A. Henson Hotel and Conference Center are also available. **The office may be contacted at 410-651-6065.**

### **Two Plus Two and Other Off-Campus Programs**

The Two Plus Two Program and other off-campus degree programs are designed to meet the educational needs of both the continuing education and degree seeking non-traditional student population. UMES has established formal agreements with several community colleges and institutions to provide access for the continuing education of their students through Two Plus Two Programs. These agreements encourage students to continue studies beyond the associate degree level to obtain a bachelor's degree. The specifics of the agreement are unique for each institution. However, through these collaborative efforts between UMES and the partnering institution, there are greater opportunities and choices for academic studies.

The Two Plus Two Program allows students at the community college to complete the junior and senior years of study for the bachelor's degree at a site away from the UMES campus. In some instances the upper level courses are offered at the community college.

Currently, UMES has established the following Two Plus Two and off-campus degree programs:

#### ***Eastern Shore Association of Colleges (ESAC) Higher Education Center,***

Chesapeake College – Wye Mills, MD  
Human Ecology (Bachelor of Science) – Concentration in  
Child Development  
Criminal Justice (Bachelor of Science)  
Computer Science (Bachelor of Science)

#### ***Community College of Baltimore County at Catonsville,*** Catonsville, MD

Aviation Sciences (Bachelor of Science--Three options are available:  
Professional Pilot, Aviation Management, and  
Aviation Maintenance Management  
Hotel Restaurant Management (Bachelor of Science)

#### ***Universities at Shady Grove, Rockville, MD*** Hotel Restaurant Management (Bachelor of Science)

#### ***Baltimore Museum of Industry, Baltimore, MD*** Teacher certification in Technology Education

Additional information concerning these Two Plus Two Programs and other off-campus degree programs may be obtained by contacting the Coordinator at **410-651-6337** or **[pasampson@mail.umes.edu](mailto:pasampson@mail.umes.edu)**.

### **University Scholars Program**

The UMES Scholars Program is an initiative to bring outstanding students to UMES with emphasis on under-represented groups in certain academic areas. Initially, participants will be selected on a competitive basis from the State of Maryland, and access will be eventually extended

to non-Maryland students. The program is opened to students who meet the academic requirements and are interested in any major offered at UMES. Scholars must be citizens or permanent residents of the United States.

The Scholars are expected to gain experience through travel and study-abroad programs, summer internships, community service, and research projects. Each student is assigned to a mentor in a particular area of interest to guide these experiences. Students are encouraged to produce scholarly work that will allow them to present at professional meetings as well as to publish in appropriate journals. Participants are expected to attend group meetings and seminars and to visit various businesses, colleges and universities, and other educational sites.

Students who are at the top of their class, hold at least a 3.5 grade point average, and have outstanding SAT scores are eligible to apply for admission. Part of the selection process includes an interview, evidence of leadership ability, evidence of potential to be successful in an academic environment, perceived ability to make a contribution to the University and the community, and desire to attend graduate or professional school. To remain in good academic standing, students must maintain full-time status and earn at least a 3.3 grade point average. **The office may be contacted at 410-651-6474.**

### **Which Department and School Do You Belong To?**

At the University of Maryland Eastern Shore (UMES), departments are grouped into Schools. A Dean heads each School. Listed below are the names of each School, along with the departments located within the School. You belong to the School in which your department is located. For example, if your major is Physician Assistant, you are a member of the Department of Physician Assistant, which is a Department within the School of Agricultural and Natural Sciences.

#### **School of Agricultural and Natural Sciences Dean, Early Childhood Research Center, Rm. 1120 410-651-6072**

Department of Agriculture, Trigg Hall, Rm. 1107  
410-651-6168

Department of Human Ecology, Richard Henson  
Center, Rm. 2101 410-651-6056/6061

Department of Natural Sciences, Carver Hall, Rm. 1103  
410-651-6013/6015

Department of Physician Assistant, Modular 934-5  
410-651-7584

Department of Rehabilitation Services, Modular 934-4  
410-651-6262

Department of Physical Therapy, Kiah Hall, First Floor  
410-651-6301/6360

**School of the Arts and Professions**  
**Dean, Early Childhood Research Center, Rm. 1120**  
**410-651-6083**

Department of Criminal Justice, Modular 934-1  
 410-651-6585

Department of Education, Library Brown Building,  
 Rm. 1131 410-651-6217

Department of English & Modern Languages, Wilson Hall,  
 Rm. 1102 410-651-6552

Department of Fine Arts, Arts and Technology, Rm. 1151  
 410-651-6488/6571

Department of Physical Education, W. P. Hytche Athletic  
 Center, Rm. 1104 410-651-8141

Department of Social Sciences, Modular 934-6  
 410-651-6086

**School of Business and Technology**  
**Dean, Early Childhood Research Center, Rm. 1105**  
**410-651-6067**

Department of Business, Management and & Accounting,  
 Kiah Hall, Second Floor 410-651-6523

Dr. Ibibia Dabipi, Engineering and Aviation Science  
 Tanner Hall, Rm. 1117 410-651-6365

Dr. John Dixon, Hotel & Restaurant Management, Richard  
 A. Henson Center, Rm. 2100 410-651-6563

Dr. Daniel Okunbor, Mathematics and Computer Science,  
 Kiah Hall, First Floor 410-651-6422

Dr. Leon Copeland, Technology, Arts and Technology  
 Center, Rm. 110 410-651-6465

**School of Graduate Studies, Dean, Early Childhood**  
**Research Center, Rm. 1136 410-651-6507/7966**

**Library Services, Dean, Frederick Douglass Library,**  
**Rm. 2105 410-651-6621**

**ACRONYMS**

**Agriculture**

AGBU	-	Agribusiness
AGEC	-	Agricultural Economics
AGED	-	Agriculture Education
AGME	-	Ag Engineering and Mechanization
AGNR	-	Agriculture and Natural Resources
AGRI	-	Agriculture
AGRN	-	Agronomy
AMIC	-	Applied Microbiology
ANPT	-	Animal and Poultry Technology
ECON	-	Economics
ENTO	-	Entomology

FDST	-	Food Science and Technology
HORT	-	Horticulture
NRES	-	Natural Resources
PLSC	-	Plant and Soil Science
SOIL	-	Soil Chemistry

**Business, Management and Accounting**

ACCT	-	Accounting
BUAD	-	Business Administration
BUED	-	Business Education
FINA	-	Finance
MKTG	-	Marketing

**Criminal Justice**

CRJS	-	Criminal Justice
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**Education**

EDCI	-	Education
EDSP	-	Special Education
GNST	-	General Studies
PSYC	-	Psychology

**Engineering and Aviation Sciences**

AVSC	-	Aviation Science
ENAE	-	Aerospace Engineering
ENEE	-	Engineering – Electrical
ENME	-	Engineering – Mechanical Engineering
ENES	-	Engineering – Engineering Science

**English and Modern Languages**

ENGL	-	English
FREN	-	French
SPAN	-	Spanish
THAR	-	Theater Arts

**Fine Arts**

ARTS	-	Arts
MUSI	-	Music

**General Studies**

FRDG	-	Fundamentals of Reading Lab
FWTG	-	Fundamentals of Writing Skills Lab
FMTH	-	Fundamentals of Math Skills Lab

**General Education Requirement**

**GER CURR. AREA**

(This acronym will be accompanied by the appropriate number for the designated area to be used.)

**Hotel and Restaurant Management**

CARM	-	Culinary Arts Restaurant Management
FMGT	-	Food and Beverage Management
HMGT	-	Hotel and Restaurant Management
TMGT	-	Travel and Tourism Management

**Human Ecology**

CHDE	-	Child Development Education
FMCT	-	Fashion Merchandising, Clothing & Textiles
HUEC	-	Human Ecology
NUDT	-	Nutrition and Dietetics

**Mathematics and Computer Sciences**

CSDP - Computer Science  
MATH - Mathematics

**Physician Assistant**

PHAS - Physician Assistant

**Physical Education**

EDHE - Health  
EDPE - Physical Education  
EXSC - Exercise Science  
RECR - Recreation

**Social Sciences**

HIST - History  
POLI - Political Science  
SOCI - Social Science  
SOWK - Social Work

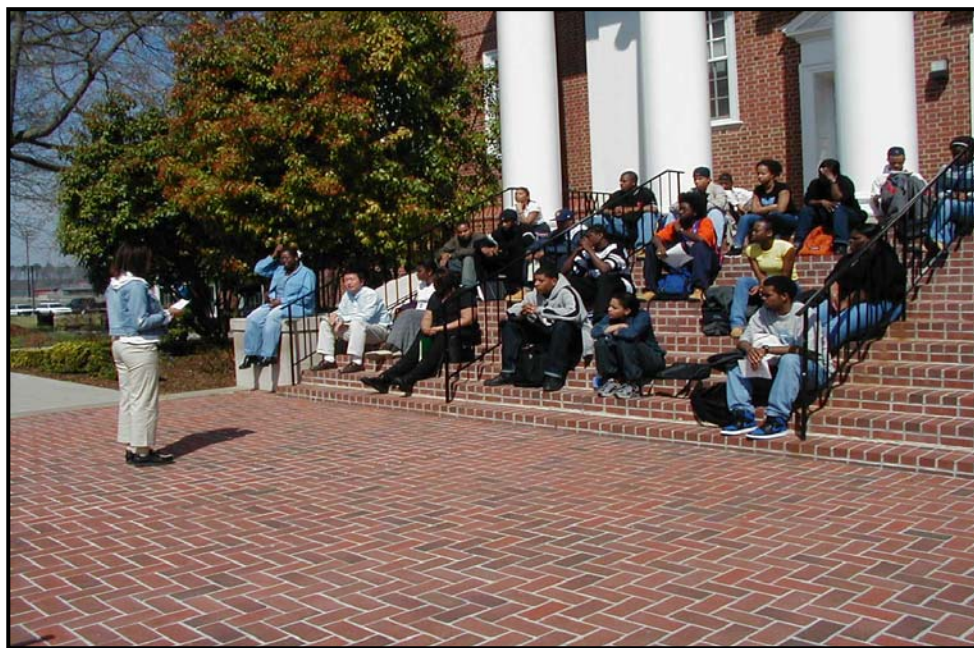
**Technology**

CMTE - Construction Management Technology  
EDTE - Technology Education  
ETME - Mechanical Engineering Technology  
ETEE - Electrical/Electronics  
Engineering Technology



**Hawk Cheerleaders**

## SCHOOL OF AGRICULTURAL AND NATURAL SCIENCES



**Trigg Hall**

The School of Agricultural and Natural Sciences is comprised of six academic departments: Agriculture, Human Ecology, Natural Sciences, Rehabilitation Services, Physical Therapy, and Physician Assistant. The Dean of the School is also the Research Director of land-grant programs. Undergraduate programs in pre-veterinary medicine, plant and soil science, animal science, agribusiness, nutrition, dietetics, fashion merchandising, early child development, family and consumer sciences, biology, chemistry, environmental science, allied-health-related and behavioral rehabilitation services, and physician assistant are representative of the School's varied curricula. Graduate programs, at both the Masters and Doctorate levels, are offered in Marine Estuarine and Environmental Sciences, and the Master's degree is offered in Rehabilitation Counseling and in Food and Agricultural Sciences. The doctorate in Physical Therapy is offered as well as a Ph.D. in Food Science and Technology. The faculty within the School of Agricultural and Natural Sciences are actively involved in important individual and collaborative research projects on campus, nationally, and internationally.

## DEPARTMENT OF AGRICULTURE

### Dean:

Carolyn B. Brooks, Ph.D.

### Interim Chair:

Mervalin Morant, Ph.D.

### 1890 Associate Research Director:

Arthur L. Allen, Ph.D.

### Professors:

Robert Dadson, Ph. D.

Ejigou Demissie, Ph.D.

Jagmohan Joshi, Ph.D.

### Associate Professors:

Arthur L. Allen, Ph.D.

Thomas Handwerker, Ph.D.

Jeannine Harter-Dennis, Ph.D.

George Heath, Ph.D., DVM

Theodore Mollett, Ph.D.

Mervalin Morant, Ph.D.

Okeleke Nzeogwu, Ph.D.

Jurgen Schwarz, Ph.D.

### Assistant Professors:

George Shorter, Ph.D.

Niki Whitley, Ph.D.

Salina Parveen, Ph.D.

Kisun Yoon, Ph.D.

### Director, Farm Operations:

James Jardine, M.S.

## MISSION

The mission of the Department of Agriculture is to provide students with an active learning environment that will prepare them to compete successfully in a global society. Graduates of our programs will be poised to make significant, positive contributions to the food and agricultural sciences, which is in keeping with the land-grant philosophy of learning, discovery, and engagement. Thus, it is our never-ending task to provide students with a nurturing environment that offers opportunities for discovery through experiential learning. Accomplishment of our task will result in graduates who have

- skills in information management;
- critical and analytical thinking skills necessary to integrate theory and real-world situations for making management decisions;
- the ability to communicate effectively;
- the ability to compete in a highly technological, computer-information oriented, global society.

Additionally, we strive to prepare students who can interact successfully in an ethnically diverse workforce that is comprised of people of socially and culturally diverse backgrounds.

## GOAL

The goal of our academic programs is to provide the nation and the world with graduates who have attained intellectual and professional competencies. Graduates of the Department of Agriculture will have received cross-disciplinary and interdisciplinary training that will enable them to successfully integrate into any career related to the food and agricultural sciences.

## OBJECTIVES

To provide an interdisciplinary program in the mathematical, biological, physical and social sciences, and humanities to support individual areas of concentration in the food and agricultural sciences, including conservation and preservation of our natural resources

To prepare students to interpret and apply scientific principles and techniques in the ever-evolving food, agricultural, and environmental sciences, on a global basis

To promote civic responsibilities of our students, faculty, and staff through community interactions

To provide students with the applied information technology skills necessary to compete successfully in today's workforce.

## DESCRIPTION OF PROGRAMS

The department offers two distinct degree programs. These programs are Agribusiness and General Agriculture. Specific descriptions of degree programs and degree program concentrations are given in the following narrative.

The **General Agriculture Degree Program** is designed to prepare students in the application of scientific principles, practices, and techniques requisite for careers in the agri-industry job market and for continued study at the graduate level. Students enrolled in this program may select a course of study in one of the following concentrations: Agricultural Education, Plant and Soil Science, and Animal and Poultry Science.

The **Agricultural Education Concentration** leads to the Bachelor of Science degree in General Agriculture and concurrent teacher certification. This concentration prepares students to become qualified teachers and to successfully assume the complex role of a teacher in the classroom of the twenty-first century. Agricultural Education includes general education, professional education, and specialized education. The curriculum for each student will vary depending on needs and interest. The flexibility of the curriculum provides the student an opportunity to select courses in various areas of agriculture.

The primary goal of the undergraduate teacher education program is to insure success within the teaching profession by 1) providing a comprehensive knowledge base that insures competency in agriculture subject matter areas, and 2) providing the opportunity to develop sophisticated clinical skills. Students enrolled in this program are provided a carefully planned course of study that emphasizes excellence in both theoretical and applied learning.

The ***Plant and Soil Science Concentration*** provides students with baccalaureate degree training in appropriate concentrations qualifying them for careers in agronomic and horticultural sciences, marketing production, governmental service, research, and/or graduate studies. Courses in this program are designed to incorporate laboratory, hands-on experiences, internships, and coop-education. This curriculum is designed to provide students with a broad background in the basic sciences and general education. The flexibility of the program allows students to focus in basic or applied plant sciences.

The ***Animal and Poultry Science Concentration*** is designed to provide students with the basic concepts of animal and poultry science, the fundamentals of modern production systems, and the applied management techniques used in today's animal and poultry industries. Two major program options leading to a Bachelor of Science degree in General Agriculture are offered.

***Option 1*** is a career-oriented program designed to provide students with a thorough knowledge of poultry and animal production combined with a working knowledge of economics and agri-business. Students successfully completing this program will receive a B.S. degree in General Agriculture and will be prepared for advancement in a career in poultry and animal production.

***Option 2*** is a pre-professional program which includes the prerequisite courses required to apply to the various veterinary colleges or to poultry and/or animal science graduate programs in the areas of nutrition, physiology, diseases, and genetics.

Students may apply to veterinary schools in the USA and abroad. It is the responsibility of the student to determine the admission requirements of any veterinary schools of interest prior to application.

The ***Agricultural Studies Concentration*** is designed to allow students to explore the Food, Fiber, Natural Resources, Environmental, Biological, Social and Natural Sciences without specializing in any particular concentration area. Ag Studies is a "student centered" individualized curriculum that will allow the student, in consultation with a faculty advisor, to select courses from approved programs to customize a program of study that best fits the student's career goals. While this concentration offers a great deal of program flexibility, restriction is built into the curriculum to ensure that each student's program meets University requirements for the baccalaureate degree. Ag Studies students must satisfactorily complete a

minimum number of upper level (300 and above) courses to complete the program. By completing courses in the department and Ag Studies core, students obtain a strong foundation of agricultural knowledge and skills. On-the-job training, which provides hands-on experiential learning, can be obtained through internships. Internships are highly recommended so that students can apply classroom knowledge and develop industry and/or government contacts while acquiring technical and field experience that will prepare them for a highly competitive and diversified workforce. A student's program should be planned in consultation with his/her departmental advisor, and approved by the AGST Oversight Committee and the Department Chair.

The ***Agribusiness Degree Program*** combines instruction in the agricultural sciences and economics with particular emphasis on the management of agricultural production and marketing firms, decision-making, and problem solving in public policy. The core curriculum of the program is developed from courses offered in the Departments of Agriculture, Business, Management and Accounting, Mathematics, and Computer Science.

By combining these areas in the curriculum, the agribusiness program is designed to: (1) meet the requirements for agribusiness competency essential for today's production agriculture, and (2) provide students sufficient expertise to allow them to enter management levels of diverse agribusiness firms. In addition, the curriculum includes a broad range of elective courses, which allows the student in agribusiness to structure a program consistent with his/her personal interests and goals.

Agribusiness students are also strongly encouraged to be involved in an internship or cooperative education program with a university-approved agribusiness firm, a federal or state agency, or an international organization during their junior or senior year. This arrangement provides students with training, experience, and a first-hand look at various career opportunities.

## PROGRAM REQUIREMENTS

### Specific requirements for minors in Agribusiness and General Agriculture are as follows:

A grade of C or better will be required in the courses taken to satisfy the minors in General Agriculture or Agribusiness. In accordance with the guidelines below, specific minor programs for individual students will be set up and approved by the Chair of the Department or a designee.

*A Minor in Agribusiness* requires a minimum of 18 hours.

*A Minor in General Agriculture* requires a minimum of 18 hours in the Plant and Soil Sciences, or in Animal and Poultry Science.

**BACHELOR OF SCIENCE DEGREE  
AGRIBUSINESS**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 42-43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218,  
 ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
ECON 201/201H	Principles of Economics I	3

Students must select one course:

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H 3

**C. Curriculum Area III - (Biological and Physical Sciences) 8 Credits**

Student must select any two (2) courses from the following:

BIOL 101, BIOL 103, BIOL 111, BIOL 113, ENVS 101, BIOL 112, BIOL 114,  
 CHEM 101, CHEM 103, CHEM 102, CHEM 104, CHEM 111, CHEM 113,  
 PHYS 101, PHYS 103, PHYS 121, PHYS 123, PHYS 122, PHYS 124,  
 PHYS 161, PHYS 181, PHYS 182, PHYS 184, PHYS 263,

**D. Curriculum Area IV - (Mathematics) 6-7 Credits**

Course No.	Title	Credits
MATH 109	College Algebra or	3
MATH 111H	Honors Elementary Mathematics Analysis	4
MATH 210	Elementary Statistics	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101/101H	Basic Composition I or Honors Basic Composition	3
ENGL 102/102H	Basic Composition II or Honors Basic Composition	3
ENGL 305	Technical Writing	3

**F. Curriculum Area VI - (Emerging Issues) 4 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
AGNR 111	First Year Experience Seminar	1*

**\*Required for all Department of Agriculture students**

**II. Program Core Requirements 15 Credits**

Course No.	Title	Credits
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Lab	1
AGEC 213	Introduction to Agricultural Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
AGRI 301	Seminar	1

**III. Major Core Requirements\* 48 Credits**

Course No.	Title	Credits
AGBU 223	Introduction to Agribusiness	3
AGBU 313	Quantitative Methods in Agribusiness	3
AGBU 323	Agribusiness Management	3
AGBU 471	Agribusiness Seminar II	1
AGEC 333	Agricultural Price Analysis	3
AGEC 423	Marketing Agricultural Products	3
AGEC 433	International Agricultural Markets, Trade and Development	3
AGEC 443	Farm Management	3
AGEC 453	Agricultural Finance	3
AGEC 463	Agricultural Policy	3
ACCT 201	Introductory Financial Accounting I	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
MATH 112	Calculus I	4
ECON 202/H	Principles of Economics II/Honors Principles of Economics II	3
ECON 300	Intermediate Micro Economic Theory	3
CSDP 220	Introduction to Computer Use	4

**\*A minimum grade of "C" is required for each course.**

**IV. Supportive Requirements \*\* 6 Credits**

Choose a minimum of 6 credit hours from courses listed below

Course No.	Title	Credits
AGBU 300	Internship I	3
AGBU 371	Agribusiness Seminar I	1
AGBU 400	Internship II	3
AGEC 419	Agricultural Cooperatives	3
CSDP 240	Principles of Data Processing	3
ECON 301	Intermediate Macro Economic Theory	3
ECON 304	The Economics of Black America	3
ECON 303	Labor Economics	3
ECON 302	Money and Banking	3
ECON 402	Economics of Development	3
BUAD 302/H	Organization and Accounting Management	3
BUAD 412	Business Law	3
ACCT 301	Cost and Budgetary Control	3
BUAD 411/H	Operations Research & Decision Theory	3
BUAD 307	Industrial Relations	3

**\*\*A minimum cumulative grade of "C" (GPA 2.0) is required for supportive courses.**

**V. Free Electives 8 Credits**

**TOTAL PROGRAM REQUIREMENTS 120**



**AGRIBUSINESS**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ANPT	114	Intro. to Animal Science	4
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
MATH	109	College Algebra <b>or</b>	3
MATH	111H	Honors Elem. Math Analysis	4
ECON	201	Principles of Economics I <b>or</b>	
ECON	201H	Honors Principles of Economics I	3
AGNR	111	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>14/15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDHE	111	Personalized Health Fitness	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Composition II	3
ECON	202	Principles of Economics II <b>or</b>	
ECON	202H	Hnrs. Principles of Economics II	3
MATH	112	Calculus I	4
AGME	283	Eng. Prin. of Appl. to Agric.	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA I	3
ENGL	203	Fund. of Contemporary Speech	3
		GER CURR. AREA II	3
PLSC	184	Intro. to Plant Science	3
PLSC	185	Intro to Plant Science Lab	1
AGEC	213	Introduction to Ag. Economics	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA I	3
AGBU	223	Intro. to Agri-Business	3
		GER CURR. AREA III	4
CSDP	220	Intro. to Computer Programming	<u>4</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGBU	313	Quantitative Methods in AGBU	3
ACCT	201	Intro. Financial Accounting	3
		GER CURR. AREA III	4
AGBU	323	Agribusiness Management	3
ECON	300	Int. Micro. Econ. Theory	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	202	Intro. Corp. & Managerial Acct.	3
		Program Area IV: Supportive Course	3
ENGL	305	Technical Writing	3
		Elective	3
AGEC	333	Agricultural Price Analysis	3
AGRI	301	Seminar	<u>1</u>
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGEC	433	Int. Agr. Mkts, Trade & Dev.	3
AGEC	463	Agri. Policy	3
AGEC	453	Agric. Finance	3
		Supportive Course	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AGEC	423	Mkt. of Agric. Products	3
AGEC	443	Farm Management	3
		Program Area IV: Supportive Course	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**Total Credits Required**      **120**

**GENERAL AGRICULTURE  
AGRICULTURE EDUCATION CONCENTRATION**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218,  
 ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
ECON 202	Principles of Economics II	3
PSYC 200	Introduction to Psychology	3

**C. Curriculum Area III - (Biological and Physical Sciences) 11 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Lab	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
ENVS 101	Introduction to Environmental Science	3

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra or higher	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 4 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
AGNR 111	First Year Experience Seminar	1

**II. Program Core Requirements\* 15 Credits**

Course No.	Title	Credits
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Lab	1
AGEC 213	Introduction to Agriculture Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
AGRI 301	Seminar	1

<b>III.</b>	<b>Professional Core (Agriculture Education)*</b>	<b>42 Credits</b>																																							
	<table border="0"> <thead> <tr> <th><b>Course No.</b></th> <th><b>Title</b></th> <th><b>Credits</b></th> </tr> </thead> <tbody> <tr> <td>EDCI 200</td> <td>Introduction to Contemporary Education</td> <td>3</td> </tr> <tr> <td>EDSP 200B</td> <td>Introduction to Special Education</td> <td>3</td> </tr> <tr> <td>PSYC 305</td> <td>Developmental Psychology</td> <td>3</td> </tr> <tr> <td>PSYC 307</td> <td>Educational Psychology</td> <td>3</td> </tr> <tr> <td>EDCI 311</td> <td>Comprehensive Assessment in Education</td> <td>3</td> </tr> <tr> <td>AGED 313</td> <td>Supervised Experience Programs</td> <td>3</td> </tr> <tr> <td>EDCI 400</td> <td>Senior Seminar in Education</td> <td>3</td> </tr> <tr> <td>EDCI 406</td> <td>Classroom Management</td> <td>3</td> </tr> <tr> <td>EDCI 409</td> <td>Teaching Reading in the Content Areas: Part I</td> <td>3</td> </tr> <tr> <td>EDCI 427A</td> <td>Curriculum and Instruction in Agriculture</td> <td>3</td> </tr> <tr> <td>EDCI 490A</td> <td>Teaching Internship</td> <td>6</td> </tr> <tr> <td>EDCI 480A</td> <td>Teaching Internship</td> <td>6</td> </tr> </tbody> </table>	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>	EDCI 200	Introduction to Contemporary Education	3	EDSP 200B	Introduction to Special Education	3	PSYC 305	Developmental Psychology	3	PSYC 307	Educational Psychology	3	EDCI 311	Comprehensive Assessment in Education	3	AGED 313	Supervised Experience Programs	3	EDCI 400	Senior Seminar in Education	3	EDCI 406	Classroom Management	3	EDCI 409	Teaching Reading in the Content Areas: Part I	3	EDCI 427A	Curriculum and Instruction in Agriculture	3	EDCI 490A	Teaching Internship	6	EDCI 480A	Teaching Internship	6	
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EDCI 409	Teaching Reading in the Content Areas: Part I	3																																							
EDCI 427A	Curriculum and Instruction in Agriculture	3																																							
EDCI 490A	Teaching Internship	6																																							
EDCI 480A	Teaching Internship	6																																							
	<b>* A minimum grade of "C" is required for each course</b>																																								
<b>IV.</b>	<b>Supportive Requirements**</b>	<b>21 Credits</b>																																							
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	<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>120</b>																																							



**AGRICULTURE EDUCATION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGNR	111	First Year Experience. Seminar	1
ENGL	101	Basic Composition I	3
MATH	109	College Algebra or Higher	3
ANPT	114	Intro. to Animal Science	4
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	English Composition II	3
AGME	283	Engineering Prin. Applied Ag	3
EDSP	200B	Intro. to Special Education	3
ECON	202	Principles of Economics II	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
EDCI	200	Intro. to Contemporary Education	3
AGEC	213	Intro. to Ag. Economics	3
PSYC	200	Intro. to Psychology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
PSYC	305	Developmental Psychology	3
PSYC	307	Educational Psychology	3
HUEC	220	Perspective on Aging	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUED	212	Computer Concepts/Apps. I	3
PLSC	184	Intro. to Plant Science	3
PLSC	185	Intro. to Plant Science Lab	1
EDCI	427A	Curr. and Instru. in Ag. Ed..	3
AGRI		Elective	<u>4</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Select one Agricultural Course	4
EDCI	409	Teaching Reading Content Areas: Part I	3
		Select one Agricultural course	3
AGRI	301	Seminar	1
		Select one Agricultural course	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDCI	311	Comprehensive Assessment	3
EDCI	406	Classroom Management	3
AGED	313	Supervised Experience Program	3
		Select one Agricultural course	3
		Select one Agricultural course	<u>4</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	490A	Teaching Internship	6
EDCI	480A	Teaching Internship	<u>6</u>
<b>Semester Total</b>			<b>15</b>
<b>Total Credits Required</b>			<b>120</b>

**GENERAL AGRICULTURE  
AGRICULTURAL STUDIES CONCENTRATION**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 42-43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

**Course No. Title**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327,  
 ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III - (Biological and Physical Sciences) 7-8 Credits**

**Course No. Title**

Students must select two science courses—one must include a laboratory:

ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102,  
 CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101,  
 PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra or Higher	3

**(Students must select MATH 109 as required by this program option or a higher level as indicated by results of their mathematics placement exam)**

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <u>or</u>	3
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 7 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
AGNR 111	First Year Experience Seminar	1*
	Elective	3

**\*Required for all Department of Agriculture Students**

**II. Program Core Requirements\* 15 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Lab	1
AGEC 213	Introduction to Agriculture Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
AGRI 301	Seminar	1

**III. Ag Studies Core\* 27 Credits**

Select a minimum of 27 credit hours of which one three credit-hour course must be selected from at least three current Department Programs.

**\* A minimum grade of "C" is required for each of these courses**

**IV. Supportive Requirements\*\* 37 credits**

Select 37 credits hours which will enhance and strengthen the students' chosen Food & Agricultural Science interest area. A minimum of 20 credit hours must be selected from the 200-400 level.

**\*\* A minimum cumulative grade of "C" (GPA 2.0) is required for Supportive Courses**

**TOTAL PROGRAM REQUIREMENTS 120**

**GENERAL AGRICULTURE  
ANIMAL and POULTRY SCIENCE CONCENTRATION  
OPTION I (BUSINESS/TECHNOLOGY)**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Course No.	Title	Credits
<u>Students must select ENGL 203 plus two additional courses</u>		
<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H	
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310	
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102	
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401	

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
<u>Students must select one course in each of two disciplines</u>		
<b>SOCIAL SCIENCES:</b>	ECON 201 <u>or</u> ECON 201H, ECON 202 <u>or</u> ECON 202H, GEOG 201 <u>or</u> GEOG 202, HIST 101 <u>or</u> HIST 111H, HIST 102 <u>or</u> HIST 112H, POLI 200 <u>or</u> POLI 200H, POLI 342 SOVI 101 <u>or</u> SOVI 111H	3

<b>BEHAVIORAL SCIENCES:</b>	CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200, SOVI 201, SOWK 200 <u>or</u> SOWK 200H	3
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**C. Curriculum Area III - (Biological and Physical Sciences) 12 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Lab	1

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 110	Trigonometry and Analytical Geometry or Higher	3*

\* Placement in MATH 110 is based on placement test scores or successful completion of MATH 109.

**E. Curriculum Area V – (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3

**F. Curriculum Area VI - (Emerging Issues) 4 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
AGNR 111	First Year Experience Seminar	1**

\*\*Required for all Department of Agriculture students

**II. Program Core Requirements 15 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Lab	1
AGEC 213	Introduction to Agriculture Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
AGRI 301	Seminar	1

**III. Major Core Requirements 27 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ANPT 214	Animal & Avian Physiology	4
ANPT 223	Introduction Poultry Technology & Management	3
ANPT 304	Reproductive Physiology of Domestic Animals	4
ANPT 313	Introduction to Animal & Avian Nutrition	3
ANPT 424	Animal & Avian Health & Diseases	4
	Select three 400 level courses from ANPT Production	9

**IV. Supportive Requirements 33 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 132	Introduction to Business	3
ACCT 201	Introduction to Financial Accounting	3
ACCT 202	Intro. Corporate & Managerial Accounting	3
BUED 212	Computer Concepts/Applications. I	3
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
NRES 473	Ornithology	3
BIOL 301	Microbiology <b>and</b>	
BIOL 303	Microbiology Lab <b>or</b>	4
AMIC 324	Agricultural Microbiology	4
	Select one 300-400 Level courses as from: BUAD, ACCT, ECON, AGBU or AGECE elective	3
CHEM 211	Fundamentals of Organic Chemistry I <b>and</b>	
CHEM 213	Fundamentals of Organic Chemistry I Lab <b>or</b>	
CHEM 331	Elementary Organic Chemistry	4

**V. Free Electives 5 Credits**

**TOTAL PROGRAM REQUIREMENTS 123**



**ANIMAL AND POULTRY SCIENCE  
CONCENTRATION  
Recommended Course Sequence  
Option No. 1 (Business/Technology)**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
AGNR	111	First Year Experience Seminar	1
ANPT	114	Intro. to Animal Science	4
		GER CURR AREA I	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
BUAD	132	Introduction to Business	3
MATH	110	Trig. & Anal. Geo. or Higher	3
ECON	201	Principles of Economics I	3
HUEC	220	Perspective on Aging	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ANPT	223	Intro. to Poultry Tech. Mngt.	3
CHEM	111	Prin. of Chemistry I	3
CHEM	113	Prin. of Chemistry I Lab	1
ANPT	214	Animal & Avian Physio.	4
PLSC	184	Intro. to Plant Science	3
PLSC	185	Intro. to Plant Science Lab	<u>1</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AGME	283	Engineering Prin. Applied Ag	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
BIOL	222	Genetics	3
BIOL	223	Genetics Lab	1
		GER CURR AREA I	<u>3</u>
		<b>Semester Total</b>	<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ACCT	201	Intro. Financial Accounting	3
AGEC	213	Intro. to Agricultural Economics	3
CHEM	331	Elementary Organic Chem. <b>or</b>	4
CHEM	211	Fund. of Organic Chem I <b>and</b>	
CHEM	213	Fund. of Organic Chem. I Lab	4
ANPT	313	Intro. to Animal/Avian Nutrition	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ANPT		400 Level Production Elective	3
AGRI	301	Ag Seminar: Pro. Dvlpmnt.	1
ACCT	202	Intro. Corporate &. Man. Acct.	3
ANPT	304	Repro. Physiology	4
BIOL	301	Microbiology <b>and</b>	
BIOL	303	Microbiology Lab <b>or</b>	
AMIC	324	Agricultural Microbiology	<u>4</u>
		<b>Semester Total</b>	<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ANPT		400 Level Production Elective	3
		FREE Electives	5
		GER CURR. AREA II	3
BUED	212	Computer Concepts/Appl. I	3
		Select 300-400 Level course: BUAD, ACCT, ECON, AGBU or AGEC course	<u>3</u>
		<b>Semester Total</b>	<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Tech. Writing	3
ANPT		400 Level Production Elective	3
ANPT	424	Animal & Avian Health & Dis.	4
		Select a 300-400 Level course: BUAD, ACCT, ECON, AGBU or AGECE	<u>3</u>
		<b>Semester Total</b>	<b>13</b>

**Total Credits Required            120**

**GENERAL AGRICULTURE  
ANIMAL AND POULTRY SCIENCE CONCENTRATION  
OPTION II (PRE-VETERINARY/PRE-PROFESSIONAL)**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218,  
 ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H, 3  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H 3

**C. Curriculum Area III - (Biological and Physical Sciences) 12 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology II	1

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 110	Trigonometry and Analytical Geometry <u>or</u>	3*
MATH 112	Calculus I	

**Placement in MATH 110 is based on placement test scores or successful completion of MATH 109.**

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <u>or</u>	3
ENGL 310	Advanced Composition	

<b>F.</b>	<b>Curriculum Area VI - (Emerging Issues)</b>	<b>4 Credits</b>																																																			
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<b>V.</b>	<b>Free Electives</b>	<b>3 Credit</b>																																																			
	<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>120</b>																																																			

**ANIMAL AND POULTRY SCIENCE  
CONCENTRATION**

**Recommended Course Sequence  
Option II  
(Pre-Veterinary/Pre-Professional)**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	114	Principles of Chemistry I Lab	1
AGNR	111	First Year Experience Seminar	1
ANPT	114	Introduction to Animal Science	4
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	110	Analytical Geometry <u>or</u>	
MATH	112	Calculus I	3
ECON	201	Principles of Economics I	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
EDHE	111	Personalized Health & Fitness	3
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGEC	213	Intro. to Ag. Economics	3
ANPT	214	Animal & Avian Physiology	4
CHEM	211	Fund. of Org. Chem. I	3
CHEM	213	Fund. of Org. Chem. I Lab	1
ANPT	223	Intro. to Poultry Tech Mgmt	3
PLSC	184	Intro to Plant Science	3
PLSC	185	Intro to Plant Science Lab	1
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Cont. Speech	3
CHEM	212	Fund. of Org. Chem. II	3
CHEM	214	Fund. of Org. Chem. II Lab	1
BIOL	222	Genetics	3
BIOL	223	Genetics Lab	1
AGME	283	Eng. Prin. Appl. To Ag.	3
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	121	Gen. College Physics I	3
PHYS	123	Gen. College Physics I Lab	1
ANPT	313	Intro. to Animal/Avian Nutrition	3
GER CURR. AREA II			3
MATH	210	Elementary Statistics <u>or</u>	
MATH	260	Statistics for Scientists. <u>or</u>	
Elective <u>or</u>			
BUED	212	Computer Concepts/ Appli. I	3
ELECTIVE GER Area I			3
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
PHYS	122	Gen. College Physics II	3
PHYS	124	Gen. College Physics II Lab	1
ANPT	304	Repro. Physio. Dom. Ani.	4
BIOL	301	Microbiology <u>OR</u>	
AMIC	323	Agricultural Micro.	4
AGRI	301	Seminar	1
<b>Semester Total</b>			<b>13</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ANPT		400 Level Production Elective	3
GER CURR. AREA I			3
ENGL	305	Tech Writing <u>or</u>	
ENGL	310	Advanced Comp.	3
CHEM	341	Biochemistry	3
CHEM	343	Biochemistry Lab	1
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ANPT		400 Level Production Elective	3
ANPT 424		Animal & Avian Health & Dis.	4
Select one course:			
BIOL 311, BIOL 322,			
BIOL 326/327, BIOL 420/421,			
BIOL 426M			4
FREE Elective			3
<b>Semester Total</b>			<b>14</b>

**Total Credits Required      120**

**GENERAL AGRICULTURE  
PLANT AND SOIL SCIENCE CONCENTRATION**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines:

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H, 3  
GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
SOVI 101 or SOVI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
PSYC 200, SOVI 201, SOWK 200 or SOWK 200H 3

**C. Curriculum Area III - (Biological and Physical Sciences) 12 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology Lab I	1

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra or Higher	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 4 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
AGNR 111	First Year Experience Seminar	1*

**\*Required for all Department of Agriculture Students**

**II. Program Core Requirements\* 15 Credits**

Course No.	Title	Credits
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Lab	1
AGEC 213	Introduction to Agriculture Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
AGRI 301	Seminar	1

**III. Major Requirements 24 Credits**

Course No.	Title	Credits
AMIC 324	Agricultural Microbiology	4
HORT 203	Introduction to Horticultural Science <b>or</b>	
HORT 203H	Honors Introduction to Horticultural Sciences	3
SOIL 203	Introduction to Soil Science	3
BIOL 112	Principle of Biology II <b>and</b>	
BIOL 114	Principle of Biology Lab II <b>or</b>	
BIOL 112H	Honors Principles of Biology II <b>and</b>	
BIOL 114H	Honors Principles of Biology II Lab	4
AGRN 423	Plant Nutrition & Soil Fertility	3
BUED 212	Computer Concepts/Applications I <b>and</b>	
CHEM 211	Fundamentals of Organic Chemistry I <b>or</b>	
CHEM 213	Fundamentals of Organic Chemistry I Lab <b>and</b>	
CHEM 211H	Honors Fundamentals of Organic Chemistry I Lab	4

\* A minimum grade of "C" is required for each of these courses

**IV. Supportive Requirements\*\* 24 Credits**

Select a minimum of 24 credit hours

Course No.	Title	Credits
HORT 313	Floriculture & Ornamental Horticulture <b>or</b>	
HORT 313H	Honors Floriculture & Ornamental Horticulture	3
HORT 333	Landscape Design Theory	3
HORT 353	Turf Maintenance and Management	3
HORT 383	Horticultural Therapy	3
HORT 463	Plant Tissue Culture	3
ENTO 313	General and Applied Entomology	3
AGME	Select Courses with Advisor's Approval	
AGRN 333A	Weed Science	3
AGNR 353	Natural Resources Conservation	3
AGNR 283	Agriculture and the Environment	3
AGNR 483	Principles of Geographic Information Systems	3
AGRN 463/H	Plant Genetics & Breeding	3
HORT 423/H	Horticultural Crops	3
PLSC 283	Agriculture and the Environment	3
AGRN 413/H	Global Agronomic Crops	3
SOIL 443/H	Soil Chemistry	3
AGRI 499	Special Topics in Agriculture	3
PLSC 474	Plant Pathology <b>or</b>	
PLSC 474H	Honors Plant Pathology	4
AGRN 499	Independent Study in Plant & Soil Sci.	1-4
PLSC 440	Plant Physiology	4
AGRI 483/H	Recombinant DNA Technology	3
FDST 493	Food Chemistry	3
NRES 404	Conservation Biology	3
PLSC 484	Internship in Agriculture and Natural Resources	3-6

Select a minimum of 11 credit hours

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 222	Genetics	3
BIOL 223	Genetics Lab	1
BIOL 402	Ecology	4
BUAD	Select Courses with Advisor's Approval	
BUED	Select Courses with Advisor's Approval	
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Lab	1
CHEM 311	Analytical Chemistry I	4
CHEM 312	Analytical Chemistry II	4
PHYS	Select Courses with Advisor's Approval	
ENVS	Select Courses with Advisor's Approval	
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Lab	1
MATH	Select Courses with Advisor's Approval	
HUEC	Select Courses with Advisor's Approval	
ENVS	Choice of an ENVS Course	3-4

**\*\* A minimum cumulative grade of C (GPA 2.0) is required for Supportive Courses**

**V. Elective Requirements** **3 Credits**

Electives must be chosen with the approval of the student's advisor

**TOTAL PROGRAM REQUIREMENTS** **120**

**PLANT AND SOIL SCIENCE CONCENTRATION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGNR	111	First Year Exper. Seminar	1
ENGL	101/H	Basic Composition I	3
MATH	109	College Algebra or higher	3
CHEM	111	Principles of Chemistry I <b>and</b>	
CHEM	113	Principles of Chem. I Lab <b>or</b>	
CHEM	111H	Honors Principles of Chem. I	3
CHEM	113H	Honors Principles of Chem. I Lab	1
PLSC	184	Introduction to Plant Science	3
PLSC	185	Intro to Plant Science Lab	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	112	Principles of Biology II <b>and</b>	
BIOL	114	Principles of Biology II Lab <b>or</b>	
BIOL	112H	Honors Prins. of Biology II <b>and</b>	3
BIOL	114H	Honors Prin. of Biology II Lab	1
CHEM	112/H	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Basic Composition II	3
		CURR. AREA I	3
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ANPT	114	Intro. to Animal Science <b>or</b>	
ANPT	114H	Honors Intro. to Animal Sci.	4
AGEC	213	Intro. to Ag. Economics <b>or</b>	
AGEC	213H	Honors Intro. to Ag Economics	3
HORT	203	Intro to Horticultural Sci.	3
ENGL	203	Fund. of Contemporary Speech	3
CHEM	211	Fund. Of Organic Chem. I <b>and</b>	
CHEM	213	Fund. of Organic Chem. I Lab <b>or</b>	
CHEM	211H	Hnrs. Fund. of Organ. Chem.	
		<b>I and</b>	3
CHEM	213H	Hnrs. Fund. of Organ. Chem.	
		I Lab	<u>1</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AGRN	203	Introduction to Soil Science	3
AGME	283	Engineering Principles Applied to Agriculture	3
BIOL	111	Principles of Biology I <b>and</b>	
BIOL	113	Principles of Biology Lab I <b>or</b>	
BIOL	111H	Honors Prin. of Biology I	3
BIOL	113H	Honors Prin. of Biology I	1
		GE CURR. AREA II	3
BUED	212	Computer Concepts/Appl I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		Science or Math Sup. Course	3
ENGL	305	Technical Writing	3
		Plant & Soil Sci. Elective, Math or Sci. Supp. Course	3
		GER CURR. AREA I	<u>6</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AMIC	324	Agricultural Microbiology	4
		Science or Math Sup. Course and/or Plant and Soil Science Elective	3
		GER CURR. AREA II	3
		Science or Math Sup. Course	3
AGRI	301	Agriculture Seminar	<u>1</u>
<b>Semester Total</b>			<b>14</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AGRN	423	Plant Nutri. and Soil Fert. <b>or</b>	
AGRM	423H	Hnrs. Plant Nutri.& Soil Fert.	3
		Science or Math Electives <b>and/or</b> Plant/ Soil Science Electives	7
		Science, Math or Plant/Soil Science Supportive Course	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		*FREE Elective	3
		Plant and Soil Science Elective	3
		Plant and Soil Science Electives	<u>7</u>
<b>Semester Total</b>			<b>13</b>
<b>Total Required Credits</b>			<b>120</b>



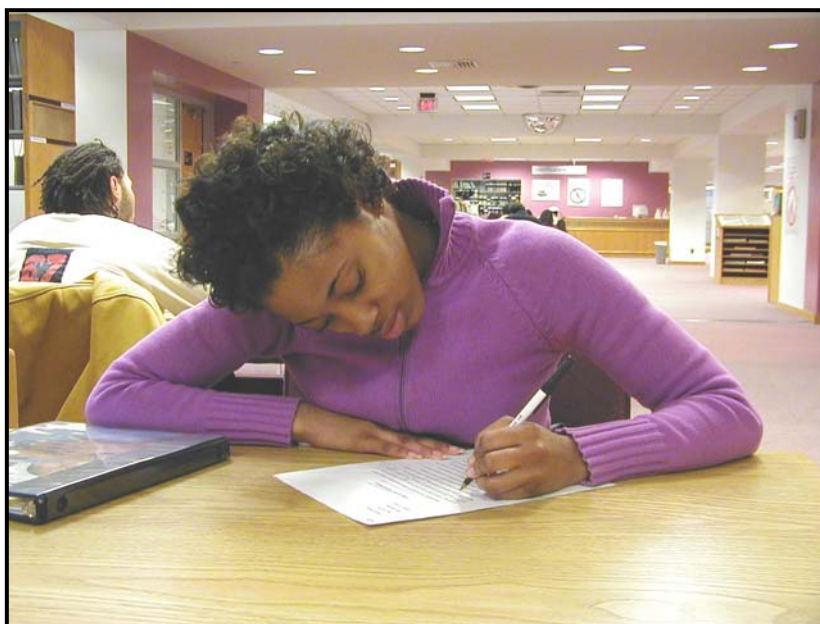
## MINOR PROGRAMS

### AGRIBUSINESS

A **Minor in Agribusiness** requires a minimum of 18 hours from the courses listed below:

Course	No.	Title	Credits
AGBU	313	Quantitative Methods in Agribusiness	3
AGBU	323	Agribusiness Management	3
AGBU	371	Agribusiness Seminar I	1
AGEC	213	Introduction to Agricultural Economics	3
AGEC	333	Agricultural Price Analysis	3
AGEC	419	Agricultural Cooperatives	3
AGEC	423	Marketing Agricultural Products	3
AGEC	433	International Agricultural Markets, Trade and Development	3
AGEC	443	Farm Management	3
AGEC	453	Agricultural Finance	3
AGEC	463	Agricultural Policy	3

A **Minor in General Agriculture** requires a minimum of 18 hours for the Plant and Soil Sciences, or for Animal and Poultry Science.



## COURSE DESCRIPTIONS

### AGRIBUSINESS

**AGBU 223/H Introduction to Agribusiness 3 crs.**  
The course offers definition and scope of agribusiness firms and explains the characteristics of agribusiness firms. It also examines trends of their expansion/decline and explores career opportunities available in agribusiness. Prerequisite: AGECE 213.

**AGBU 300 Internship I 3 crs.**  
This course offers the opportunity to students to observe and participate in management operation at university-approved agribusiness firms. A written appraisal of theoretical and/or applied management, economics, or business concepts observed during the internship is required. Prerequisite: Junior standing in Agribusiness.

**AGBU 313/H Quantitative Methods in Agribusiness 3 crs.**  
Agribusiness problems will be addressed through the use of indices, graphics, budgeting, discounting, simulation, basic statistical measure, and micro-computers. Prerequisites: AGECE 213 and MATH 210.

**AGBU 323/H Agribusiness Management 3 crs.**  
The course offers an examination and study of the organization, management, and operation of agribusiness firms with reference to the application of management principles for effective decision making. Prerequisite: AGBU 223.

**AGBU 371 Seminar I 1 cr.**  
A term paper with focus on economic, business or management analysis of current issues in agribusiness is required. Prerequisite: Junior standing in Agribusiness or Business.

**AGBU 400 Internship II 3 crs.**  
The course offers the opportunity to students to observe and participate in management operation at University-approved agribusiness firms. A written appraisal of theoretical and/or applied management, economics or business concepts observed during the internship is required. Prerequisite: Senior standing in Agribusiness.

**AGBU 471 Seminar II 1 cr.**  
A term paper with focus on economic, business or management analysis of current issues in agribusiness is required. Prerequisite: Senior standing in Agribusiness.

### AGRICULTURAL ECONOMICS

**AGECE 213/H Intro. to Agricultural Economics 3 crs.**  
Students will learn economic concepts, definition and scope of agricultural economics, business organizations in the food and fiber system, factors of production and their characteristics, market equilibrium analysis, and the role of price elasticities of demand and supply.

**AGECE 333/H Agricultural Price Analysis 3 crs.**  
The course combines economic theory, statistics, and data to describe, understand, and forecast agricultural price relationships and variation in agriculture. Specifically, it covers quantitative techniques developed to determine the factors causing price variation and to measure trend, cyclical, seasonal, and random price variation. Prerequisite: AGECE 213.

**AGECE 419 Agricultural Cooperatives 3 crs.**  
The course reviews basic philosophy, the fundamental principles, objectives, structure, and management of cooperative organizations. It also explains and evaluates the place of cooperatives in the modern economic history and legislations that affect them. Prerequisite: AGECE 213.

**AGECE 423/H Marketing Agricultural Products 3 crs.**  
The course examines the characteristics of the demand for and supply of farm products; alternative marketing channels, services, and costs involved in marketing are explained. The characteristics of cooperatives, what they have tried to do, and what they have done, as well as their special problems in organization, finance and control of their business are also examined. Prerequisite: AGECE 213.

**AGECE 433/H International Agricultural Markets, Trade and Development 3 crs.**  
The course focuses on international trade of agricultural products, including theory trade and monetary flows, national trade policies and world market structures for agricultural products. Impacts of trade on the domestic agricultural sector and the role of trade in agribusiness are also covered. Prerequisite: AGECE 213.

**AGECE 443/H Farm Management 3 crs.**  
Farm management explores farming as a business, including factors affecting profits, size of the business, choice of enterprises, forms of tenure and leases, planning and management of specific farms, and principles and techniques of keeping and interpreting farm records and accounts. Prerequisite: AGECE 213.

**AGECE 453/H Agricultural Finance 3 crs.**  
The course explains agricultural finance in agricultural firms and financial institutions, emphasizing financial reports and analysis, liquidity and risk, use of credit, and other financial alternatives to acquire control of farm resources. The sources of credit and acquisition of capital and decision-making are also explained. Prerequisites: AGECE 213 and ACCT 201.

**AGECE 463/H Agricultural Policy 3 crs.**  
The course explains current policy issues, policy instruments, and choices in U.S. agriculture. Also, it describes the economic characteristics and problems of agriculture, evolution and significance of agricultural policies, the international dimension, and domestic policies that affect agriculture. Prerequisites: AGECE 213 and senior standing.

## AGRICULTURE EDUCATION

**AGED 313 Supervised Experience Programs 3 crs.**  
This course is an overview of the job of the agri-science teacher and an examination of agricultural education programs for youth, with special emphasis on supervised experience practicums.

## AGRICULTURAL MECHANIZATION

**AGME 283 Engineering Principles Applied to Agriculture 3 crs.**  
The application of engineering principles to problems in soil and water conservation, agricultural power units, machinery, agricultural electricity, structures, and animal environments. Material handling and processing of agricultural products will also be covered.

**AGME 313 Agricultural Surveying Technology 4 crs.**  
In this course engineering principles and theory of surveying, care and use of surveying equipment, measurement of horizontal distances and angles, differential and profile leveling, topographic surveying, mapping, field notes and area measurement computation methods are examined.

**AGME 334 Small Power Equipment Technology 4 crs.**  
This course examines engineering design and principles of operation, adjustment, maintenance and repair of light horsepower, single cylinder internal combustion engines, with special emphasis on the use of operator's service and repair manuals to determine specifications.

**AGME 344 Agricultural Construction Materials and Procedures 3 crs.**  
In this course, the selection and use of agricultural building materials, including concrete and masonry, lumber, plywood, finishes, and fasteners and proper safety and use of hand and power tools in agricultural construction will be covered.

**AGME 354 Metal Construction and Maintenance 4 crs.**  
This course covers the selection and application of ferrous and non-ferrous metals through autogenous welding, cold working and hot working processes in agricultural construction and maintenance.

**AGME 374 Farm Tractor Power 4 crs.**  
Principles of operation and service and maintenance of spark and compression ignition engines and auxiliary systems including hydraulics, power trains, electrical, and comfort control are covered in this course.

**AGME 384 Agricultural Electrification 4 crs.**  
The course covers principles of electrical distribution and wiring according to governing codes of single and 3-phase service, and the selection of electrical controls and motors for agricultural application.

**AGME 444 Agricultural Machinery and Power Management 4 crs.**  
In this course, selection, sizing and operational principles required in the use of agricultural field and farmstead machine systems, cost analysis, and computer techniques are applied to planning and management of agricultural machinery systems.

**AGME 454 Principles of Animal Environment and Structures 4 crs.**  
Effects of environment on animal production principles of environment control; feed handling systems; waste management alternatives; and planning functional, economical, and environmentally controlled livestock facilities will be explored.

**AGME 490 Pre-Occupational Internship 4 crs.**  
Students will spend a period of up to 12 weeks with an approved agricultural business firm in their technical specialty, working as directed in management related tasks. Prerequisites: 54 credit hours and permission of instructor.

**AGME 499 Special Topics 1-4 crs.**  
This course requires a written report and an oral presentation of agricultural mechanization related topics. Prerequisite: Permission of instructor.

## AGRICULTURE AND NATURAL RESOURCES

**AGNR 111 First Year Experience Seminar 1 cr.**  
This course helps to prepare students for career opportunities, as well as assisting with professional development. It focuses on adjustments needed to succeed in college, study skills and test taking, crisis or stress management, and on understanding the significance of the land-grant system. This course is designed to acquaint students with current trends, pertinent issues, and modern practices associated with the various disciplines in agriculture and natural resources from a global perspective. **Required of all first year students in the Department of Agriculture, this course substitutes for the University-wide 100 level course: First Year Experience Seminar.**

**AGNR 353 Natural Resources Conservation 3 crs.**  
Students enrolled in this course are provided the principles of soil, water, sediment, and nutrient conservation and management. Application of the principles of land use, run-off and erosion control, and soil management practices including elements of the universal soil loss equation, are also discussed. Prerequisite: PLSC 184 and PLSC 185 or permission of instructor.

**AGNR 483 Principles of Geographic Information Systems 3 crs.**

This course is designed to provide students with an overview of the applicability and use of Geographic Information Systems (GIS); students will become competent with ArcView<sup>®</sup>, a GIS software package from Environmental Systems Research Institute (ESRI), Inc. Students will also learn the basics of data management, data accuracy, spatial analysis, and data presentation. Prerequisite: Sophomore standing.

**AGRICULTURE****AGRI 301 Agriculture Seminar: Professional Development 1 cr.**

This course is an individualized preparation for entry into a professional career in agriculture. The course is to be taken during the spring semester of the junior year. Skills such as resume writing, interviewing for employment, and developing a professional image will be emphasized. The organization of information and the presentation of technical data through oral and written communication skills will be stressed. Prerequisite: ENGL 203 or permission of instructor.

**AGRI 483 Recombinant DNA Technology 3 crs.**

This is a laboratory course to introduce the basic principles of gene cloning. It gives essential background on working with *E. coli*, utilizes different cloning systems, and employs methods for PCR applications, methods and procedures for DNA sequencing. Prerequisites: Senior standing and permission of instructor.

**AGRI 499 Special Topics in Agriculture 3 crs.**

Students conduct research with faculty on prearranged topics. Prerequisite: Permission of instructor.

**AGRONOMY****AGRN 333 Weed Science 3 crs.**

Weed identification, and action of herbicides, physical, biological, chemical and cultural weed control are covered. Safe use, handling and management of pesticides, including preparation for Maryland Certification, will also be emphasized.

**AGRN 413/H Global Agronomic Crops 3 crs.**

This course is an in-depth study of major field (cereal, oil and fiber) crops that are grown in temperate, tropical, and sub-tropical environments.

**AGRN 423/H Plant Nutrition and Soil Fertility 3 crs.**

This course provides an advanced study of the interrelationships between soil type, mineralogy, pH, soil nutrients, and other nutritional aspects related to plant growth, development and production. The availability and supply of micro and macro nutrients in soil, as affected by the environment, and the use of organic and inorganic fertilizers on plant growth and nutrition will be a major focus. Prerequisites: PLSC 184, PLSC 185 and SOIL 203 or permission of instructor. Cross-listed with AGRN 653.

**AGRN 463 Plant Genetics and Breeding 3 crs.**

This course deals with principles of plant genetics, cytological and genetic variation in crop plants, production and control of such variation in developing varieties and hybrids, crop improvement using biotechnology, methods of breeding self- and cross pollinated crops and production and maintenance of high quality seeds. Prerequisite: PLSC 184 or permission of instructor.

**AGRN 499 Independent Study in Plant and Soil Science 1-4 crs.**

This course is designed for students with an interest in pursuing independent research topics in the plant and soil sciences. Prerequisite: Permission of instructor.

**APPLIED MICROBIOLOGY****AMIC 324 Agricultural Microbiology 4 crs.**

Instruction includes lectures and laboratories which apply general principles of microbial ecology, food microbiology, pathogenic microbiology and industrial microbiology as they directly relate to practical applications in the Agricultural Sciences. Prerequisites: BIOL 111, CHEM 111 or permission of instructor.

**ANIMAL AND POULTRY TECHNOLOGY****ANPT 114/H Introduction to Animal Science 4 crs.**

This course is an introduction to the interspecies survey of principles through scientific animal production including breeding and genetics, reproduction, nutrition, animal management, and the importance of animal products to consumers.

**ANPT 202 Practicum in Animal and Poultry Science 2 crs.**

In this course, students may gain practical management experience by working at the UMES animal facilities through a non-paid contractual agreement. Students may spend time in the aquaculture, swine, poultry and/or ruminant facilities. Prerequisites: Second semester freshman standing and permission of instructor. Course may be repeated, but credit toward graduation will be limited to two credit hours.

**ANPT 213/H Introduction to Aquaculture 3 crs.**

The course covers an overview of the commercial aquaculture industry including shell and fin fish culture. Basic concepts include water quality management, reproduction, hatchery management, nutrition, disease control, processing, and marketing.

**ANPT 214/H Animal and Avian Physiology 4 crs.**

This course involves laboratory and lecture studies of the basic anatomy of mammals and domestic fowl and how this anatomy relates to the physiological functions of tissues, organs and systems. Prerequisite: ANPT 114 or permission of instructor.

**ANPT 223 Introduction to Poultry Technology and Management 3 crs.**

The course provides an overview of the poultry industry and how it relates to the human food chain. The basic concepts of poultry breeding, housing, management and production, processing, and marketing will be introduced.

**ANPT 304/H Reproductive Physiology 4 crs.**

In this course, students study the fundamental concepts of reproduction, including, comparative physiology, reproductive technologies, and management of domestic animal reproductive performance. Prerequisites: ANPT 114 or permission of instructor.

**ANPT 313/H Introduction to Animal and Avian Nutrition 3 crs.**

The fundamental concepts of digestion and metabolism of nutrients by animal and avian species are covered. Nutritional deficiencies and their requirements for various physiological functions are also included. Prerequisites: ANPT 114, CHEM 111, CHEM 113 or permission of instructor.

**ANPT 399 Internship in the Animal and Poultry Industry 3 crs.**

Offered as part of the student's educational training, this course provides practical work experience and familiarizes the student with the operation and management of a commercial animal or poultry business firm. Faculty will aid students in identifying firms; however, placement is not guaranteed. Prerequisite: Permission of instructor.

**ANPT 403/NRES 403 Advanced Aquaculture 3 crs.**

This course covers the fundamentals of commercial fish and other marine animal production, including basic principles of pond and tank production, management, nutrition and disease control.

**ANPT 413 Advanced Poultry Production and Management 3 crs.**

The principles and current practices in hatching egg production, incubation and hatchery management and commercial broiler production are covered in this course. Topics include broiler breeder management, hatching egg incubation, broiler housing systems, ventilation, heating, lighting, feeding, and health care. Practical experience in poultry production practices will be gained by putting classroom instruction into practice through operating the 10,000 bird broiler house on the UMES farm. Prerequisites: ANPT 223 and ANPT 313, or permission of instructor.

**ANPT 423/BIOL 463 Wildlife Management 3 crs.**

In this course, students develop an understanding of the principles and practices associated with wildlife management. Emphasis is placed on research design, sampling techniques, and field research. Students practice field techniques, analyze results, and develop management recommendations as part of semester projects.

**ANPT 424/H Animal and Avian Health and Diseases 4 crs.**

Students study parasitic, viral, bacterial and protozoal diseases of mammalian and avian species. Methods of disease prevention, control and eradication are also discussed. Prerequisites: ANPT 214/H or permission of instructor.

**ANPT 443 Horse Production 3 crs.**

Principles and applied practices of horse production, with emphasis on management, nutrition, health care, genetics and physiology are emphasized in this course. Prerequisites: ANPT 114 or permission of instructor (offered in odd-numbered years).

**ANPT 463 Dairy Production 3 crs.**

Applied dairy science with emphasis on genetics, nutrition and feeding, lactation, physiology and management, and marketing systems for dairy products are topics covered in this course. Prerequisites: ANPT 114 or permission of instructor (offered even-numbered years).

**ANPT 473 Swine Production 3 crs.**

Modern, applied aspects of swine production are covered, including breeding and selection, reproduction and artificial insemination, nutrition and feeding, environmental aspects of housing and management, production systems, herd health, and pork products and their value in the human diet. Prerequisites: ANPT 114 or permission of instructor.

**ANPT 499 Special Topics in Animal and Poultry Science 1-5 crs.**

This course includes individualized research and study of a problem in the student's area of interest done in cooperation with an ANPT faculty member. Prerequisite: Permission of instructor.

**ECONOMICS****ECON 201/H Principles of Economics I 3 crs.**

Students learn the principles of economic analysis, economic institutions, and issues of public policy. The emphasis is on aggregate economics, covering national income analysis, money and banking, business cycles, and economic stabilization. Prerequisite: MATH 102 or higher.

**ECON 202/H Principles of Economics II 3 crs.**

Students learn the principles of economic analysis and institutions and issues of public policy. Topics covered include production, market models, the allocation of resources, the distribution of income through the price system (micro analysis), and international economics. Prerequisite: MATH 102 or higher.

**ECON 300/H Intermediate Micro Economic Theory 3 crs.**

Students learn the general principles and analytical tools of price theory. Topics include an analysis of consumer behavior, business firms, and industry and factor markets. Prerequisites: ECON 201 and ECON 202.

**ECON 301 Intermediate Macro Economic Theory 3 crs.**

This course includes analysis of the determination of national income, employment, and price levels from the viewpoints of classical, Keynesian, neo-classical and neo-Keynesian economists. Key topics include consumption, investment, inflation, and monetary and fiscal policies. Prerequisites: ECON 201 and ECON 202.

**ECON 302/H Money and Banking 3 crs.**

This course explores the role of money, credit and the banking system in the United States. The growth of the commercial bank is traced from the colonial times to the present. Topics included are demand deposit, bank investments, Federal Reserve System, and monetary and fiscal policies. Prerequisites: ECON 201 and ECON 202.

**ECON 303 Labor Economics 3 crs.**

This course includes a study of the labor force in the United States with special reference to employment, wage structure, and historical and social background of trade unionism and labor legislature. Prerequisites: ECON 201 and ECON 202.

**ECON 304 The Economics of Black America 3 crs.**

This course includes survey and analysis of economic conditions of Black people in the United States from 1906 to present. Topics covered include Black land ownership, income, education, wages, mobility, businesses, employment welfare, discrimination, the Civil Rights Act of 1964, the impact of Federal economic policy on Blacks, and the historical factors which shaped them. Prerequisites: ECON 201 and ECON 202.

**ECON 401 Interpretative Analysis of Economic Theories 3 crs.**

Students do an in-depth study of basic economic concepts and theories which will be applied to understanding current economics policies and issues. Topics in general include monetary policy, fiscal policy, the public debt, income distribution, black economic development, collective bargaining, international trade, alternative economic systems, and the less developed countries. Prerequisites: ECON 201 and ECON 202.

**ECON 402 Economics of Development 3 crs.**

This course involves a study of the economic factors involved in the development of an economy. Particular emphasis is placed upon the capital accumulation in economies at various stages of economic growth. The economic problems of the developing areas of the world are examined. Prerequisites: ECON 201 and ECON 202.

**ECON 403 Economics of Public Finance 3 crs.**

The course involves a study of principles and practices of taxation and public expenditure. Topics include economic effects of public spending and debts, taxation, financing social security and other services, fiscal and monetary policies and their relation to inflation and social problems. Prerequisites: ECON 201 and ECON 202.

**ECON 404 International Economics 3 crs.**

Students study international economic problems, policies and processes. Topics covered include foreign trade, the balance of payments, exchange rate and exchange controls, international economic organization, the relationship between domestic and international economic organization, and the relationship between domestic and international economic policies. Prerequisites: ECON 201 and ECON 202.

**ECON 480 Directed Independent Study in Economics 3 crs.**

This course is designed to upgrade knowledge in a specialized area of study determined by deficiencies or projected area of growth and plans for further studies. It will be structured to meet the needs of the students taking the course. The enrolled student will be assigned to a faculty member with whom he will work out a specific plan of study. The course will be similar to tutorials in structure. The student will have the primary responsibility of completing the assignments. Credit hours may vary in accordance with the need and amount of work assigned. Prerequisite: Senior standing and permission of instructor.

**ECON 490 Senior Seminar in Economics 3 crs.**

This course offers students the opportunity for individualized, in-depth study with presentation to and criticism by peers. Topics of current interest will be announced before registration. Prerequisite: Senior standing.

**ENTOMOLOGY****ENTO 313 General and Applied Entomology 3 crs.**

This course consists of lectures and laboratory exercises that focus on biology, taxonomy, and management of insects. The fundamentals of integrated pest management will also be covered.

**FOOD SCIENCE AND TECHNOLOGY****FDST 493 Food Chemistry 3 crs.**

This course explores the chemistry of food components including water, carbohydrates, lipids, proteins, vitamins, and minerals, as well as additives, including preservatives, colorants, flavors, antioxidants and sweeteners. Functionality and interaction of components and their importance to quality and wholesomeness of foods will be discussed. Prerequisites: CHEM 212 or permission of instructor.

**HORTICULTURE****HORT 203 Intro. to Horticultural Science 3 crs.**

This course is designed to introduce the scientific principles and practices of horticulture as a scientific discipline. Plant relationships, structure, growth and development, as well as the artistic aspects will be discussed. The course is divided into three sections: 1) basic concepts and processes in plant science, 2) general managerial practices of horticultural crops, and 3) discussions of current topics in horticulture.

**HORT 313 Floriculture and Ornamental Horticulture** 3 crs.

This course is an introduction to the concepts of ornamental plant production and floral design. It includes production, propagation, harvesting and marketing of ornamental plants. Previously listed as HORT 312.

**HORT 333 Landscape Design Theory** 3 crs.

Students learn theory and principles of design, role of the environment in selecting plants and landscape materials, and basic graphic elements. Prerequisites: PLSC 184 and PLSC 185 or permission of instructor.

**HORT 353 Turf Mgmt. and Maintenance** 3 crs.

In this course, students learn to identify, select, establish and manage turf for commercial, recreational and residential use. Management factors such as renovation, drainage, irrigation, fertility, pest and disease control, as well as mowing and other maintenance procedures will be covered. Prerequisites: PLSC 184, PLSC 185 and SOIL 203 or permission of instructor.

**HORT 383 Horticultural Therapy** 3 crs.

This course addresses the therapeutic role and application of horticulture to individuals, it includes therapy and rehabilitation of the physically, emotionally and mentally challenged individuals. Prerequisites: PLSC 184 and PLSC 185 or permission of instructor.

**HORT 423 Horticultural Crops** 3 crs.

This course presents the scientific aspects of commercial fruit and vegetable production. Principles of economics and practices in the global marketing of vegetables, fruits and nuts are discussed in relation to the maintenance of a safe food supply. General aspects of regional vegetables and fruits are given special emphasis for the Delmarva Peninsula. Prerequisite: HORT 203 or permission of instructor.

**HORT 463 Plant Tissue Culture** 3 crs.

This course explores the principles and methods for *in vitro* culture and propagation of important horticultural and agronomic crops. Prerequisites: PLSC 184 and PLSC 185 or permission of instructor.

**NATURAL RESOURCES**

**NRES 403/ANPT 403 Advanced Aquaculture** 3 crs.

This course covers the fundamentals of commercial fish and other marine animal production, including basic principles of pond and tank production, management, nutrition and disease control.

**NRES 404 Conservation Biology** 3 crs.

The course is an introduction to the principles of conservation biology, with an emphasis on application of ecological principles, management tools and case history studies related to conservation issues. **Prerequisite: BIOL 402 or equivalent. Cross-listed with BIOL 404.**

**NRES 473 Ornithology** 3 crs.

This course covers general biology, taxonomy, and natural history of birds, with an emphasis on North American families. Cross-listed with NRES 673. Prerequisites: BIOL 111, BIOL 113, BIOL 112, BIOL 114 or permission of instructor.

**PLANT AND SOIL SCIENCE**

**PLSC 184/H Introduction to Plant Science** 3 crs.

This course provides an introduction to fundamental biological principles as they relate to plant growth, reproduction and development, interaction of plants with their environment, and importance of plants to society, with specific reference to the role of plants in Maryland's economy. Impact of crop production practices on other natural resources will also be discussed.

**PLSC 185 Introduction to Plant Science Lab** 1 cr.

This course deals with laboratory and field studies of plants, and related processes, including photosynthesis, nitrogen fixation, reproduction, classification, genetic variability, weed control and tillage practices. Co-requisite: PLSC 184.

**PLSC 283 Agriculture and the Environment** 3 crs.

This course examines the impact of agricultural practices on humans and our natural resources. Emphases is placed on providing and maintaining an adequate food supply while protecting the environment.

**PLSC 474/H Plant Pathology** 4 crs.

This course examines causes of diseases in agronomic and horticultural crops, to include symptom and sign recognition, isolation, and enumeration and management of diseases in the landscape and field crops. Lab exercises include preparation of a journal-type manuscript based on an individual research project. Prerequisites: PLSC 184 and PLSC 185 or permission of instructor. Cross-listed with PLSC 674.

**PLSC 484 Internship in Agriculture and Natural Resources** 3-6 crs.

This course involves supervised work experience in an approved setting that is planned with a business, university, or government agency. A faculty advisor must pre-approve the internship opportunity. Prerequisite: Permission of instructor.

**SOIL SCIENCE**

**SOIL 203 Introduction to Soil Science** 3 crs.

This course engages students in a study of soil forming minerals, weathering, soil physical properties, organic matter mineralization, and soil chemistry and the impact of these factors on soil fertility, moisture holding ability, and pH. Prerequisites: CHEM 111 and CHEM 113 or permission of instructor.

**SOIL 443 Soil Chemistry****3 crs.**

This course provides students with knowledge of the chemical composition and formation of soils, cation and anion exchange; soil acidity, soil alkalinity, soil salinity, soil conditions, and soil fixation of nutrients. Chemical methods of soil analysis are studied with emphasis on *their* relation to fertilizer requirements. Prerequisites: CHEM 112, CHEM 114 and SOIL 203.

**Honors courses: Students will be given more assignments, take home problems, term papers, and exams and quizzes than regular students.**



**FACULTY****Allen, Arthur L.**

Associate Professor, 1890 Associate Research Director  
 B.S., University of Arkansas at Pine Bluff  
 M.S., Oklahoma State University  
 Ph.D., University of Illinois-Urbana

**Dadson, Robert B.**

Professor  
 B.S., University of London  
 M.S., Ph.D., McGill University

**Demissie, Ejigou**

Professor  
 B.S., M.S., Ph.D., Oklahoma State University

**Handwerker, Thomas**

Associate Professor  
 B.S., University of Tennessee  
 M.S., Ph.D., Cornell University

**Harter-Dennis, Jeannine**

Associate Professor  
 B.S., M.S., Ph.D., University of Illinois

**Heath, George**

Associate Professor  
 B.S., Virginia State University  
 M.S., Ph.D., University of Minnesota  
 DVM., Tuskegee University

**Jardine, James**

Director, Farm Operations  
 B.S., M.S., Pennsylvania State University

**Joshi, Jagmohan**

Professor  
 B.S., Government Agriculture College  
 M.S., Punjab University, India  
 Ph.D., Ohio State University

**Mollett, Theodore A.**

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 M.S., Ph.D., Purdue University

**Morant, Mervalin**

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**Nzeogwu, Okeleke**

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 Missouri-Columbia

**Shorter, George**

Assistant Professor  
 B.S., Maryland State College  
 M.S., Virginia State College  
 Ph.D., Iowa State University

**Whitley, Niki**

Assistant Professor  
 B.S., M.S., University of Georgia  
 Ph.D., Mississippi State University

**DEPARTMENT OF HUMAN ECOLOGY****Dean:**

Carolyn B. Brooks, Ph.D.

**Chair and Associate Professor:**

Shirley Hymon-Parker, Ph.D.

**Professors:**

Anugrah Shaw, Ph.D.

**Associate Professors:**

Jurgen Schwarz, Ph.D.

Missale Kumelachew, Ph.D.

**Assistant Professor:**

Bettie W. Blakely, R.D., Ph.D.

Salina Parveen, Ph.D.

Elka Stevens, Ph.D.

**Lecturers:**

Annette N. Austin, M.S.

Nina Lyon Jenkins, M.S.

Donna Long, M.S.

Donna Satterlee, M.Ed.

**Research Assistant Professor:**

Kisun Yoon, Ph.D.

**MISSION**

The mission of the Department of Human Ecology is to prepare students for careers, graduate study, and leadership roles in Fashion Merchandising, Child Development, Family and Consumer Sciences, and Food and Nutrition. The department challenges faculty and students to make contributions that will enhance the quality of life of individuals and families in diverse societies. Our focus is to empower individuals to cope with change, explore new technologies, and manage resources wisely.

The philosophical tenets and programmatic focus remain central to the mission of the 1890-land grant university. This mission is carried out through teaching, research and community service.

**GOALS**

- To establish and promote high academic standards and performance.
- To provide career development opportunities for students, faculty and staff.
- To strengthen and expand research and community service programs.
- To increase enrollment and graduation rates.

**DESCRIPTION OF PROGRAMS**

The department offers an undergraduate degree in Human Ecology with options in the following areas:

- Child Development
- Dietetics
- Family and Consumer Sciences
- Family and Consumer Sciences Education
- Fashion Merchandising
- Honors Fashion Merchandising
- Advertising & Marketing Communications (FIT)
- Nutrition

**Child Development.** The program in Child Development provides a broad interdisciplinary background in the area of children and families. It prepares students to work with and/or teach others to work with children and their families. Emphases are given to development within various family structures and to strategies for facilitating normal development. Students learn basic and applied concepts of human development and acquire skills in working with young children of varying abilities and backgrounds and with their families in a variety of settings. In addition to classroom instruction, the Child Development students spend part of several semesters working in the campus Child and Family Development Center and in off-campus social and human service agencies. Potential employment opportunities include private child care facilities, hospital and clinic settings, recreation programs, health and social service agencies, and businesses. Students choosing this option can broaden their career possibilities by completing courses in cognate areas such as business, recreation, or nutrition that complement the training in Child Development. In addition, successful completion of the Child Development program provides excellent preparation for graduate studies.

The University of Maryland Eastern Shore and Wor-Wic Community College have an articulation agreement that facilitates the transfer of Early Childhood Education students from Wor-Wic Community College to UMES for the purpose of entering the bachelor's degree program in Human Ecology - Child Development.

**Dietetics.** The curriculum in Dietetics is approved by the Commission on Accreditation for Dietetic Education (CADE) American Dietetic Association. The course offerings are sequenced to provide experiences that become increasingly complex and build upon previous knowledge and experiences. Supporting courses are selected to provide prerequisite knowledge for professional courses. Students combine classroom experience with clinical and field experiences and are required to complete a minimum of 160 clock hours of practicum at approved facilities. Additional related field experience is recommended. Program graduates are eligible to apply for supervised practice programs and, upon successful completion, are qualified to write the dietetic registration examination. Registered dietitians are employed by industry, public health services, hospitals, food and health services, and

other local, state, national and international agencies in research and educational programs.

**Family and Consumer Sciences.** The Family and Consumer Sciences program is designed to provide the student with an interdisciplinary perspective for professional work with families and consumers. Students develop a comprehensive educational background while focusing on a specific interest. Graduates of the Family and Consumer Sciences program will be prepared to work in either the public or private sector that serves families and consumers. Students may select a minor to strengthen their general education core and required course work. Depending on the student's interest, the minor may be chosen from one of the following areas: Fashion Merchandising, Clothing and Textiles, Nutritional Science, or Business Administration. Early advisement is highly recommended.

**Family and Consumer Sciences Education.** The Family and Consumer Sciences Education Program provides educational opportunities designed to fulfill the needs of society in general and the State of Maryland in particular for FCS teachers. The program (1) offers a hands-on experience, performance-based program that will prepare prospective FCS teachers with the knowledge and skills needed to address some of life's most difficult tasks; and (2) enhances the quality of life for individuals and families in regard to resource management; living environments; individual, child and family development; nutrition and food; and textiles at the secondary level. The knowledge, skills, and processes acquired through Family and Consumer Sciences Education are applicable to the management of personal and family lives as well as work responsibilities. **Students applying for admission to the Professional Teacher Education Program will be required to meet the following criteria by the time they wish to enroll in the professional education classes:**

- Complete an application for formal admission to the Professional Program during the semester prior to entrance into content methods courses.
- Complete a minimum of 60 credits, including transfer hours, with an overall grade point average of 2.75 or better. The 60 hours must include EDCI 200, EDSP 200, ENGL 101, 102, 203, and 305; PSYC 200; science, social science, and math credits with grades of C or better in each course.
- Complete the Communication Skills and General Knowledge subtests of the Praxis.
- Obtain the signatures of two (2) faculty members, outside of the Department of Education who have instructed them prior to application for admission and can recommend the student for the program.
- Receive approval of the written application by the advisor.

**Fashion Merchandising.** The Fashion Merchandising program is designed to prepare students for entry level management positions in the broad field of fashion merchandising, with emphasis on the retail products and services. It includes a minor in business administration, as well as an internship in Fashion Merchandising or related areas. In addition, the department participates in the Fashion Institute of Technology Visiting Student Program (located in New York City). Fashion Merchandising majors who meet eligibility requirements may opt to spend one year (junior year) at FIT for an additional degree (A.A.S.) in Advertising and Communications. Students return to UMES to complete the four-year program and receive both degrees at graduation. To complement their program, students may opt to complete electives that focus on advertising, journalism, communication, or visual presentation. With appropriate courses taken as electives, students can pursue careers in fashion reporting, advertising, or graphic design.

**General Studies.** General Studies students interested in majoring in a Human Ecology concentration should consult an advisor when pursuing this program. Human Ecology must follow the sequence outlined in this catalog for Family and Consumer Sciences. Students may select a minor in Fashion Merchandising, Food and Nutrition, or Gerontology as part of the Family and Consumer Sciences sequence.

**Nutrition.** The program allows students to select certain courses in accordance with their interests. Teaching and research efforts are focused on the basic sciences of nutrition and foods and the application of knowledge in these disciplines to the maintenance of health and well being of human beings throughout the lifespan. Potential employment opportunities include research positions in laboratories, hospitals and industry. This program meets the needs of students who want to continue with their graduate work; it provides students a strong foundation for graduate studies in human nutrition and related fields, such as public health.

## RESEARCH

Faculty in the Department of Human Ecology are currently involved in the following research activities: 1) Effects of Dietary L-Carnitine in Talapia; 2) Nutritional quality of soybean and bio-availability of nutrients as being affected by food processing; 3) Nutrition & Health Promotion; 4) Protective clothing for pesticide users; 5) Microbiological safety of refrigerated and frozen food; 6) Texture, structure(TEM) and sensory evaluation of food.

## PROGRAM REQUIREMENT

Department of Human Ecology programs require that all students maintain a "C" in each course in their Program Core and Program Electives and a "C" average in General Education and Supportive Course Requirements. Individual programs may choose specific courses to fulfill General Education requirements.

**HUMAN ECOLOGY**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41-43 Credits**

Students should consult with freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities)<sup>1,2</sup> 9 Credits**

Course No.	Title	Credits
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Students must select ENGL 203 plus two additional courses:

<b>ART:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H,
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360,
<b>LANGUAGES:</b>	FREN 101 or FREN 102, SPAN 101 or SPAN 102,
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 324, ENGL 327, ENGL 328/H, ENGL 329/H, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
PSYC 200	Introduction to Psychology	3
SOCI 101	Introduction to Sociology	3

**C. Curriculum Area III - (Biological and Physical Sciences)<sup>3,4</sup> 7-8 Credits**

Course No.	Title	Credits
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Students must select two science courses and, if appropriate, the related laboratories:

ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102, CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101, PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

**D. Curriculum Area IV - (Mathematics)<sup>3</sup> 3-4 Credits**

Course No.	Title	Credits
MATH 109	College Algebra <b>or</b>	3
MATH 110	Trigonometry and Analytic Geometry <b>or</b>	3
MATH 111H	Honors Elementary Mathematical Analysis <b>or</b>	4
MATH 112	Calculus I	4

**E. Curriculum Area V - (English Composition)<sup>2</sup> 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <sup>5</sup>	3

**F. Curriculum Area VI (Emerging Issues) 7 Credits**

Course No.	Title	Credits
EDHE 111	Personalized Health & Fitness	3
HUEC 100	First Year Experience Seminar	1
	Select one course from:	
	BUAD 304, HUEC 230, MATH 210 <sup>6</sup>	3

<sup>1</sup> Honors students are required to take MUSI 310H

<sup>2</sup> Honors students substitute Honors courses

<sup>3</sup> Consult advisor when selecting these courses; Child Development students take MATH 102 or higher

<sup>4</sup> Dietetics and Nutrition students take BIOL 111 and 113 and BIOL 231 and 233; Child Development students take BIOL 101 and BIOL 103

<sup>5</sup> FIT option students take AC 241 at FIT instead of ENGL 305

<sup>6</sup> Fashion Merchandising students complete BUAD 304; Dietetics and Nutrition students complete a second math course (MATH 210); Child Development and Family & Consumer Sciences students take HUEC 230.

**II. Department of Human Ecology - Core Courses 9-12 Credits**

Course No.	Title	Credits
HUEC 370	Professional Development	2
HUEC 400	Internship (including HUEC 399 and HUEC 409) <sup>7</sup>	4-5
HUEC 464	Social Psychology of Food, Clothing and Shelter	3

<sup>7</sup> Dietetics students substitute NUDT 475 (4 credits); Nutrition students substitute NUDT 484 (5 credits); FIT option students substitute IC 291/491 for HUEC 399 & 400; Child Development majors complete HUEC 400 for 5 credits for a total of 12 core credits; FCS Education majors complete EDCI 480 and 490 as part of Professional Education courses.

**MAJOR PROGRAMS**

**CHILD DEVELOPMENT**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41<sup>3,4,6\*</sup> Credits**

Students should consult with freshman or departmental advisor when making course selections.

**II. Core Curriculum 12 Credits<sup>7</sup>**

**III. Professional Courses 47 Credits**

Course No.	Title	Credits
CHDE 220	Foundations of Early Childhood Education	3
CHDE 222	Infant/Child Development & Learning	3
CHDE 224	Emerging Language and Literacy	3
CHDE 323	Creative Activities for Young Children	3
CHDE 325	Special Needs in Early Childhood	3
CHDE 327	Curriculum & Instruction for Infants & Toddlers	3
CHDE 330	Observing & Interpreting Behavior of Young Children	3
CHDE 332	Curriculum & Instruction for Preschool Children	3
CHDE 427	Partnerships	3
CHDE 430	Supervision & Administration of Early Childhood Programs	3
CHDE 440	School Age Programming	3
HUEC 203	Human Development: A Lifespan Perspective	3
HUEC 361	Contemporary Family Issues	3
HUEC 450	Human Development Practicum	5
NUDT 214	Infant & Child Nutrition	3

**IV. Support Courses 20 Credits**

Course No.	Title	Credits
BUAD 213	Business Software Applications <u>or</u>	3
BUED 212	Computer Concepts and Applications I <u>or</u>	3
HUEC 474	Research Methodology II	2
	Approved Electives**	15

\*\*Consult advisor for approved list of electives

**TOTAL PROGRAM REQUIREMENTS 120**

**CHILD DEVELOPMENT 2+2**  
**Articulated Program with Wor-Wic Community College (WWCC)**

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 42<sup>3,4,6</sup>(T) Credits**

Students should consult with freshman or departmental advisor when making course selections.

**II. Core Curriculum 12 Credits<sup>7</sup>****III. Professional Courses 47 Credits**

Course No.	Title	Credits
CHDE 220	Foundations of Early Childhood Education	3 (T)
CHDE 222	Infant/Child Development and Learning	3 (T)
CHDE 224	Emerging Language and Literacy	3 (T)
CHDE 323	Creative Activities for Young Children	3
CHDE 325	Special Needs in Early Childhood	3
CHDE 327	Curriculum and Instruction for Infants and Toddlers	3
CHDE 330	Observing and Interpretation Behavior in Young Children	3
CHDE 332	Curriculum and Instruction for Preschool Children	3
CHDE 427	Partnerships	3
CHDE 430	Supervision and Administration of Early Childhood Programs	3
CHDE 440	School Age Programming	3
HUEC 203	Human Development: A Lifespan Perspective	3
HUEC 361	Contemporary Family Issues	3
HUEC 450	Human Development Practicum	5
NUDT 214	Infant and Child Nutrition	3

**IV. Support Courses (18 to 20 credits transferred WWCC) 20 Credits**

Course No.	Title	Credits
BUAD 213	Business Software Applications <u>or</u>	3
BUED 212	Computer Concepts and Applications I <u>or</u>	3 (T)
HUEC 474	Research Methodology II	2
	Approved Electives**	15 (T)

\*\*Consult advisor for approved list of electives

**TOTAL PROGRAM REQUIREMENTS 121**

**DIETETICS**

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 42<sup>4,6</sup> Credits**

Students should consult with freshman or departmental advisor when making course selections.

**II. Core Curriculum 9 Credits<sup>7</sup>****III. Professional Courses 36 Credits**

Course No.	Title	Credits
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3
NUDT 212	Scientific Principles of Food II	3
NUDT 300	Essentials of Nutrition Practice	1
NUDT 305	Nutrition in the Life Cycle	3
NUDT 310	Nutrition Education and Counseling	3
NUDT 391	Nutritional Science I	3
NUDT 392	Nutritional Science II	3
NUDT 401	Clinical Nutrition I	3

Course No.	Title	Credits
NUDT 402	Clinical Nutrition II	3
NUDT 471	Foodservice Systems Management	5
NUDT 473	Community Nutrition	3

**Chemistry Minor****20 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Lab	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Lab	1
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Lab	1

**IV. Support Courses****13 Credits**

Course No.	Title	Credits
BIOL 301	Microbiology <b>and</b>	3
BIOL 303	Microbiology Lab <b>or</b>	1
AMIC 324	Agricultural Microbiology	4
BIOL 232	Human Anatomy and Physiology II	3
BIOL 234	Human Anatomy and Physiology II Lab	1
HUEC 474	Research Methodology	2
HUEC 487	Supervisory Management	3

**TOTAL PROGRAM REQUIREMENTS 120****FAMILY AND CONSUMER SCIENCES****I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 41<sup>6</sup> Credits**

Students should consult with freshman or departmental advisor when making course selections.

**II. Core Curriculum****10 Credits****III. Professional Courses****45 Credits**

Course No.	Title	Credits
CHDE 222	Infant/Child Development and Learning	3
FMCT 201	Clothing and Textiles for Consumers <b>or</b>	
FMCT 381	Textiles I	3
HUEC 101	Principles of Art and Design	2
HUEC 104	Principles of Art and Design Lab	1
HUEC 203	Human Development: A Lifespan Perspective	3
HUEC 243	Housing Design	3
HUEC 310	Resource Management	3
HUEC 361	Contemporary Family Issues	3
HUEC 460	The Family and Aging	3
HUEC 487	Supervisory Management	3
HUEC 490	Consumer Motivation	3
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3
NUDT 212	Scientific Principles of Food II	3
NUDT 305	Nutrition in the Life Cycle	3
PSYC 303	Adolescent Psychology	3

**IV. Support Courses 6 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 213	Business Software Applications <u>or</u>	
BUED 212	Computer Concepts and Applications I	3
ECON 202	Principles of Economics II	3

**V. Minor Program 18 Credits**

A minor in Family and Consumer Sciences requires a minimum of 18 credit hours.

**TOTAL PROGRAM REQUIRMENTS 120**

**FAMILY AND CONSUMER SCIENCES EDUCATION**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41<sup>6</sup> Credits**

Students should consult with freshman or departmental advisor when making course selections.

**II. Core Curriculum 5 Credits<sup>7</sup>**

**III. Professional Courses 32 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHDE 222	Infant/Child Development and Learning	3
CHDE 323	Creativities Activities for Young Children	3
FMCT 361	Apparel Construction & Evaluation	3
FMCT 201	Clothing and Textiles for Consumer <u>or</u>	
FMCT 381	Textiles I	3
HUEC 243	Housing Design	3
HUEC 310	Resource Management	3
HUEC 361	Contemporary Family Issues	3
HUEC 474	Research Methodology II	2
HUEC 490	Consumer Motivation	3
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3

**IV. Professional Education Courses 42 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200A	Introduction to Contemporary Education	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 400	Senior Seminar in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in the Content Areas I	3
EDCI 410	Teaching Reading in the Content Areas II	3
EDCI 427C	Curriculum & Instruction in Home Economics	3
EDCI 480	Teaching Internship: Secondary Education	3
EDCI 490	Teaching Internship: Secondary Education	6
EDSP 200B	Introduction to Special Education	3
HUEC 203	Human Development: A Lifespan Perspective	3
PSYC 307	Educational Psychology	3

**TOTAL PROGRAM REQUIREMENTS 120**



## FASHION MERCHANDISING

### I. General Education Requirements

#### TOTAL REQUIRED FOR GENERAL EDUCATION – 41 Credits

Students should consult with freshman or departmental advisor when making course selections.

### II. Core Curriculum

**10 Credits**

### III. Professional Courses

Course No.	Title	Credits
FMCT 141	Introduction to Fashion Industry	3
FMCT 300	Historic Costumes	3
FMCT 341	Fashion Buying and Merchandising	3
FMCT 342	Advertising and Promotion	3
FMCT 361	Apparel Construction/Evaluation	3
FMCT 381	Textiles I	3
FMCT 382	Textiles II	3
FMCT 441	Visual Merchandising	3
HUEC 101	Principles of Art and Design	2
HUEC 104	Principles of Art and Design Lab	1
HUEC 310	Resource Management	3
HUEC 487	Supervisory Management	3
HUEC 490	Consumer Motivation	3

### Business Administration Minor

**18 Credits**

Course No.	Title	Credits
ACCT 201	Introductory Financial Accounting	3
BUAD 132	Introduction to Business	3
BUAD 302	Management & Organizational Behavior	3
BUAD 412	Business Law I	3
ECON 202	Principles of Economics II	3
MKTG 308	Principles of Marketing	3

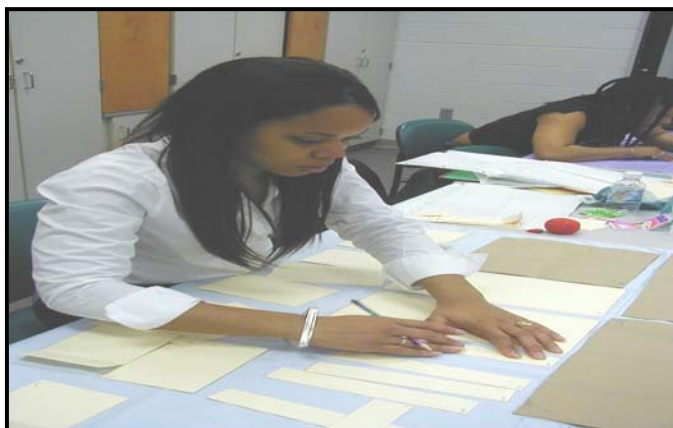
### IV. Support Courses

**15 Credits**

Course No.	Title	Credits
BUAD 213	Business Software Applications <u>or</u>	
BUED 212	Computer Concepts and Applications I	3
	Electives	12

### TOTAL PROGRAM REQUIREMENTS

**120**



## FASHION MERCHANDISING HONORS PROGRAM

### I. General Education Requirements

#### TOTAL REQUIRED FOR GENERAL EDUCATION – 42 Credits

Students should consult with their freshman or departmental advisor when making course selections.

### II. Core Curriculum

**10 Credits**

### III. Professional Courses

Course No.	Title	Credits
FMCT 141	Introduction to Fashion Industry	3
FMCT 300	Historic Costumes	3
FMCT 341H	Honors Fashion Buying and Merchandising	3
FMCT 342H	Honors Advertising and Promotion	3
FMCT 361	Apparel Construction/Evaluation	3
FMCT 381	Textiles I	3
FMCT 382H	Honors Textiles II	3
FMCT 441	Visual Merchandising	3
HUEC 101	Principles of Art and Design	2
HUEC 104	Principles of Art and Design	1
HUEC 310H	Honors Resource Management	3
HUEC 487H	Honors Supervisory Management	3
HUEC 490H	Honors Consumer Motivation	3

#### Business Administration Minor

Course No.	Title	Credits
ACCT 201	Introductory Financial Accounting	3
BUAD 132	Introduction to Business	3
BUAD 302H	Honors Management & Organizational Behavior	3
BUAD 412	Business Law	3
ECON 202H	Honors Principles of Economics II	3
MKTG 308	Principles of Marketing	3

### IV. Support Courses

**14 Credits**

Course No.	Title	Credits
BUAD 213	Business Software Applications <u>or</u>	
BUED 212	Computer Concepts and Applications I	3
	Electives	8
MATH 210	Elementary Statistics	3

**TOTAL PROGRAM REQUIREMENTS                      120**

## FASHION MERCHANDISING - FIT ADVERTISING AND MARKETING COMMUNICATIONS OPTION

### I. General Education Requirements

#### TOTAL REQUIRED FOR GENERAL EDUCATION – 41 Credits<sup>5</sup>

Students should consult their freshman or departmental advisor when making course selections.

### II. Core Curriculum

**10 Credits<sup>7</sup>**

### III. Professional Courses

**33 Credits**

Course No.	Title	Credits
FMCT 141	Introduction to Fashion Industry	3
FMCT 300	Historic Costumes	3
FMCT 341	Fashion Buying and Merchandising	3
FMCT 361	Apparel Construction/Evaluation	3

Course No.	Title	Credits
FMCT 381	Textiles I	3
FMCT 382	Textiles II	3
FMCT 441	Visual Merchandising	3
HUEC 101	Principles of Art and Design	2
HUEC 104	Principles of Art and Design Lab	1
HUEC 310	Resource Management	3
HUEC 487	Supervisory Management	3
HUEC 490	Consumer Motivation	3

**FIT Professional Courses****29 Credits**

Course No.	Title	Credits
AC 111	Advertising & Promotion	3
AC 113	Strategic Planning	3
AC 221	Publicity Workshop (formerly AC 121)	3
AC 141	Journalism	3
AC 171	Mass Communication	3
AC 231	Advertising Copywriting	3
AC 362	Broadcast Workshop (formerly AC 261)	3
AC 271	Audiences & Media	3
AC 272	Research Methods in IMC	3
AD 101	Advertising Layout Techniques	2

**Business Administration Minor****18 Credits**

Course No.	Title	Credits
ACCT 201	Introductory Financial Accounting	3
BUAD 132	Introduction to Business	3
BUAD 302	Management & Organizational Behavior	3
BUAD 412	Business Law	3
ECON 202	Principles of Economics II	3
MKTG 308	Principles of Marketing	3

**IV. Support Courses****3 Credits**

Course No.	Title	Credits
BUAD 213	Business Software Applications <u>or</u>	
BUED 212	Computer Concepts and Applications I or II	3

**TOTAL PROGRAM REQUIREMENTS****134****NUTRITION****I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits<sup>4,6</sup>**

Students should consult with their freshman or departmental advisor when making course selections.

**II. Core Curriculum****10 Credits****III. Professional Courses****27 Credits**

Course No.	Title	Credits
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3
NUDT 212	Scientific Principles of Food II	3
NUDT 305	Nutrition in the Life Cycle	3

Course No.	Title	Credits
NUDT 310	Nutrition Education and Counseling	3
NUDT 391	Nutritional Science I	3
NUDT 392	Nutritional Science II	3
NUDT 473	Community Nutrition	3
NUDT	Elective	3

**Chemistry Minor****20 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Lab	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Lab	1
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Lab	1

**IV. Support Courses****21 Credits**

Course No.	Title	Credits
BIOL 232	Anatomy and Physiology II	3
BIOL 234	Anatomy and Physiology II Lab	1
BIOL 301	Microbiology	
BIOL 303	Microbiology Lab <b>or</b>	
AMIC 324	Agricultural Microbiology	4
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry II Lab	1
HUEC 474	Research Methodology	2
	Electives (w/Advisor Consent)	7

**TOTAL PROGRAM REQUIREMENTS****120****MINOR PROGRAMS**

The Department of Human Ecology offers minor programs in Clothing and Textiles, Fashion Merchandising, Gerontology, and Nutrition. The minor program in Nutrition has two Options: Nutritional Science and Food and Nutrition. A minimum of **18** credits is required for each area.

**CLOTHING AND TEXTILES**

Course No.	Title	Credits
FMCT 300	Historic Costumes	3
FMCT 361	Apparel Construction/Evaluation	3
FMCT 381	Textiles I	3
FMCT 382	Textiles II	3
	Select two from the following courses: FMCT 321, FMCT 422, FMCT 460, HUEC 490	6

### FASHION MERCHANDISING

Course No.	Title	Credits
FMCT 141	Introduction to the Fashion Industry	3
FMCT 341	Fashion Buying and Merchandising	3
FMCT 342	Advertising & Promotion	3
FMCT 441	Visual Merchandising	3
HUEC 490	Consumer Motivation	3
	Select one from the following courses:	
	FMCT 361, FMCT 381, HUEC 487	3

### GERONTOLOGY

Course No.	Title	Credits
HUEC 203*	Human Development: A Lifespan Perspective	3
HUEC 220	Perspective on Aging	3
HUEC 460	The Family and Aging	3
SOCI 361	Social Gerontology	3
	Select two from the following courses:	
	HUEC 450, NUDT 305, REHA 302	6

\* This course **cannot** be used to satisfy GE requirement for Gerontology minors

### NUTRITION - OPTION 1: NUTRITIONAL SCIENCE

Course No.	Title	Credits
NUDT 210	Elements of Nutrition	3
NUDT 391	Nutritional Science I	3
NUDT 392	Nutritional Science II	3
NUDT 401	Clinical Nutrition I	3
NUDT 402	Clinical Nutrition II	3
NUDT 473	Community Nutrition	3

### NUTRITION - OPTION 2: FOOD AND NUTRITION

Course No.	Title	Credits
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3
NUDT 212	Scientific Principles of Food II	3
NUDT 305	Nutrition in the Life Cycle	3
NUDT 310	Nutrition Education and Counseling	3
NUDT 473	Community Nutrition	3

**NOTE: Family & Consumer Sciences majors should consult advisor prior to selecting a minor.**



**CHILD DEVELOPMENT 2+2**  
**Articulated Program with Wor-Wic Community**  
**College**  
**Recommended Course Sequence**

**FRESHMAN YEAR (AT WOR-WIC)**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CMP	101	Intro. to Information Systems	3
EDU	101	Intro. to Early Childhood Educ.	3
EDU	102	Child Development	3
EDU	103	Preschool Child Care	3
ENG	101	Fundamentals of English I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CDV	101	Career Development	1
EDU	151	Infant and Toddler Care	3
EDU	152	School-Age Group Child Care	3
EDU	153	Child Health, Safety & Nutrition	3
ENG	151	Fundamentals of English II	3
PSY	101	Introduction to Psychology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIO	101	Fundamentals of Biology	4
EDU	201	Foundations of Reading	3
EDU	260	Related Field Experience	3
PSY	205	Child Guidance and Group Mgt.	3
SPH	101	Fund. of Oral Communication	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDU	251	Introduction to Special Education	3
EDU	252	Family and Community Relations	<u>3</u>
EDU	261	Related Field Experience	3
MTH	103	Fundamental Concepts I	3
SCI	ELE	Physical Science Elective	<u>4</u>
<b>Semester Total</b>			<b>16</b>

**Total WWCC Credits Hours      63**

**JUNIOR YEAR (AT UMES)**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHDE	323	Crea. Activ. for YoungChildren	3
CHDE	327**	Curr. & Instr. for Inf./Todd.	3
CHDE	330	Observ. & Interpreting Behavior of Young Children	3
HUEC	203	Human Development: A Lifespan Perspective	3
SOCI	101#	Introduction to Sociology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHDE	325	Spcl Needs in Early Childhood	3
CHDE	332**	Curr. & Instr. for Presch. Child.	3
HUEC	230	Multicultural Perspective of Families in the U.S.	3
HUEC	361	Contemporary Family Issues	3
HUEC	399	Pre-Internship Seminar	1
HUEC	464	Social Psychology of Food, Clothing & Shelter	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHDE	427**	Partnerships	3
CHDE	430	Supervision & Adm. of Early Childhood Program	3
CHDE	440	School Age Programming	3
ENGL	305	Technical Writing	3
HUEC	370	Professional Development	2
HUEC	474	Research Methodology	<u>2</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDHE	111	Personalized Health & Fitness	3
HUEC	400	Internship	5
HUEC	409	Post-Internship Seminar	1
HUEC	450	Human Development Practicum	<u>5</u>
<b>Semester Total</b>			<b>14</b>

**Total UMES Credit Hours      61**

**Total Credits Required      124**

Students enrolled in Wor-Wic Community College Early Childhood Education Associate of Applied Science Program (AAS) can transfer to UMES for completion of the bachelor's degree in Human Ecology - Child Development, following completion of the AAS program. A maximum of 60 credits of successful community college study can be transferred to UMES.

\*\* Wor-Wic transfer students may earn credit for these courses through departmental challenge examination at UMES.

# Students are encouraged to take prior to fall enrollment at UMES.

**CHILD DEVELOPMENT**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	101	Theory & Aps. of Bio Sciences	3
BIOL	103	Biology Lab	1
EDHE	111	Personalized Health & Fitness	3
ENGL	101	Basic Composition I	3
		GER CURR. AREA I	3
HUEC	100	First Year Experience Seminar	1
SOCI	101	Intro. to Sociology	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	102	Applications of College Math <u>or</u> Higher	3
PSYC	200	Introduction to Psychology	3
		GER CURR. AREA I	3
HUEC	230	Multicultural Perspective on Families in the U.S.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HUEC	203	Human Development: A Lifespan Perspective	3
ENGL	203	Fund. Of Contemporary Speech	3
CHDE	222	Infant/Child Dev. & Learning	3
NUDT	214	Infant & Child Nutrition	3
		GER CURR. AREA III	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHDE	220	Found. of Early Child. Ed.	3
ENGL	305	Technical Writing	3
CHDE	224	Emerging Language & Literacy	3
BUAD	213	Bus. Software Applications <u>or</u>	
BUED	212	Comp. Concepts & Appl. I	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHDE	323	Creat. Actv. for Young Children	3
CHDE	327	Curr. & Instr. for Inf./Toddler	3
CHDE	330	Observ. & Interpreting Behavior of Young Children	3
HUEC	370	Professional Development	2
		Elective	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHDE	325	Special Needs in Early Childhd.	3
CHDE	332	Curr. & Instr. for Presch. Child.	3
HUEC	361	Contemporary Family Issues	3
HUEC	399	Pre-Internship Seminar	1
HUEC	464	Social Psychology of Food, Clothing & Shelter	3
		Elective	3
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHDE	427	Partnerships	3
CHDE	430	Supervision & Adm. of Early Childhood Program	3
HUEC	474	Research Methodology	2
CHDE	440	School Age Programming	3
		Elective	<u>6</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	400	Internship	5
HUEC	409	Post-Internship Seminar	1
HUEC	450	Human Development Practicum	<u>5</u>
<b>Semester Total</b>			<b>11</b>

**Total Credits Required      120**

**DIETETICS****Recommended Course Sequence****FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	109	College Algebra or higher	3
CHEM	111	Principles of Chemistry I	3
CHEM	112	Principles of Chemistry I Lab	1
SOCI	101	Intro. to Sociology	3
HUEC	100	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
BIOL	111	Principles of Biology I & Lab	3
BIOL	113	Principles of Biology I Lab	1
NUDT	210	Elements of Nutrition	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
EDHE	111	Personalized Health & Fitness	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fundamentals of Speech	3
BIOL	231	Human Anatomy & Physio. I	3
BIOL	233	Human Anatomy & Physio I Lab	1
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund of Organic Chem I Lab	1
NUDT	211	Scientific Prin. of Food I	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	232	Human Anatomy & Physio. II	3
BIOL	234	Human Anatomy & Physio II Lab	1
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund of Organic Chem. II Lab	1
PSYC	200	Intro. to Psychology	3
NUDT	212	Scientific Prin. of Food II	3
NUDT	305	Nutrition in the Life Cycle	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HUEC	370	Professional Development	2
NUDT	300	Essentials of Nutrition Prac.	1
NUDT	310	Nutrition Ed. & Counseling	3
NUDT	391	Nutritional Sciences I	3
CHEM	341	Biochemistry	3
CHEM	343	Biochemistry Lab I	<u>1</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
MATH	210	Elementary Statistics	3
NUDT	392	Nutritional Sciences II	3
NUDT	401	Clinical Nutrition I	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology &	
BIOL	303	Microbiology Lab <b>or</b>	
AMIC	324	Agricultural Microbiology	4
HUEC	474	Research Methodology	2
NUDT	402	Clinical Nutrition	3
NUDT	471	Foodservice Sys. Mgmt.	<u>5</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	464	Social Psychology of Food, Clothing & Shelter	3
HUEC	487	Supervisory Management	3
NUDT	473	Community Nutrition	3
NUDT	475	Senior Practicum	<u>4</u>
<b>Semester Total</b>			<b>13</b>

**Total Credits Required**      **120**



**FAMILY AND CONSUMER SCIENCES**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Introduction to Sociology	3
HUEC	100	First Year Experience Seminar	1
HUEC	101	Principles of Art & Design	2
HUEC	104	Principles of Art & Design	1
		GER CURR. AREA III	<u>4</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	109	College Algebra or higher	3
EDHE	111	Personalized Health & Fitness	3
		GER CURR. AREA I	3
		GER CURR. AREA III	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	213	Bus. Software Aps. <u>or</u>	
BUED	212	Comp. Concepts & Appl. I	3
ENGL	203	Fund. of Contemp. Speech	3
ECON	202	Principles of Economics II	3
PSYC	200	Introduction to Psychology	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	243	Housing Design	3
NUDT	210	Elements of Nutrition	3
		Select course for Minor	3
HUEC	203	Human Development: A Lifespan Perspective	3
HUEC	230	Multicultural Perspective on Families in the U.S.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHDE	222	Infant/Child Dev. & Learning	3
HUEC	310	Resource Management	3
HUEC	370	Professional Development	2
NUDT	211	Scientific Prin. of Food I	3
PSYC	303	Adolescent Psychology	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
HUEC	399	Pre-Internship Seminar	1
HUEC	490	Consumer Motivation	3
NUDT	212	Scientific Prin. of Food II	3
NUDT	305	Nutrition in the Life Cycle	3
		Select course for Minor	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SUMMER SEMESTER</b>			<b>HOURS</b>
HUEC	400	Internship	<u>3</u>
<b>Semester Total</b>			<b>3</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
FMCT	201	Clothing & Textiles for Cons. <u>or</u>	
FMCT	381	Textiles I	3
HUEC	361	Contemporary Family Issues	3
HUEC	409	Post-Internship Seminar	1
		Select course for Minor	<u>6</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	460	The Family and Aging	3
HUEC	464	Social Psychology of Food, Clothing & Shelter	3
HUEC	487	Supervisory Management	3
		Select course for Minor	<u>6</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      120**

**FAMILY AND CONSUMER SCIENCES  
EDUCATION  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Intro to Sociology	3
PSYC	200	Intro to Psychology	3
HUEC	100	First Year Experience Seminar	1
BIOL	101	Theo. & App. Bio	3
BIOL	103	Theo. & App. Bio Lab	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Comp. II	3
CHEM	101	Gen Chemistry I	3
MATH	102	Appl. of College Mathematics <u>or</u> Higher	<u>3</u>
EDHE	111	Pers. Health & Fitness	3
HUEC	230	Multi. Pers. of Family	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Con. Speech	3
HUEC	203	Hum. Dev. A Lifespan	3
		Gen. Ed. Req. Area I	3
NUDT	211	Scientific Prin. of Food I	3
EDCI	200A	Intro to Contemporary Ed	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
PSYC	307	Educational Psychology	3
CHDE	222	Inf./Child Dev. & Lrn	3
NUDT	210	Elements of Nutrition	3
HUEC	243	Housing Design	3
EDSP	200B	Intro to Special Education	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HUEC	370	Professional Dev.	2
HUEC	310	Resource Mgmt.	3
FMCT	201/381	Clothing & Textiles for Cons. <u>or</u> Textiles I	
FMCT	361	Apparel Const/Eval.	3
HUEC	474	Research Seminar	2
CHDE	323	Creative Act. & Mat.	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	464	Social Psychology of Food Clothing & Shelter	3
HUEC	361	Con. Family Issues	3
HUEC	490	Consumer Motivation	3
EDCI	409	Teach. Reading in Cont. Area I	3
EDCI	406	Classroom Mgmt.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDCI	410	Teach. Reading in Cont. Area II	3
EDCI	311	Comp. Ass. in ED	3
EDCI	427D	Curr. & Instr. in Family & Cons. Sciences	3
		GER CURR. AREA I	3
ENGL	305	Technical Writing	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar in Ed.	3
EDCI	480C	Teaching Intern.: Secondary Ed.	3
EDCI	490C	Teaching Intern.: Secondary Ed.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      120**

**FASHION MERCHANDISING**  
**Recommended Program Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Introduction to Sociology	3
HUEC	101	Principles of Art & Design	2
HUEC	104	Principles of Art & Design Lab	1
FMCT	141	Intro. to the Fashion Industry	3
HUEC	100	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	109	College Algebra or higher	3
BUAD	132	Introduction to Business	3
EDHE	111	Personalized Health & Fitness	3
GER CURR. AREA III			<u>4</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUED	212/213	Comp. Concepts & Appl. I <u>or</u>	
BUED	213	Comp. Concepts & Appl. II	3
PSYC	200	Introduction to Psychology	3
ENGL	203	Fund. of Contemporary Speech	3
GER CURR. AREA I			3
GER CURR. AREA III			<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	201	Introductory Financial Acct.	3
ECON	202	Principles of Economics II	3
ENGL	305	Technical Writing	3
Elective			3
GER CURR. AREA I			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
MKTG	308	Principles of Marketing	3
HUEC	370	Professional Development	2
FMCT	341	Fashion Buying & Merch.	3
FMCT	361	Apparel Const./Evaluation	3
FMCT	381	Textiles I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
FMCT	300	Historic Costumes	3
FMCT	342	Advertising & Promotion	3
FMCT	382	Textiles II	3
HUEC	399	Pre-Internship Seminar	1
Elective			<u>6</u>
<b>Semester Total</b>			<b>16</b>

<b>SUMMER</b>			<b>HOURS</b>
HUEC	400	Internship	<u>3</u>
<b>Semester Total</b>			<b>3</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302	Mgmt. & Organizational Behavior	3
BUAD	412	Business Law	3
HUEC	310	Resource Management	3
HUEC	409	Post-Internship Seminar	1
FMCT	441	Visual Merchandising	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HUEC	464	Social Psychology of Food, Clothing & Shelter	3
HUEC	487	Supervisory Management	3
HUEC	490	Consumer Motivation	3
BUAD	304	Small Business & Management Entrepreneurship	3
Elective			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**      **120**

**HONORS PROGRAM IN  
FASHION MERCHANDISING  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Honors Basic Composition I	3
HUEC	101	Principles of Art & Design	2
HUEC	104	Principles of Art & Design Lab	1
SOCI	101	Introduction to Sociology	3
FMCT	141	Intro. to Fashion Industry	3
HUEC	100	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102H	Honors Basic Composition II	3
MATH	111H	Honors Elem. Math. Anal.	4
BUAD	132	Introduction to Business	3
EDHE	111	Personalized Health & Fitness	3
		GER CURR. AREA III	<u>4</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUED	212	Comp. Concepts & Appl. I <u>or</u>	3
BUED	213	Comp. Concepts & Appl. II	
ENGL	203	Fund. of Contemporary Speech	3
PSYC	200	Introduction to Psychology I	3
		GER CURR. AREA III	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	201	Introductory Financial Acct.	3
ECON	202H	Honors Prin. of Economics II	3
ENGL	305	Technical Writing	3
MATH	210	Elem. Statistics	3
MUSI	310H	Honors Music Exploration	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
MKTG	308	Principles of Marketing	3
HUEC	370	Professional Development	2
FMCT	341H	Honors Fashion Buying & Merchandising	3
FMCT	361	Apparel Const./Evaluation	3
FMCT	381	Textiles I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
FMCT	300	Historic Costumes	3
FMCT	342H	Honors Advertising & Promotion	3
FMCT	382H	Honors Textiles II	3
HUEC	399	Pre-Internship Seminar	1
		Elective	<u>5</u>
<b>Semester Total</b>			<b>15</b>

<b>SUMMER</b>			<b>HOURS</b>
HUEC	400	Internship	<u>3</u>
<b>Semester Total</b>			<b>3</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302H	Honors Mgmt. & Org. Behavior	3
BUAD	412	Business Law	3
FMCT	441	Visual Merchandising	3
HUEC	310H	Honors Resource Management	3
HUEC	409	Post- Internship Seminar	1
		Elective	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BUAD	304	Small Business & Management Entrepreneurship	3
HUEC	464	Social Psychology of Food, Clothing & Shelter	3
HUEC	487H	Honors Supervisory Management	3
HUEC	490H	Honors Consumer Motivation	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**Total Credits Required      120**

**FIT ADVERTISING AND MARKETING  
COMMUNICATIONS OPTION  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
ENGL 101	Basic Composition I	3
HUEC 101	Principles of Art & Design	2
HUEC 104	Principles of Art & Design Lab	1
SOCI 101	Introduction to Sociology	3
FMCT 141	Intro. to Fashion Industry	3
HUEC 100	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>		<b>13</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
MATH 109	College Algebra or higher	3
ENGL 102	Basic Composition II	3
EDHE 111	Personalized Health & Fitness	3
BUAD 132	Introduction to Business	3
	GER CURR. AREA III	<u>4</u>
<b>Semester Total</b>		<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
BUED 212/213	Comp. Concepts & Appl. I <u>or</u>	
BUED 213	Comp. Concepts & Appl. II	3
ENGL 203	Fund. of Contemporary Speech	3
PSYC 200	Introduction to Psychology I	3
FMCT 361	Apparel Const./Evaluation	3
	GER CURR. AREA I	3
	GEN CURR. AREA III	<u>3</u>
<b>Semester Total</b>		<b>18</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
ACCT 201	Introductory Financial Acct.	3
BUAD 302	Mgmt. & Organizational Behavior	3
ECON 202	Principles of Economics II	3
FMCT 300	Historic Costumes	3
MKTG 308	Principles of Marketing	3
	GER CURR AREA I	<u>3</u>
<b>Semester Total</b>		<b>18</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AC 111	Advertising & Promotion	3
AC 221	Publicity Workshop	3
AC 141	Journalism	3
AC 172	Mass Communication	3
AC 362	Broadcast Workshop (formerly AC 261)	3
AD 101	Advertising Layout Techniques	<u>2</u>
<b>Semester Total</b>		<b>17</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
AC 113	Strategic Planning	3
AC 231	Advertising Copywriting	3
AC 271	Audiences & Media	3
AC 272	Research Methods in IMC	3
AC 341	Magazine Journalism (ENGL 305) Formerly AC 241	3
IC 291	Internship (HUEC 399, 400)	<u>4</u>
<b>Semester Total</b>		<b>19</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
HUEC 310	Resource Management	3
HUEC 409	Post-Internship Seminar	1
HUEC 370	Professional Development	2
FMCT 341	Fashion Buying & Merch.	3
FMCT 381	Textiles I	3
FMCT 441	Visual Merchandising	<u>3</u>
<b>Semester Total</b>		<b>15</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
BUAD 304	Small Business & Management Entrepreneurship	3
BUAD 412	Business Law	3
FMCT 382	Textiles II	3
HUEC 464	Social Psychology of Food, Clothing & Shelter	3
HUEC 487	Supervisory Management	3
HUEC 490	Consumer Motivation	<u>3</u>
<b>Semester Total</b>		<b>18</b>

**Total Credits Required      134**

**NUTRITION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	109	College Algebra or higher	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
SOCI	101	Intro. to Sociology	3
HUEC	100	First Year Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
BIOL	111	Principles of Biology I	1
BIOL	113	Principles of Biology I Lab	1
EDHE	111	Personalized Health & Fitness	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anatomy & Physio. I	3
BIOL	233	Human Anatomy & Physio I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chemistry I Lab	1
NUDT	211	Scientific Prin. of Food I	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
NUDT	210	Elements of Nutrition	3
NUDT	212	Scientific Prin. of Food II	3
BIOL	232	Human Anatomy & Physio. II	3
BIOL	234	Human Anatomy & Physio II Lab	1
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem II Lab	1
NUDT	305	Nutrition in the Life Cycle	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HUEC	370	Professional Development	2
PSYC	200	Intro. to Psychology	3
NUDT	310	Nutrition Ed. & Counseling	3
NUDT	391	Nutritional Sciences I	3
CHEM	341	Biochemistry I	1
CHEM	343	Biochemistry I Lab	1
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	342	Biochemistry II	3
CHEM	344	Biochemistry II Lab	1
NUDT	392	Nutritional Science II	3
MATH	210	Elementary Statistics	3
ENGL	305	Technical Writing	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology &	
BIOL	303	Microbiology Lab <u>or</u>	
AMIC	324	Agricultural Microbiology	4
HUEC	474	Research Methodology	2
NUDT		Elective	3
		Elective	<u>4</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
NUDT	473	Community Nutrition	3
NUDT	484	Nutrition Research	5
		Elective	3
HUEC	464	Social Psychology of Food, Clothing & Shelter	<u>3</u>
<b>Semester Total</b>			<b>14</b>
<b>Total Credits Required</b>			<b>120</b>

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**Stevens, Elka**

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 B.S., Howard University  
 Ph.D., University of Minnesota

## COURSE DESCRIPTIONS

### CHILD DEVELOPMENT EDUCATION

**CHDE 220 Foundations of Early Childhood 3 crs.**  
This course provides a conceptual framework for examining roles and services in early childhood education, and includes historical, social, and philosophical influences while emphasizing current trends, issues, and practices. Attention is given to family and professional partnerships. The course introduces basic techniques for observing children. A field experience is required. Prerequisite: PSYC 200.

**CHDE 222 Infant/Child Development and Learning 3 crs.**  
This course is the study of how children develop and learn from conception to middle childhood. Theory and research relating to the physical, social-personal, and cognitive development of children and the role of family are emphasized. Field experience required. Prerequisite: PSYC 200.

**CHDE 224 Emerging Language & Literacy 3 crs.**  
This course examines the theories, processes, and acquisition of language arts, and addresses the cognitive, linguistic, social and physiological factors involved in oral and written language development. Prerequisite: CHDE 222.

**CHDE 323 Creative Activities For Young Children 3 crs.**  
This course is designed to provide many opportunities to gain techniques and resources for art, music, play, and creative dramatics. The students will identify resources and age appropriate activities to develop skills for organizing and presenting creative activities to young children. This course has two-hour lectures and one two-hour laboratory. Prerequisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

**CHDE 325 Special Needs in Early Childhood 3 cr.**  
This course provides a framework for using principles of developmentally appropriate practice to design effective learning programs for young children with special needs. The focus includes children from birth to age 8 and their families who are in a variety of early childhood settings. Prerequisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

**CHDE 327 Curriculum and Instruction for Infants and Toddlers 3 crs.**  
This course provides application of theoretical and empirical research for field observations and curriculum projects. Emphasis is on integration of curricula responsive to individual needs in multidisciplinary and inclusive settings, along with the study of parent-child relations and early socialization with significant others and peers in program environments through activities which foster all

areas of development. Prerequisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

**CHDE 330 Observing and Interpreting Behavior of Young Children 3 crs.**  
Approaches will be provided for observing, recording and interpreting the behaviors of children who are developing normally and those with special needs in a variety of early childhood education settings. A child observational study is required. This class has two hours lecture and one two-hour laboratory. Prerequisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

**CHDE 332 Curriculum and Instruction for Preschool Children 3 crs.**  
This course examines curricula development and implementation of instructional strategies for preschool children in a variety of settings, including nursery schools, childcare and home-care centers, Headstart, hospitals, and community programs. A field experience is required. Prerequisite: CHDE 327. OPEN TO MAJORS ONLY.

**CHDE 427 Partnerships 3 cr.**  
The aim of this course is to examine the role of the teacher and parent in the school setting with the goals of maximizing the child's education and developing insights into students' growth. Development of strategies for parent-teacher collaboration that support growth of the child's learning potential in home and school environments are emphasized. Prerequisites: CHDE 330, CHDE 332. Senior Standing. OPEN TO MAJORS ONLY.

**CHDE 430 Supervision and Administration of Early Childhood Programs 3 cr.**  
This course examines the role and function of an early childhood program administrator. Instructional focus includes planning, budgeting, financing, staffing and the facilitation of parent involvement within childhood programs. Students assess educational and professional information needs in terms of the system services available. Materials and experiences in this course are appropriate for the early childhood education student as well as the practicing director. Prerequisites: CHDE 330, CHDE 332, Senior Standing, or Permission of Instructor. OPEN TO MAJORS ONLY.

**CHDE 440 School Age Programming 3 cr.**  
This course will have students examining appropriate principles, materials and methods used with school age children. Emphasis is place on growth and development of children 5 to 12 years of age. Development and implementation of age appropriate activities is considered as well as classroom management, environmental planning, utilization of community resources, and communication with parents. Prerequisites: CHDE 222. OPEN TO MAJORS ONLY.



**CHDE 499 Independent Study/Research in Child Development 1-3 crs.**

This course provides an intensive study of a specialized topic in Child Development for advanced students. Permission to take an independent study must be obtained from the instructor.

**FASHION MERCHANDISING, CLOTHING & TEXTILES****FMCT 141 Introduction to the Fashion Industry 3 crs.**

Introduction to the Fashion Industry provides an overview of the fashion industry, including the organization and operation of the numerous facets of the textile, apparel, home furnishings, and cosmetics industries, product development, the impact of technology, and career opportunities. Forty clock hours of work experience in a retail or related setting is also required. This course consists of three hours of lecture.

**FMCT 201 Clothing and Textiles for Consumers 3 crs.**

This course focuses on the basic knowledge of fabric characteristics and its application in the selection of products for apparel and home furnishings. The study of social, cultural, economic, and psychological factors that influence choices related to textile products are discussed.

**FMCT 300 Historic Costumes 3 crs.**

This course is the study of historic costumes and design reflecting the social, economic, and political environment of the past and fashion cycles relating historic costume/designs to current fashions. The course consists of three hours of combined lecture and laboratory.

**FMCT 321 Fashion Illustration 3 crs.**

Fashion Illustration provides an introduction to drawing fashion figures, rendering various textiles, and illustrating apparel and accessories utilizing an array of media. The course consists of three hours of combined lecture and laboratory.

**FMCT 341/341H Fashion Buying & Merchandising/ Honors 3 crs.**

This course provides practical application of buying practices and procedures; merchandise planning, controlling, budgeting; merchandise assortment planning; and managing inventory. Prerequisites: FMCT 141, MATH 109 or higher. Co-requisite: MKTG 308.

**FMCT 342/342H Advertising and Promotion/ Honors 3 crs.**

Advertising & Promotion introduces students to both the theoretical and practical aspects of the principles and techniques used in promoting fashion goods and services to the consumer. Promotional strategies and creative concepts for promotional campaigns are developed by the students for local businesses. The course consists of three hours of combined lecture and laboratory. Prerequisites: FMCT 141. Junior Standing.

**FMCT 361 Apparel Construction/Evaluation 3 crs.**

The main focus of this course is to provide an introduction to various sewing techniques, and to demonstrate the use of commercial patterns. A variety of garment components, including alterations, is identified and classified. An evaluation of ready-to-wear apparel will be fully conducted. One lecture and two laboratories.

**FMCT 381 Textiles I 3 crs.**

This is a fundamental course that covers information on fibers, yarns, fabric construction, dyeing, printing and finishing of textiles. Two lectures and one laboratory.

**FMCT 382/382 H Textiles II/ Honors 3 crs.**

This course requires an understanding of basic textiles principles. Students enrolled in this course are required to measure the physical properties of fabrics, compile and analyze data, and relate the results to the performance of fabrics and garments. One lecture and two laboratories. Prerequisite: FMCT 381.

**FMCT 390 Product Development 3 crs.**

Product Development introduces both theoretical and practical aspects of the principles and techniques used in the creation, production, marketing, and distribution of fashion-related products that meet customer needs in the microeconomic and/or global marketplace. Actual prototypes will be created. The course consists of three hours of combined lecture and laboratory. Prerequisites: BUED 212 and MKTG 308, or instructor's permission.

**FMCT 422 Apparel Design: Pattern Drafting and Draping 3 crs.**

Apparel Design: Pattern Drafting and draping introduces students to basic principles of flat pattern design and draping through the development of the master pattern and its use in the design and production of marketable apparel. The course consists of one hour of lecture and two hours of laboratory. Prerequisite: FMCT 361.

**FMCT 441 Visual Merchandising 3 crs.**

Visual Merchandising is the study of principles and practices of designing and evaluating the various aspects of visual displays. The course involves the creation of window and interior promotional displays and the development of a visual portfolio. The course consists of three hours of combined lecture and laboratory. Prerequisite: FMCT 342.

**FMCT 460 Clothing For Special Needs 3 crs.**

This course has main emphasis on clothing selection, basic fitting, and sewing techniques to meet needs related to age, figure type, and physical disability. Two lectures and one laboratory. Prerequisite: FMCT 361.

**FMCT 463 Tailoring/Alterations 3 crs.**

This course is designed to teach the fundamentals of tailoring and alterations. Tailoring techniques include short-cut tailoring methods, as well as samples of custom tailoring techniques. Students learn to apply alteration techniques for various fitting problems. One lecture and

two laboratories. OPEN TO MAJORS ONLY. Prerequisite: FMCT 361.

**FMCT 497A Fashion Merchandising Study Tour 3 crs.**

Fashion Merchandising Study Tour is an organized trip to a designated city or country that allows student to explore the various facets of the fashion industry through visits to manufacturing facilities, designer showrooms, pattern companies, advertising agencies, retailers, colleges, forecasters, publishers, and museums. OPEN TO MAJORS ONLY.

**FMCT 497B Textiles Study Tour 1-3 crs.**

Textiles Study Tour is an organized trip to a designated city or country that allows student to explore the various facets of the textile manufacturers, converters, testing laboratories, and museums. OPEN TO MAJORS ONLY.

**FMCT 499 Independent Study/Research in Fashion/Clothing 1-3 crs.**

Independent Study/Research in Fashion allows the student to participate in an intensive study of a specialized topic or existing research project related to fashion or clothing. Permission to take an independent study must be obtained from the instructor.

**HUMAN ECOLOGY**

**HUEC 100 First Year Experience Seminar 1 cr.**

This course provides an opportunity for students to make a seamless transition from high school to college. Essential skills for transition will be explored and discussed. This course assists students in developing cognitive skills and in adjusting personally and socially to the college environment. Additionally this course facilitates self-awareness and interpersonal communication. Required for all first year students. This course is taken by HUMAN ECOLOGY MAJORS in lieu of GNST 101. One lecture.

**HUEC 101 Principles of Art and Design 2 crs.**

Principles of Art and Design is designed to introduce students to the basic principles and elements of art and design. The course consists of two lecture hours. Students must enroll concurrently in HUEC 104.

**HUEC 104 Principles of Art and Design Lab 1 crs.**

Principles of Art and Design Lab is designed to introduce students to the basic principles and elements of art and design through a variety of studio projects. The course consists of one laboratory hour. Students must enroll concurrently in HUEC 101.

**HUEC 203 Human Development: A Lifespan Perspective 3 crs.**

This course is a study of human development from conception to death. It examines the interactions within the family system from a lifespan perspective. MAY NOT RECEIVE CREDIT FOR PSYC 305. Satisfies Gen. Ed. Requirement Area II.

**HUEC 220 Perspectives on Aging 3 crs.**

This is an interdisciplinary course that examines the phenomenon of aging and its consequences for society from a variety of perspectives. The course is designed to give students a broad overview of the field of gerontology. Satisfies Gen. Ed. Requirement Area II.

**HUEC 230 Multicultural Perspectives on Families in the U.S. 3 crs.**

This course is an interdisciplinary introduction to the concepts central to multiculturalism and diversity as they apply to the study of contemporary families in the U.S. Satisfies Gen. Ed. Requirement Area VI.

**HUEC 243 Housing Design 3 crs.**

This course is a study of the interaction of people and the built environment. It examines ergonomics, anthropometrics, and proxemics in human factors and lifespan issues as they relate to the design of interiors. Prerequisites: PSYC 200, SOCI 101.

**HUEC 310/310H Resource Management/Honors 3 crs.**

This course focuses on the allocation and management of resources, personal and family financial decision making, and wise selection and purchase of consumer goods and services. Prerequisites: MATH 102 or MATH 109, SOCI 101, PSYC 200.

**HUEC 343 Dwelling 3 cr.**

This course is an examination of contemporary housing issues within the context of the socio-economic, political, and psychological factors that impact the process of housing. Major theories and policies will be discussed.

**HUEC 361 Contemporary Family Issues 3 cr.**

This course is a study of contemporary issues affecting the family system, such as parenting, divorce, death, drug dependence, non-traditional life styles, mobility, and chronic illness. Prerequisites: SOCI 101, PSYC 200. Satisfies Gen. Ed. Requirement Area II.

**HUEC 370 Professional Development 2 cr.**

This course is designed to prepare students for a professional career in various divisions of Human Ecology. Emphasis is placed on resume writing, interviewing skills, dressing for success, developing a professional image, presentational and oral communication skills, and planning and organizing presentations before small and large audiences. OPEN TO MAJORS ONLY.

**HUEC 399 Pre-Internship Seminar 1 cr.**

Pre-internship Seminar is designed to prepare students for internships in the field of family and consumer sciences/human ecology. This course consists of one lecture hour. Prerequisite: Junior Level Standing. OPEN TO MAJORS ONLY.

**HUEC 400 Internship 3-5 cr.**  
Internship is a supervised work experience in an approved work setting planned cooperatively with business establishments, agencies, or centers. Fashion and family and consumer science students take this course during the summer preceding the senior year for three credits. Child development students register for **five** credits during their final semester and register concurrently with HUEC 409 and HUEC 450. Two hundred clock hours of field experience are required. Prerequisite: HUEC 399. OPEN TO MAJORS ONLY.

**HUEC 409 Post-Internship Seminar 1 cr.**  
Post-Internship Seminar provides the opportunity for students to reflect upon and present an overview of their work experience in their discipline. The course is one hour. Prerequisites: Senior Level Standing, HUEC 400, or permission of the instructor. OPEN TO MAJORS ONLY.

**HUEC 450 Practicum-Human Development 1-5 cr.**  
This course is a concentrated, continuous, on the job experience in various aspects of human services under the supervision and guidance of trained personnel. Students with a Child Development concentration will observe and participate with groups of young children in Day Care/Headstart Centers or with older children in shelters and youth programs. Students taking this course for a minor in gerontology will be assigned to an agency/organization or institution that serves the elderly. Students have to have 40 clock hours for each credit hour.

**HUEC 460 The Family and Aging 3 cr.**  
This course examines the aging process and its impact on the family and explores the characteristics, attitudes, behaviors, and concerns of older people, including their physical, psychological, social, and economic needs. Related legislative and community resources are also examined.

**HUEC 464 Social Psychology of Food, Clothing and Shelter 3 crs.**  
This course includes interdisciplinary examination of the socio-psychological and economic dimensions of choices related to food, clothing, and shelter in multicultural family and community environments.

**HUEC 474/474H Research Methodology/ Honors 2 crs.**  
This course covers an overview of research methods commonly used in human ecology related disciplines. Upon completion of the course, the students should be able to read and critique studies. They should also be able to design and conduct experiments related to their field of study. Students should also be able to design and carry out their own research studies. Prerequisite: Senior Level Status. OPEN TO MAJORS ONLY.

**HUEC 487/487H Supervisory Management/ Honors 3 crs.**  
This course is the study of principles and applications of managerial skills required for first-line supervisors. Emphasis is on supervisory functions, decision-making, delegation, motivation is leadership styles, communication, and conflict-resolution. Open to all students. Prerequisite: Senior Standing.

**HUEC 490/490H Consumer Motivation/ Honors 3 crs.**  
This course offers an interdisciplinary approach to the study of consumer motivation and behavior in the marketplace with emphasis on functioning of the market system and models of consumer behavior. Prerequisites: SOCI 101, PSYC 200.

**HUEC 499 Independent Study/Undergraduate 1-3 crs. Research**  
Students who wish to get advanced experience in a particular area of their discipline and an opportunity to do supervised, individualized studies may enroll in this course. The maximum number of undergraduate special topics or independent study credits that may be taken with the same prefix and number is determined by the student's major department. Department chair's approval is required. OPEN TO MAJORS ONLY.

### NUTRITION AND DIETETICS

**NUDT 210 Elements of Nutrition 3 cr.**  
This is an introductory level nutrition course, which covers the fundamental concepts, dietary standards and evaluations, nutrient functions, and human nutritional requirements. The course includes a survey of the processes of digestion, absorption, and metabolism of food constituents and the role of nutrition in chronic diseases.

**NUDT 211 Scientific Principles of Food I 3 cr.**  
This is a fundamental course in food preparation based on physical, chemical, and nutritional changes occurring in food during storage, cooking, processing, and preservation. Government regulations governing food and food safety are also covered. Product evaluation using sensory techniques is emphasized. One lecture and two laboratories.

**NUDT 212 Scientific Principles of Food II 3 cr.**  
This is a continuation of NUDT 211, and is designed to advance the student's thinking beyond the fundamentals of scientific principles of food preparation. Students are required to carry out individual and group projects to further their understand of the principles covered. Prerequisite: NUDT 211. One lecture and two laboratories.

**NUDT 214 Infant and Child Nutrition 3 cr.**  
The course is the study of nutrition from conception through adolescence, including factors affecting nutrient requirements, food choices, and nutritional problems. Special emphasis is placed on managing feeding problems and the relationship between nutrition, and physical and mental development.

**NUDT 300 Essentials of Nutrition Practice 1 cr.**

This course introduces the student to nutrition/dietetics practice. It includes a review of the history of the profession as well as the educational and experiential requirements for the nutrition practice. Course content includes legislation, standards, and regulations affecting practice; professional and bioethics; career opportunities; and factors which affect the delivery of nutrition services. The course is open to junior or senior level nutrition/dietetics majors.

**NUDT 305 Nutrition in the Life Cycle 3 crs.**

This course will provide students with an understanding of the nutritional requirements and related health concerns occurring throughout the life cycle. Course covers relevant topics including growth and development, nutrient needs, assessment of nutritional status and special problems associated with stages of the life cycle starting from conception through adulthood and aging. Prerequisite: NUDT 210, or permission of the instructor.

**NUDT 310 Nutrition Education and Counseling 3 cr.**

This course includes a study of nutrition education and counseling principles and techniques; students explore counseling strategies used to assess and modify nutrition behaviors. Prerequisite: PSYC 200. This course is cross-listed with NUDT 499F.

**NUDT 391 Nutritional Science I 3 cr.**

This course examines the biochemical and physical bases of human nutritional requirements. It covers the digestion and metabolism of carbohydrates, proteins, fats, minerals and vitamins. Prerequisites: CHEM 211+213 and 212+214. This course is cross-listed with NUDT 499C.

**NUDT 392 Nutritional Science II 3 cr.**

This course is a continuation of NUDT 391. Survey of current literature and research in nutrition is also included. Prerequisites: NUDT 391 and CHEM 341+343. This course is cross-listed with NUDT 499A.

**NUDT 401 Clinical Nutrition I 3 cr.**

This course involves the application of nutritional concepts to the treatment of disease states. Concepts and/or skills acquired include nutrition screening/assessment, food/drug/herbal interaction, and principles of nutrition care management including nutrition support. Prerequisite: NUDT 392. This course is cross-listed with NUDT 499.

**NUDT 402 Clinical Nutrition II 3 crs.**

This course is a continuation of NUDT 401; concepts and skills acquired in NUDT 401 are expanded to include nutrition management of diseases affecting organ systems and in-born errors of metabolism. Prerequisite: NUDT 401. This course is cross-listed with NUDT 499D.

**NUDT 471 Foodservice Systems Management 5 cr.**

This course focuses on foodservice systems organization and management. Students explore concepts and applications of food safety principles, menu planning, purchasing, production, service, and resource management. Content also includes marketing strategies and use of

computer technology in foodservice operations. Course combines didactic and laboratory offerings. Senior level dietetics majors or permission of the instructor is required. This course is cross-listed with NUDT 499H.

**NUDT 473 Community Nutrition 3 cr.**

This course involves a study of planning, implementation and evaluation of nutrition programs; strategies and resources for community needs assessment; and health promotion and disease prevention; discussion of political factors that influence nutrition programming and funding are also included. This course is cross-listed with NUDT 499E.

**NUDT 475 Senior Practicum 4 cr.**

This course involves a study of planning, implementation and evaluation of nutrition programs; strategies and resources for community needs assessment; and health promotion and disease prevention; discussion of political factors that influence nutrition programming and funding are also included. Prerequisite: Senior level status. OPEN TO MAJORS ONLY. This course is cross-listed with NUDT 499B.

**NUDT 484 Nutrition Research 3-5 cr.**

This course requires students to understand the principles of basic experimental design and plan and carry out a specific project in their area of specialization. Prerequisites: Senior level status and permission of the instructor. This course is cross-listed with 499G.

**NUDT 485 International Nutrition 3 cr.**

This course will explore international aspects of nutrition, including global nutrition concerns, world hunger and malnutrition. Local, national, and international programs involved in program planning and improvement will be investigated.

**NUDT 499 Independent Study/Undergraduate Research 1-5 cr.**

This course is designed for nutrition and dietetics majors wishing to explore topics of special interest through an independent study. Students must obtain prior approval of the independent project from the course instructor, and permission of the department chair. This course is limited to nutrition and dietetics majors only.

**NUDT 499A Nutritional Science II 3 crs.****NUDT 499B Senior Practicum 4 crs.****NUDT 499C Nutritional Science I 3 crs.****NUDT 499D Clinical Nutrition II 3 crs.****NUDT 499E Community Nutrition 3 crs.****NUDT 499F Nutrition Education & Counseling 3 crs.****NUDT 499G Nutrition Research 3-5 crs.****NUDT 499H Food Service System Management 5 crs.****NUDT 499I Independent Research 1-5 crs.**

## DEPARTMENT OF NATURAL SCIENCES

### Dean:

Carolyn B. Brooks, Ph.D.

### Chair and Associate Professor:

Joseph Okoh, Ph.D.

### Associate Professors (Biology):

Eugene L. Bass, Ph.D.

Kelly Mack, Ph.D.

Douglas E. Ruby, Ph.D.

### Assistant Professors (Biology):

Dwayne Boucaud, Ph.D.

Linda Johnson, Ph.D.

Mitra Madhumi, Ph.D.

### Lecturers (Biology):

Angela Hebel, M.S.

Jeurel Singleton, Ph.D.

### Associate Professor (Chemistry):

Yan Waguespack, Ph.D.

### Assistant Professors (Chemistry):

Gerald Kananen, Ph.D.

Ghislain R. Mandouma, Ph.D.

Shawn White, Ph.D.

### Lecturer (Chemistry):

Amelia Potter, M.S.

### Professor (Environmental Science):

Gian Gupta, Ph.D.

### Distinguished Research Scientist (Environmental Science):

Eric May, Ph.D.

### Assistant Professors (Environmental Science):

Clement Counts, Ph.D.

Ali Ishaque, Ph.D.

Pernell Lewis, Ph.D.

### Lecturer (Environmental Science):

Isoken Tito Aighewi

### Professor (Physics):

Gurbax Singh, Ph.D.

### Lecturer (Physics):

Joseph Doodoo, Ph.D.

## MISSION

The mission of the Department of Natural Sciences (DNS) is to prepare students for employment in the diversified fields in biological, physical and environmental sciences and health related occupations. Our programs prepare students for entry into graduate or professional schools.

## PROGRAM DESCRIPTION

The Department of Natural Sciences offers programs for students majoring in Biology, Chemistry, and Environmental Science and minors in Biology, Chemistry and Physics. The Chemistry Program at UMES is certified by the American Chemical Society.

Included in the Department's offerings are programs of lower division courses for those desiring a degree in Dental Hygiene, Nursing, Pharmacy or Radiation Therapy.

The Department offers courses leading to M.S. and Ph.D. degrees in the University-wide graduate programs in Marine-Estuarine-Environmental Sciences and Toxicology. In cooperation with The University of Maryland Center for Environmental and Estuarine Studies, combined 4-year B.S./5-year M.S. programs in Marine Sciences and Environmental Chemistry are available.

The Department also provides courses which satisfy the general education requirements in the biological and physical sciences and supporting courses for students in other departments. Included in the latter groups are courses in Biology, Chemistry and Physics required for majors in Agriculture, Human Ecology, Industrial Arts Education, Construction Management/Technology and Physical Education.

## GOALS

The aims of the programs in DNS are to: expose students to the breadth and depth of knowledge necessary to fulfill requirements of specific scientific fields and careers; have students acquire mastery of skills and techniques used to obtain, analyze and interpret scientific information; provide experiences appropriate for students considering careers or graduate studies in the sciences; develop in students the ability to think clearly, independently, and critically; prepare students for better citizenry and for the preservation and conservation of the environment and natural resources.

## OBJECTIVES

The objectives of the programs in DNS are to

- Provide students with academic curricula to develop a strong understanding of basic science;
- Prepare students to be adaptable to new developments in science;
- Train students to conduct scientific research through example, mentoring and personal experience;
- Prepare students for employment in newly evolving and conventional scientific fields related to their majors;

- Expose students to social, historical, and ethical issues through the science curricula;
- Promote interaction between the university and the community through faculty and students in the department;
- Promote faculty development to accomplish the objectives of the department.

### **PROGRAM REQUIREMENTS**

Department of Natural Sciences programs require that all students maintain a C in each course in their Program Core and Program Electives and a C average in General Education and Supportive Course Requirements.

Individual programs may choose specific courses to fulfill General Education requirements.

A maximum of six (6) semester hours in Independent Study and Undergraduate Research (i.e., BIOL, CHEM, ENVS 498, 499) will be credited toward Program Electives.

### **FINANCIAL AID**

**Honors Program Scholarship:** The UMES Honors Program provides high quality undergraduate programs in the natural sciences for academically talented students. Incoming freshmen with SAT scores of at least 1100 and GPA 3.3 are eligible to apply for this scholarship.

**MARC Program Fellowship:** The UMES MARC Program is designed to promote matriculation of underrepresented minority groups into doctoral degree programs in the biomedical sciences. The program offers competitive scholarships to high achieving juniors and seniors.

**National Oceanic and Atmospheric Administration Scholarship:** Through the Living Marine Resources Cooperative Science Center funded by NOAA, scholarships and fellowships are offered to undergraduate and graduate students respectively who major in the Marine Sciences.

**BIOLOGY (NON-TEACHING)**  
**Required and Recommended Course Sequence**

The Biology Program offers degrees leading to the Bachelor of Science with concentrations in Teaching, Non-Teaching and Pre-Medicine career paths. The teaching degree prepares students for teaching at the middle and secondary school levels. The Non-Teaching degree prepares students for careers in Biology and entrance to graduate or professional schools. The student's knowledge of biological principles and concepts will be broadened by offering courses at the molecular, cellular, organismal, population and community levels. Students are given opportunities to experience hands-on investigation to enhance their skills in observation and critical thinking. These programs of study are designed to improve the competency and literacy of students in the biological sciences.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 Credits**

**Course No. Title**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PHYS 121	General College Physics I <b>or HIGHER</b>	3
PHYS 123	General College Physics I Laboratory <b>or HIGHER</b>	1
PHYS 122	General College Physics II <b>or HIGHER</b>	3
PHYS 124	General College Physics II Laboratory <b>or HIGHER</b>	1

**D. Curriculum Area IV – (Mathematics) 6 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MATH 110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3
MATH 210	Elementary Statistics	3

**E. Curriculum Area V – (English Composition) 9 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <b>or</b>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - Emerging Issues** **4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3

**II. Program Core Requirements** **17 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory	1
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory	1
BIOL 497/497M	Biology Seminar	1

A grade of "C" or better is required in each of the Program Core Requirements.

**III. Program Electives** **23 credit minimum**

A minimum of 23 credits must be selected. A grade of "C" or better is required in each of these courses. Students with interest in pursuing medicine and/or professional and graduate degrees in the biomedical sciences are encouraged to take General Biology Electives. Likewise, students with interests in Ecology are encouraged to take Ecology Electives. Students are encouraged to take only one course in an area not related to his/her career interest.

**General Biology Electives**

Course No.	Title	Credit
BIOL 233	General and Economic Botany	4
BIOL 211	Principles of Biology III	3
BIOL 213	Principles of Biology III Laboratory	1
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology	4
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	4
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
*BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4
CHEM 422M	Bio-Inorganic Chemistry	3

**Ecology Electives**

Course No.	Title	Credits
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Lab	1
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 361	Animal Behavior	4
BIOL 402	Ecology	4
BIOL 404	Conservation Biology	3



<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 431	Mammalogy	4
BIOL 432	Herpetology	3
BIOL 440	Biology of Insects	4
BIOL 441	Comparative Physiology	4
BIOL 462	General Parasitology	4
BIOL 463	Wildlife Management	4
BIOL 464	Medical & Veterinary Entomology	4
*BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4

\*A maximum of six (6) semester hours will be credited toward Program Electives in Biology 498 and 499.

**IV. Supportive Course Requirements 31-32 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Laboratory	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Laboratory	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Laboratory	1
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Laboratory	1
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry II Laboratory	1
CSDP 220	Introduction to Computer Programming <b>or</b>	4
BUED 212	Computer Concepts, Applications I	3
MATH 112	Calculus I*	4

\* MATH 112 may not be used to satisfy Curriculum Requirements for Area IV once used for Supportive courses.

An overall grade point average of "C" or better is required for the group of courses representing the Supportive Course Requirements

**V. Free Electives 6-7 Credits**

**TOTAL PROGRAM REQUIREMENTS 120**

**BIOLOGY (TEACHING)**  
**Required and Recommended Course Sequence**

The Biology Teaching Program prepares students for teaching at the secondary school levels. Education majors enrolled in this Program are enrolled in the Department of Education as well as the Department of Natural Sciences. Therefore, students must complete the curriculum that is required by the Teacher/Counselor Education Program. Successful completion of the prescribed course of study will prepare the student to teach at the middle and/or high school level.

Requirements for entrance into the Biology Teacher Education Program include a minimum of 45 earned credit hours and a 2.75 overall grade point average. Any courses transferred into the University of Maryland Eastern Shore will be included as part of the cumulative grade point average. In addition, a grade of C or better in all prerequisite courses is required. These courses include: Introduction to Contemporary Education, Introduction to Special Education, Basic Composition I, Basic Composition II, Fundamentals of Contemporary Speech, Advanced Composition or Technical Writing, Introduction to Psychology and any Biology Program Elective. Successful completion of the English Proficiency Examination (EPE) is also required along with an accompanying official letter that must be presented at the time of application.

To gain admission into the Biology Teaching Program, completion of the Application for Admission to Teacher Education, including two essays, is required, along with the signatures of two faculty members who are familiar with the student's academic performance.

Successful completion of the PRAXIS I (Reading, Writing, Mathematics) Examination is required. Students are encouraged to register for the pre-professional skills test or computer-based test as early as possible, but no later than the second semester of the sophomore year. Applicants must earn minimum scores as follows:

<b>Paper/Pencil Test</b>	<b>Computer-Based Test</b>
<b>Reading</b> 177	325
<b>Mathematics</b> 177	322
<b>Writing</b> 173	319

NOTE: STUDENTS WHO ARE NOT FORMALLY ADMITTED TO THE PROFESSIONAL TEACHER EDUCATION PROGRAM ARE NOT PERMITTED TO ENROLL IN ANY PROFESSIONAL PROGRAM COURSES.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities)**

**9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences)**

**6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

Course	No.	Title	Credits
PHYS	121	General College Physics I <b>or HIGHER</b>	3
PHYS	123	General College Physics I Laboratory <b>or HIGHER</b>	1
PHYS	122	General College Physics II <b>or HIGHER</b>	3
PHYS	124	General College Physics II Laboratory <b>or HIGHER</b>	1

**D. Curriculum Area IV – (Mathematics) 6 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3
MATH	210	Elementary Statistics	3

**E. Curriculum Area V – (English Composition) 9 credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Basic Composition I (Honors)	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Basic Composition II (Honors)	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

**F. Curriculum Area VI - Emerging Issues 4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Health and Wellness	3

**II. Program Core Requirements 17 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory	1
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory	1
BIOL 497	Biology Seminar	1

A grade of “C” or better is required in each of the Program Core Requirements

**III. Professional Education Requirements 42 Credits**

Course No.	Title	Credits
EDCI 200	Introduction to Contemporary Education	3
EDSP 200	Introduction to Special Education	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 400	Senior Seminar in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 410	Teaching Reading in the Content Areas: Part II	3
EDCI 425A	Curriculum & Instructional Methods in Biology	3
EDCI 480/490	Teaching Internship: Biology	12

**IV. Supportive Course Requirements 16 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Laboratory	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Laboratory	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Laboratory	1

A grade of "C" or better is required in each of the Supportive Course Requirements.

**V. Program Electives**

**One course must be selected. A grade of "C" or better is required in each of these courses.**

Course No.	Title	Credits
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Lab	1
BIOL 211	Principles of Biology III	3
BIOL 213	Principles of Biology III Laboratory	1
BIOL 231	Human Anatomy and Physiology I	3
BIOL 233	Human Anatomy and Physiology I Lab	1
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 341	Introductory Physiology	4
BIOL 361	Animal Behavior	4
BIOL 402	Ecology	4
BIOL 404	Conservation Biology	3
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Lab	1
BIOL 432	Herpetology	3
BIOL 431	Mammalogy	4
BIOL 436	General Endocrinology	3
BIOL 440	Biology of Insects	4
BIOL 441	Comparative Physiology	4
BIOL 462	General Parasitology	4
BIOL 463	Wildlife Management	4
BIOL 464	Medical & Veterinary Entomology	4
BIOL 466	Medical Parasitology	3

**TOTAL PROGRAM REQUIREMENTS 120**

**BIOLOGY (HONORS)**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits**  
 Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327,  
 ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

Course	No.	Title	Credits
PHYS	181H	Honors Introductory Physics I <b>or HIGHER</b>	3
PHYS	183H	Honors Introductory Physics I Lab	1
PHYS	182H	Honors Introduction Physics II <b>or HIGHER</b>	3
PHYS	184H	Honors Introduction Physics II Laboratory	1

**D. Curriculum Area IV – (Mathematics) 6 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3
MATH	210	Elementary Statistics	3

**E. Curriculum Area V – (English Composition) 9 Credits**

Course	No.	Title	Credits
ENGL	101H	Honors English Composition I	3
ENGL	102H	Honors English Composition II	3
ENGL	305H	Honors Technical Writing <u>or</u>	
ENGL	310	Honors Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3

**II. Program Core Requirements 17 Credits**

Course No.	Title	Credits
BIOL 111H	Honors Principles of Biology I	3
BIOL 113H	Honors Principles of Biology I Laboratory	1
BIOL 112H	Honors Principles of Biology II	3
BIOL 114H	Honors Principles of Biology II Laboratory	1
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory	1
BIOL 497H	Honors Biology Seminar	1

**III. Program Electives 23 credit minimum**

A minimum of 23 credits must be selected. A grade of "C" or better is required in each of these courses. Students with interest in pursuing medicine and/or professional and graduate degrees in the biomedical sciences are encouraged to take Biology Electives. Likewise, students with interests in Ecology are encouraged to take Ecology Electives. Students may take only one course in an area not related to his/her career interest.

**General Biology Electives**

Course No.	Title	Credit
BIOL 231	Human Anatomy and Physiology	3
BIOL 233	Human Anatomy and Physiology Lab I	1
BIOL 211	Principles of Biology III	3
BIOL 213	Principles of Biology III Laboratory	1
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Lab	1
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
*BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4
CHEM 422M	Bio-Inorganic Chemistry	3

**Ecology Electives**

Course No.	Title	Credits
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Lab	1
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 361	Animal Behavior	4
BIOL 402	Ecology	4
BIOL 404	Conservation Biology	3
BIOL 431	Mammalogy	3
BIOL 432	Herpetology	3
BIOL 440	Biology of Insects	4
BIOL 441	Comparative Physiology	4
BIOL 462	General Parasitology	4
BIOL 463	Wildlife Management	4

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 464	Medical & Veterinary Entomology	4
*BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4

\*A maximum of six (6) semester hours will be credited toward Program Electives in Biology 498 and 499.

**IV. Supportive Course Requirements 32 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 111H	Honors Principles of Chemistry I	3
CHEM 113H	Honors Principles of Chemistry I Laboratory	1
CHEM 112H	Honors Principles of Chemistry II	3
CHEM 114H	Honors Principles of Chemistry II Laboratory	1
CHEM 211H	Honors Fundamentals of Organic Chemistry I	3
CHEM 213H	Honors Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212H	Honors Fundamentals of Organic Chemistry II	3
CHEM 214H	Honors Fundamentals of Organic Chemistry II Laboratory	1
CHEM 341H	Honors Biochemistry I	3
CHEM 343H	Honors Biochemistry I Laboratory	1
CHEM 324H	Honors Biochemistry II	3
CHEM 344H	Honors Biochemistry II Laboratory	1
CSDP 220	Introduction to Computer Programming	4
MATH 112	Calculus I*	4

An overall grade point average of "C" or better is required for the group of courses representing the Supportive Course Requirements.

\*MATH 111, MATH 112 and MATH 210 may not be used to satisfy curriculum requirements for Area IV once used for Supportive courses.

**V. Free Electives 6 Credits**

**TOTAL PROGRAM REQUIREMENTS 120**

**BIOLOGY (PRE-MEDICINE)**  
**Required and Recommended Course Sequence**

For individual medical school requirements, students should consult the Medical School Admissions Requirements publication by the Association of American Medical Colleges. This book is available for purchase at the UMES bookstore, on reserve at the UMES library, and in the office of the Pre-Medical advisor in the Department of Natural Sciences.

Generally, most medical schools require one year of general biology, general chemistry, organic chemistry and physics. These courses should have laboratory components. Some schools also require or recommend college mathematics through Calculus and a year of English composition. At UMES, the following courses will satisfy the above requirements in the natural sciences: BIOL 111/113, BIOL 112/114, CHEM 111/113, CHEM 112/114, CHEM 211/213, CHEM 212/214, PHYS 121/123 and PHYS 122/124.

The MCAT (Medical College Admission Test), an evaluating instrument typically used for the Medical School admissions process, is administered twice a year, April and August. Students are required to take the MCAT during the Spring semester of the academic year preceding the year in which admission to medical school is sought. Students are advised to complete the courses listed above by the end of the spring semester of their junior year.

Pre-medical students at UMES will be prepared for the MCAT and the rigors of Medical School if they follow the recommended Biology (Pre-Medicine) course sequence.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses:

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

Course	No.	Title	Credits
PHYS	121	General College Physics I <b>or HIGHER</b>	3
PHYS	123	General College Physics I Laboratory <b>or HIGHER</b>	1
PHYS	122	General College Physics II <b>or HIGHER</b>	3
PHYS	124	General College Physics II Laboratory <b>or HIGHER</b>	1

**D. Curriculum Area IV – (Mathematics) 6 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3
MATH	210	Elementary Statistics	3



**E. Curriculum Area V – (English Composition ) 9 Credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3

**F. Curriculum Area VI - Emerging Issues 4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Health and Wellness	3

**III. Program Core Requirements 17 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory	1
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory	1
BIOL 497	Biology Seminar	1

A grade of “C” or better is required in each of the Program Core Requirements.

**IV. Program Electives 23 credit minimum**

A minimum of 23 credits must be selected. A grade of “C” or better is required in each of these courses. Students with interest in pursuing medicine and/or professional and graduate degrees in the biomedical sciences are encouraged to take Biology Electives. Likewise, students with interests in Ecology are encouraged to take Ecology Electives. Students may take only one course in an area not related to his/her career interest.

**General Biology Electives**

Course No.	Title	Credit
BIOL 231	Human Anatomy and Physiology	3
BIOL 233	Human Anatomy and Physiology Lab	1
BIOL 211	Principles of Biology III	3
BIOL 213	Principles of Biology III Laboratory	1
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Lab	1
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
* BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4
CHEM 422M	Bio-Inorganic Chemistry	3

**Ecology Electives**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 361	Animal Behavior	4
BIOL 402	Ecology	4
BIOL 404	Conservation Biology	3
BIOL 431	Mammalogy	4
BIOL 432	Herpetology	3
BIOL 440	Biology of Insects	4
BIOL 441	Comparative Physiology	4
BIOL 462	General Parasitology	4
BIOL 463	Wildlife Management	4
BIOL 464	Medical & Veterinary Entomology	4
*BIOL 498	Independent Study	1-3
*BIOL 499	Undergraduate Research	1-4

\*A maximum of six (6) semester hours will be credited toward Program Electives in Biology 498 and 499.

**V. Supportive Course Requirements****36 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Laboratory	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Laboratory	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry II Laboratory	1
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Laboratory	1
CHEM 324	Biochemistry II	3
CHEM 344	Biochemistry II Laboratory	1
CSDP 220	Introduction to Computer Programming	4
DNSC 388	Critical Thinking	1
ENGL 218	Approaches to Grammar	3
MATH 112	Calculus I*	4

An overall grade point average of "C" or better is required for the group of courses representing the Supportive Course Requirements.

\*MATH 112 may not be used to satisfy curriculum requirements for Area IV once used for Supportive courses.

**VI. Free Electives****2 Credits****TOTAL PROGRAM REQUIREMENTS****120**

### **BIOLOGY (PHYSICAL THERAPY)**

Students in this program complete Biology (Non-Teaching) curriculum, after which, they transfer to the Physical Therapy program on campus.

#### **MINOR PROGRAM**

#### **BIOLOGY**

Courses in Biology that are used to satisfy requirements for science majors may not count towards the minor curriculum.

Curriculum for Non-Science majors:

**20 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory	1
	Select any three additional courses from Biology Program Electives	12

### **CHEMISTRY (NON-TEACHING)**

#### **Required and Recommended Course Sequence**

The chemistry programs in the Department of Natural Sciences are certified by the American Chemical Society Certified. The bachelor's degree graduates who have majored in chemistry and fulfilled the minimum requirements as adopted by the Society are eligible for admission as members. Certification of these graduates as members of the Society will take place in the spring after graduation, per the instructions that will be sent to the department every year. Not all chemistry graduates are necessarily expected to meet certification requirements or need to be certified. For instance, there may be students whose major study in chemistry serves as a means to achieve entrance to other fields or for graduate study in an interdisciplinary field. Such graduates may elect to substitute, for certain of the required upper level courses in chemistry, other courses more appropriate to their goals, and these graduates would thus not qualify for certification.

#### **I. General Education Requirements**

##### **TOTAL REQUIRED FOR GENERAL EDUCATION - 43 credits**

Students should consult with their freshman or departmental advisor when making course selections

##### **A. Curriculum Area I – (Arts and Humanities)**

**9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

\*Chemistry majors must take a sequence of two courses in a foreign language

##### **B. Curriculum Area II – (Social and Behavioral Sciences)**

**6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,

GEOG 201 or GEOG 202, HIST 101 or HIST 111H,

HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342

SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
SOCI 201, SOWK 200 or SOWK 200H**

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

Course	No.	Title	Credits
PHYS	161	General Physics I	3
PHYS	163	General Physics Lab I	1
PHYS	181H	Introductory Physics I (Honors)	3
PHYS	183H	Introductory Physics (Honors) Lab II	1
PHYS	182H	Introductory of Physics II (Honors)	3
PHYS	184H	Introductory of Physics II (Honors) Lab	1
PHYS	262	General Physics II	3
PHYS	264	General Physics II Lab	1

**D. Curriculum Area IV – (Mathematics) 7 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry	3
MATH	112	Calculus I	4

**E. Curriculum Area V – (English Composition) 9 Credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Basic Composition II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 4 Credits**

Course	No.	Title	Credits
DNSC	100	First Year Freshman Experience	1
EDHE	111	Health and Wellness	3

**II. Program Core Requirements 48 Credits**

Course	No.	Title	Credits
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry Lab I	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry Lab II	1
CHEM	211	Fundamentals of Organic Chemistry I	3
CHEM	213	Fundamentals of Organic Chemistry Lab I	1
CHEM	212	Fundamentals of Organic Chemistry II	3
CHEM	214	Fundamentals of Organic Chemistry Lab II	1
CHEM	311	Analytical Chemistry I	4
CHEM	312	Analytical Chemistry II	4
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry Lab I	1
CHEM	401	Principles of Physical Chemistry I	4
CHEM	402	Principles of Physical Chemistry II	4
CHEM	497/497M	Chemistry Seminar	1
CHEM	420	Advanced Inorganic Chemistry	4
CHEM	421	Instrumental Analysis	4
CHEM	499	Undergraduate Research	<u>3</u>

<b>III.</b>	<b>Supportive Course Requirements</b>		<b>19 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	BIOL 111	Principles of Biology I	3
	BIOL 113	Principles of Biology I Laboratory	1
	BIOL 112	Principles of Biology II	3
	BIOL 114	Principles of Biology II Laboratory	1
	CSDP 220	Intro. to Computers Programming	4
	MATH 211	Calculus II	4
	CHEM 498	Independent Study	3
<b>IV.</b>	<b>Program Electives</b>		<b>7-8 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	CHEM 342	Biochemistry II	3
	CHEM 344	Biochemistry Laboratory II	1
	CHEM 422M	Bio-Inorganic Chemistry	3
	CHEM 432	Advanced Organic Chemistry	3
	CHEM 621	Advanced Environmental Chemistry	4
	Two courses with one laboratory component must be selected.		
<b>V.</b>	<b>Free Electives</b>		<b>3 Credits</b>
<b>TOTAL PROGRAM REQUIRMENTS</b>			<b>120</b>

### CHEMISTRY (TEACHING)

The Chemistry Teaching Program prepares students for teaching at the secondary school levels. Education majors enrolled in this Program are enrolled in the Department of Education as well as the Department of Natural Sciences. Therefore, students must complete the curriculum that is required by the Teacher/Counselor Education Program. Successful completion of the prescribed course of study will prepare the student to teach at the middle and/or high school level.

Requirements for entrance into the Chemistry Teacher Education Program include a minimum of 45 earned credit hours and a 2.75 overall grade point average. Any courses transferred into to the University of Maryland Eastern Shore will be included as part of the cumulative grade point average. In addition, a grade of C or better in all prerequisite courses is required. These courses include: Introduction to Contemporary Education, Introduction to Special Education, Basic Composition I, Basic Composition II, Fundamentals of Contemporary Speech, Advanced Composition or Technical Writing, Introduction to Psychology and any Biology Program Elective. Successful completion of the English Proficiency Examination (EPE) is also required along with an accompanying official letter that must be presented at the time of application.

To gain admission into the Chemistry Teaching Program, completion of the Application for Admission to Teacher Education, including two essays, is required, along with the signatures of two faculty members who are familiar with the student's academic performance.

Successful completion of the PRAXIS I (Reading, Writing, Mathematics) Examination is required. Students are encouraged to register for the pre-professional skills test or computer-based test as early as possible, but no later than the second semester of the sophomore year. Applicants must earn minimum scores as follows:

<b>Paper/Pencil Test</b>	<b>Computer-Based Test</b>
<b>Reading</b> 177	325
<b>Mathematics</b> 177	322
<b>Writing</b> 173	319

NOTE: STUDENTS WHO ARE NOT FORMALLY ADMITTED TO THE PROFESSIONAL TEACHER EDUCATION PROGRAM ARE NOT PERMITTED TO ENROLL IN ANY PROFESSIONAL PROGRAM COURSES.

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**II. Program Core Requirements 26 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
CHEM 311	Analytical Chemistry I	4
CHEM 401	Principles of Physical Chemistry I	4
CHEM 497/497M	Seminar	1
CHEM 499	Undergraduate Research	1

**III. Supportive Course Requirements 12 credits**

Course No.	Title	Credits
CSDP 220	Intro. to Computer Programming	4
MATH 211	Calculus II	4
BIOL 111	Principles of Biology	3
BIOL 113	Principles of Biology I Laboratory	1

**IV. Professional Education Requirements 39 Credits**

Course No.	Title	Credits
EDCI 200B	Introduction to Contemporary Education	3
EDSP 200B	Introduction to Special Education	3
EDCI 305	Human Growth & Development	3
EDCI 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 400	Senior Seminar	3
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 406	Classroom Management	3
EDCI 425A	Curriculum & Instructional Methods in Natural Sciences	3
EDCI 480/490	Teaching Internship: Secondary Education Chemistry	12

**TOTAL PROGRAM REQUIREMENTS 120**

**MINOR PROGRAMS****CHEMISTRY**

The minor program in Chemistry is designed to provide supportive instruction for biology and mathematics majors. Courses in Chemistry that are used to satisfy requirements for science majors may not be used for the minor curriculum. Courses for a minor in chemistry for Non-Science majors include:

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
CHEM	Select one additional course at or above 300 level in Chemistry	4

## PHYSICS

The minor program in Physics is designed to provide supportive instruction for Biology, Chemistry, Environmental Science, Mathematics and Computer Science majors. The program also provides courses for preparing students for secondary school science teaching. Courses in Physics that are used to satisfy requirements for science majors may not be used for the minor curriculum. Courses for a minor in physics include: **20 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PHYS 161	General Physics I/Introductory Physics I	3
PHYS 163	General Physics Lab I	1
PHYS 181H	Introductory Physics I (Honors)	3
PHYS 183H	Introductory Physics I (Honors) Lab	1
PHYS 182H	Introductory Physics II (Honors)	3
PHYS 184H	Introductory Physics II (Honors) Lab	1
PHYS 262	General Physics II	3
PHYS 264	General Physics II Lab	1
PHYS 263	General College Physics III	3
PHYS 265	General College Physics Laboratory III	1
PHYS 283	Modern Optics	3
PHYS 423	Modern Physics	3
PHYS	Any other physics courses above 200 level (PHYS 498, 499 are recommended)	2

## CHEMISTRY – HONORS (PRE-MEDICINE/PRE-DENTISTRY)

### Required and Recommended Course Sequence

#### I. General Education Requirements

#### **TOTAL REQUIRED FOR GENERAL EDUCATION - 43 Credits**

Courses in Honors section must be used. Students with their advisors when making course selections.

#### II. Program Core Requirements

**48 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 111H	Honors Principles of Chemistry I	3
CHEM 113H	Honors Principles of Chemistry Laboratory I	1
CHEM 112H	Honors Principles of Chemistry II	3
CHEM 114H	Honors Principles of Chemistry Laboratory II	1
CHEM 211H	Honors Fundamentals of Organic Chemistry I	3
CHEM 213H	Honors Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212H	Honors Fundamentals of Organic Chemistry II	3
CHEM 214H	Honors Fundamentals of Organic Chemistry Laboratory II	1
CHEM 311	Analytical Chemistry I	4
CHEM 312	Analytical Chemistry II	4
CHEM 341H	Honors Biochemistry I	3
CHEM 343H	Honors Biochemistry Laboratory I	1
CHEM 401	Principles of Physical Chemistry I	4
CHEM 402	Principles of Physical Chemistry II	4

	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	CHEM 420	Advanced Inorganic Chemistry	4
	CHEM 421	Instrumental Analysis	4
	CHEM 497H/497M	Honors/MARC Chemistry Seminar	1
	CHEM 499	Undergraduate Research	3
<b>III.</b>	<b>Supportive Course Requirements</b>		<b>19 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	BIOL 111H	Principles of Biology I	3
	BIOL 113H	Principles of Biology I Lab	1
	BIOL 112H	Principles of Biology II	3
	BIOL 114H	Principles of Biology II Lab	1
	CHEM 498	Independent Study	3
	CSDP 220	Introduction to Computer Programming	4
	MATH 211	Calculus II	4
<b>IV.</b>	<b>Program Electives</b>		<b>7-8 Credits</b>
	Two courses must be selected and one must have a lab		
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	CHEM 342H	Honors Biochemistry II	3
	CHEM 344H	Honors Biochemistry Lab II	1
	CHEM 422M	Bio-Inorganic Chemistry	3
	CHEM 432	Advanced Organic Chemistry	3
	CHEM 621	Advanced Environmental Chemistry	4
<b>V.</b>	<b>Free Electives</b>		<b>3 Credits</b>
<b>TOTAL PROGRAM REQUIREMENT</b>			<b>120</b>

### ENVIRONMENTAL SCIENCES

The program in Environmental Sciences has been developed to create in the student abilities of critical and reflective thought relating to the many aspects of environmental concerns. The Environmental Science Program employs an interdisciplinary approach involving the areas of Biology, Chemistry, Physics, Computer Sciences, and Economics.

### PROGRAM OBJECTIVES

- To survey the scope and extent of problems and solutions to population, energy, transportation, housing, air and water supply, sewage disposal, solid waste management, noise, outdoor recreation, wildlife, natural area, urbanization and agriculture, food and fiber supply, pest control, ocean resources, and related environmental concerns.
- To develop abilities in critical and reflective thought about the scientific, technological, political, economic, and socio-psychological aspects of environmental concerns.
- To explore environmental careers and practice environmental planning and decision-making through applied use of tools and techniques of environmental scientists, and natural resource managers to actual Eastern Shore environmental concerns.



This major offers students a choice of 2 study options:

### ENVIRONMENTAL CHEMISTRY OPTION

#### Required and Recommended Course Sequence

The purpose of this program is to train students in the area of environmental pollution from man-made sources. The demand for trained professionals in this discipline is increasing every day as the nation is becoming more aware of the effects of pollutants. The students are given a strong academic background in the basic sciences before dealing with issues of energy and pollution. The curriculum for this program is very challenging and possibly unique. Students are well trained both for many career opportunities and for graduate studies.

#### I. General Education Requirements

##### TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits

Students should consult with their freshman or departmental advisor when making course selections.

#### A. Curriculum Area I - Arts and Humanities 9 Credits

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

#### B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits

Students must select ECON 201 and one course in the Behavioral Sciences

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

#### C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits

Course	No.	Title	Credits
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Laboratory	1
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Laboratory	1

#### D. Curriculum Area IV – (Mathematics) 3 Credits

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry or higher	3

#### E. Curriculum Area V - English Composition 9 Credits

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Basic Composition II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 7 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3
HUEC	230	Multicultural Perspectives on Families in the US	3

**II. Program Core Requirements 24 Credits**

Course	No.	Title	Credits
CHEM	311	Analytical Chemistry I	4
CHEM	312	Analytical Chemistry II	4
ENVS	221	Principles of Environmental Science	3
ENVS	222	Principles of Environmental Science Lab	1
ENVS	411	Water Pollution & Purification	3
ENVS	413	Water Pollution and Purification Lab	1
ENVS	434	Air Pollution & Control	4
ENVS	497	Senior Seminar	1
ENVS	498	Independent Study <u>or</u>	1-3
ENVS	499	Undergraduate Research	1-4

**III. Supportive Course Requirements 49 Credits**

Course No.	Title	Credits
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory I	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry Laboratory I	1
CHEM 488a	Advanced Environmental Chemistry	4
CSDP 220	Introduction to Computer Programming	4
ECON 202	Principles of Economics II	3
PHYS 121	General College Physics I	3
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	1
PHYS 181H	Introductory Physics I (Honors)	3
PHYS 183H	Introductory Physics I (Honors) Lab	1
PHYS 182H	Introductory Physics II (Honors)	3
PHYS 184H	Introductory Physics II (Honors) Lab	1
MATH 112	Calculus I*	4
MATH 210	Elementary Statistics*	3

\*MATH 112 and MATH 210 may not be used to satisfy curriculum requirements for Area IV once used for Supportive courses.

**IV. Program Electives**  
Two courses must be selected for a minimum of 5 hours

Course No.	Title	Credits
BIOL 402	Ecology	4
BIOL 426M	Biotechnology	4
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry Lab II	1

Course No.	Title	Credits
CHEM 401	Physical Chemistry I	4
CHEM 402	Physical Chemistry II	4
CHEM 422M	Bio-Inorganic Chemistry	3
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Lab	1
ENVS 333	Energy, Environment & Economics	3
ENVS 456	Future Sources of Energy	3
ENVS 460	Earth Science	3
ENVS 498	Independent Study	1-3
MATH 211	Calculus II	4
<b>TOTAL PROGRAM REQUIREMENTS</b>		<b>120</b>

**MARINE SCIENCE OPTION**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 42 Credits**

Students should consult with their freshman and departmental advisors when making course selections.

**A. Curriculum Area I - Arts and Humanities** **9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences)** **6 credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences)** **8 Credits**

Course	No.	Title	Credits
PHYS	121	General College Physics I	3
PHYS	123	General College Physics Lab I	1
PHYS	122	General College Physics II	3
PHYS	124	General College Physics Lab II	1

**D. Curriculum Area IV – (Mathematics)** **3 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3

**E. Curriculum Area V - English Composition 9 Credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Basic Composition II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

**F. Curriculum Area VI - Emerging Issues 7 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3
HUEC	230	Multicultural Perspectives on Families in the US	3

**II. Program Core Requirements 32 Credits**

Course No.	Title	Credits
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Lab	1
BIOL 301	Microbiology	4
BIOL 402	Ecology	4
ENVS 411	Water Pollution Purification	4
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Lab	1
ENVS 221	Principles of Environmental Science I	3
ENVS 222	Principles of Environmental Science Lab I	1
ENVS 497	Senior Seminar	1
ENVS 498	Independent Study <b>or</b>	1-3
ENVS 499	Undergraduate Research	3

**III. Supportive Course Requirements 35 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology Laboratory I	1
BIOL 112	Principles of Biology II	3
BIO: 114	Principles of Biology Laboratory II	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
MATH 112	Calculus I*	4
MATH 210	Elementary Statistics*	3
CSDP 220	Introduction to Computer Programming	4

\*MATH 112 and MATH 210 may not be used to satisfy curriculum requirements for Area IV once used for Supportive courses.

<b>IV.</b>	<b>Program Electives</b>		<b>11-12 Credits</b>
	Four courses must be selected		
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	BIOL 261	Invertebrate Zoology	4
	BIOL 311	Vertebrate Embryology	4
	BIOL 322	Comparative Vertebrate Anatomy	4
	BIOL 326	Cell Biology	3
	BIOL 327	Cell Biology Lab	1
	BIOL 330	Evolution	3
	BIOL 335	Biogeography	3
	BIOL 341	Introductory Physiology	4
	BIOL 361	Animal Behavior	4
	BIOL 420	Animal Histology	3
	BIOL 421	Animal Histology Lab	1
	BIOL 426M	Biotechnology	4
	BIOL 436	General Endocrinology	3
	BIOL 441	Comparative Physiology	4
	BIOL 463	Wildlife Management	4
	CHEM 311	Analytical Chemistry I	4
	CHEM 312	Analytical Chemistry II	4
	CHEM 341	Biochemistry I	3
	CHEM 343	Biochemistry Lab I	1
	CHEM 342	Biochemistry II	3
	CHEM 344	Biochemistry Laboratory II	1
	CHEM 401	Principles of Physical Chemistry I	4
	CHEM 402	Principles of Physical Chemistry II	4
	CHEM 421	Instrumental Analysis	4
	CHEM 422M	Bio-Inorganic Chemistry	3
	MATH 211	Calculus II	4
		<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>120</b>

#### ENVIRONMENTAL SCIENCES COMBINED B.S./M.S. PROGRAM

The combined 4-year B.S./5-year M.S. degree program offers two options: Environmental Chemistry and Marine Sciences. The curriculum for the two options is administered under the auspices of the undergraduate Environmental Science and the graduate Marine-Estuarine-Environmental Science (MEES) programs. The student receives the B.S. and M.S. degrees after completing all the requirements for the two programs. A student wishing to pursue the 5-year M.S. program must make a formal application in the first semester of the Junior year. Students must take the GRE (General Test) during their junior year.

#### OPTIONS

##### ENVIRONMENTAL SCIENCES COMBINED B.S./M.S. PROGRAM (ENVIRONMENTAL CHEMISTRY OPTION)

This program is designed to enable students to attain both the B.S. degree and M.S. degree in five years. The curriculum for this program is more advanced than in the traditional B.S. degree program, and students become involved in directed research earlier. The curriculum for the two degrees is administered under the auspices of the undergraduate Environmental Science and the graduate Marine-Estuarine-Environmental-Science (MEES) programs.

The Environmental Chemistry Option will provide students with training in such areas as environmental contamination and toxicology, air and water pollution, waste treatment and disposal, and energy resources. Students in the first two years of this program take courses to satisfy the General Education requirements, along with courses in Biology, Chemistry, Math, & Computer Sciences, and Physics. The Junior year provides training in topics specific to the field and prepares students who seek to pursue the M.S. program with prerequisites for the graduate level courses.

During the fourth year, additional courses providing advanced training in pollution and energy are offered. Those students choosing the B.S. program will graduate at the end of the fourth year with the requisite 122 credits. The 12-month period (5th year) subsequent to satisfying requirements for the B.S. degree are spent completing the M.S. requirements, including research work during the summer. For additional information, contact Chairman, Department of Natural Sciences or Director, B.S./M.S. Program in Environmental Chemistry.

### ENVIRONMENTAL CHEMISTRY OPTION Required and Recommended Course Sequence

#### I. General Education Requirements

##### TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits

Students should consult with their freshman or departmental advisor when making course selections.

#### A. Curriculum Area I - Arts and Humanities 9 Credits

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

#### B. Curriculum Area II - Social and Behavioral Sciences 6 Credits

Students must select ECON 201 and one course in the Behavioral Sciences

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

#### C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits

Course	No.	Title	Credits
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology Lab I	1
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology Lab II	1

#### D. Curriculum Area IV – (Mathematics) 3 Credits

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3

#### E. Curriculum Area V – (English Composition) 9 Credits

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Basic Composition II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

**F. (Curriculum Area VI - Emerging Issues) 7 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3
HUEC	230	Multicultural Perspectives on Families in the US	3

**II. Program Core Requirements 28 Credits**

Course No.	Title	Credits
ENVS 497	Senior Seminar	1
ENVS 498	Independent Study <u>or</u>	
ENVS 499	Undergraduate Research	3
ENVS 411/611	Water Pollution & Purification	4
ENVS 434/634	Air Pollution & Control	4
CHEM 311	Analytical Chemistry I	4
CHEM 312	Analytical Chemistry II	4
ENVS 221	Principles of Environmental Science	3
ENVS 222	Principles of Environmental Science Laboratory	1
ENVS 460/660	Earth Science	3
MEES 608	Seminar	1

**III. Supportive Course Requirements 60 Credits**

Course No.	Title	Credits
PHYS 121	General College Physics I	3
PHYS 123	General College Physics Lab I	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics Lab II	1
PHYS 181H	Introductory Physics I (Honors)	3
PHYS 183H	Introductory Physics I (Honors) Lab	1
PHYS 182H	Introductory Physics II (Honors)	3
PHYS 184H	Introductory Physics II (Honors) Lab	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
CHEM 488a	Advanced Environmental Chemistry	4
MATH 112	Calculus I*	4
MATH 211	Calculus II	4
MATH 210	Elementary Statistics*	3
BIOL 301	Microbiology	4
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry Laboratory I	1
CHEM 632	Applied Water Chemistry	3
ENVS 639	Sources & Effects of Pollutants	3
ECON 202	Principles of Economics II	3
CSDP 220	Introduction to Computer Programming	4

\*MATH 112 and MATH 210 may not be used to satisfy curriculum requirements for Area IV once used for Supportive courses.

**IV. Program Electives** **9-12 Credits**  
Choose any three courses from the following electives

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Lab	1
ENVS 333	Energy, Environment & Economics	4
ENVS 456	Future Sources of Energy	3
ENVS 641	Environmental Toxicology	3
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry Laboratory II	1
CHEM 401	Physical Chemistry I	4
CHEM 402	Physical Chemistry II	4
CHEM 422M	Bio-Inorganic Chemistry	3
BIOL 402	Ecology	4
BIOL 426M	Biotechnology	4

**V. Statistics Elective** **3 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MATH 410	Mathematical Statistics II <u>or</u>	
CSDP 604	Computer Methods in Statistics	3

**VI. Management Elective** **3 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENVS 684	Natural Resource Management	3

**VII. Thesis Research**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MEES 799	Thesis Research	6

**TOTAL PROGRAM REQUIREMENTS** **151**

**COMBINED B.S./M.S.MARINE SCIENCE OPTION**  
**Required and Recommended Course Sequence**

This program is designed to enable students to attain both the B.S. degree and M.S. degree in five years. Students who successfully complete this program receive a B.S. degree in Environmental Science (Marine Science Track) and an M.S. degree in Marine-Estuarine-Environmental-Science (MEES).

This program is offered in conjunction with the University of Maryland Center for Estuarine and Environmental Studies (CEES). Students are able to attain these degrees in five years by substituting MEES graduate courses for free electives, and by taking courses and conducting research during summers. Only nine credit hours are allowed to overlap and be credited towards both the BS and MS degrees.

Students wishing to pursue the M.S. option must formally apply to the MEES program in the first semester of their junior year. If accepted, students may attend a summer-in-residence program at Horn Point Environmental Laboratories in the summer following their junior year.

During this time, students will begin directed research and take a graduate level course. In their senior year students will complete their B.S. degree requirements by taking upper level undergraduate courses and also graduate level courses towards their M.S. degree. Students have the option of being in residence at UMES or at a participating CEES campus during their senior and fifth years.



Students in this program may select any of the specialization areas offered in the MEES program. To receive the M.S. degree, students must satisfy degree requirements which include a total of 30 course credits: course work (24 credits) and Master's Thesis research (6 credits).

## I. General Education Requirements

### TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits

Students should consult with their freshman or departmental advisor when making course selections.

#### A. Curriculum Area I – (Arts and Humanities) 9 Credits

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

#### B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

#### C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits

Course	No.	Title	Credits
PHYS	121	General College Physics I <b>or HIGHER</b>	3
PHYS	123	General College Physics Lab I <b>or HIGHER</b>	1
PHYS	122	General College Physics II <b>or HIGHER</b>	3
PHYS	124	General College Physics Lab II <b>or HIGHER</b>	1

#### D. Curriculum Area IV – (Mathematics) 3 Credits

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry <b>or HIGHER</b>	3

#### E. Curriculum Area V – (English Composition ) 9 Credits

Course	No.	Title	Credits
ENGL	101	Basic Composition I <b>or</b>	
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II <b>or</b>	
ENGL	102H	Honors Basic Composition II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3

#### F. Curriculum Area VI – (Emerging Issues) 7 Credits

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
EDHE	111	Personalized Health Fitness	3
HUEC	230	Multicultural Perspectives on Families in the US	3

**II. Program Core Requirements 38 Credits**

Course No.	Title	Credits
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Lab	1
ENVS 221	Principles of Environmental Science	3
ENVS 222	Principles of Environmental Science Laboratory	1
ENVS 497	Senior Seminar	1
ENVS 498	Independent Study <b>or</b>	1-3
ENVS 499	Independent Research	1-4
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Lab	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
BIOL 402	Ecology	4
MEES 608	Seminar	2
ENVS 411/611	Water Pollution & Purification	4

**III. Supportive Course Requirements 36 Credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
MATH 112	Calculus I	4
MATH 211	Calculus II	4
CSDP 220	Introduction to Computer Programming	4

**IV. Program Electives 6-8 Credits**

Two courses must be selected

Course No.	Title	Credits
BIOL 341	Introductory Physiology	4
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 361	Animal Behavior	4
BIOL 420	Animal Histology	4
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 441	Comparative Physiology	4
BIOL 461	Invertebrate Zoology	4
CHEM 311	Analytical Chemistry I	4
CHEM 312	Analytical Chemistry II	4
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry Laboratory I	1

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry Laboratory II	1
CHEM 401	Physical Chemistry I	4
CHEM 402	Physical Chemistry II	4
CHEM 421	Instrumental Analysis	4
CHEM 422M	Bio-Inorganic Chemistry	3

**V. MEES Electives** **6-8 Credits**

Students must choose an Area of Specialization (AOS) in the MEES Program: Ecology, Environmental Chemistry, Environmental Molecular Biology/Biotechnology, Oceanography, Fisheries Science, or Environmental Science. UMES has its greatest strengths in Ecology and Environmental Chemistry. Students must meet the requirements of their AOS. Specific information can be found in the MEES Student Guide or from the MEES Office.

**Ecology AOS**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 600	Marine and Estuarine Ecology	4
BIOL 601	Environmental Microbiology	4
BIOL 633	Adaptation to Marine Environment	3
BIOL 681	Barrier Island Management	4
BIOL 683	Wildlife Management	4
BIOL 688A	Population Ecology	4
BIOL 688B	Community Ecology	4
ENVS 660	Earth Science	4

**Environmental Chemistry AOS**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 621	Advanced Environmental Chemistry	4
CHEM 632	Applied Water Chemistry	3
CHEM 670	Advanced Biochemistry	3
ENVS 611	Water Pollution	4
ENVS 634	Air Pollution and Control	4
ENVS 639	Sources and Effects of Pollutants	3
ENVS 641	Environmental Toxicology	3
ENVS 660	Earth Science	4
ENVS 684	Natural Resource Management	3

**General**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MATH 410	Mathematical Statistics II	3
CSDP 604	Computer Methods in Statistics	3
MEES 608	Seminar	1

**VI. Thesis Research** **6 Credits**

**TOTAL PROGRAM REQUIREMENTS** **153**  
**(120 hours for B.S., plus 33 hours for M.S.)**

**UMES - SU DUAL DEGREE PROGRAM**  
**ENVIRONMENTAL SCIENCES MARINE SCIENCE OPTION**

The students enrolled at Salisbury University in the Biology Program may earn a degree in Environmental Sciences from UMES by taking 30 hours of prescribed coursework in Environmental Science at UMES. The required courses are listed below.

**30 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	4
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Lab	1
ENVS 221	Principles of Environmental Science	3
ENVS 222	Principles of Environmental Science Laboratory	1
ENVS 411	Water Pollution & Purification	3
ENVS 413	Water Pollution & Purification Lab	1
ENVS 434	Air Pollution <u>or</u>	
ENVS 460	Earth Science	3
Electives	7 hours of approved courses from SU	7

For additional information students are encouraged to contact Dr. Judy Stribling, Chairman, Department of Biology, Salisbury University, Salisbury, Maryland 21801-6862/410-548-4767 or Dr. Joseph Okoh, Chairman, Department of Natural Sciences, University of Maryland Eastern Shore, Princess Anne, Maryland 21853/410-651-6013/6015.

**DENTAL HYGIENE**  
**Required and Recommended Course Sequence**

This program offers the two years of lower division studies (pre-professional) required of a student desiring a career in Dental Hygiene. Upon completion of the pre-professional courses, the student transfers to a Dental Hygiene Program outside of UMES, for two years of upper division courses and clinical experience.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 33 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts & Humanities)**

**9 Credits**

Students must select ENGL 203 plus two additional courses

<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences)**

**6 Credits**

<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
SOCI	101	Introduction to Sociology	3
PSYC	200	Introduction to Psychology I	3

**C. Curriculum Area III – (Biological and Physical Sciences)**

**8 Credits**

<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
CHEM	101	General Chemistry	3
CHEM	103	General Chemistry Lab	1
CHEM	102	General Chemistry II	3
CHEM	104	General Chemistry II Lab	1

<b>D. Curriculum Area IV – (Mathematics)</b>			<b>3 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
MATH	109	College Algebra	3
<b>E. Curriculum Area V – (English Composition)</b>			<b>6 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3
<b>F. Curriculum Area VI – (Emerging Issues)</b>			<b>1 credit</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
DNSC	100	Freshman Seminar	1
<b>II. Program Hygiene Core Requirements</b>			<b>16 Credits</b>
<b>Course No.</b>		<b>Title</b>	<b>Credits</b>
BIOL 111		Principles of Biology I	3
BIOL 113		Principles of Biology I Laboratory	1
BIOL 231		Human Anatomy & Physiology I	3
BIOL 233		Human Anatomy & Physiology I Lab	1
BIOL 232		Human Anatomy & Physiology II	4
BIOL 234		Human Anatomy & Physiology II Lab	1
BIOL 301		Microbiology	3
BIOL 303		Microbiology Lab	1
<b>III. Supportive Core Requirements</b>			<b>10 Credits</b>
<b>Course No.</b>		<b>Title</b>	<b>Credits</b>
CHEM 331		Elementary Organic Chemistry	4
NUDT 210		Elements of Nutrition <b>or</b>	
HUEC 331		Human Nutrition	3
MATH 210		Elementary Statistics	3
<b>IV. Electives</b>			<b>6 Credits</b>
<b>Course No.</b>		<b>Title</b>	
		Select from: Psychology, Economics, Political Science, Computer Science/Data Processing	
		<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>65</b>

**PRE-NURSING  
Required and Recommended Course Sequence**

This program offers the academic courses required for lower division study in the undergraduate program of the University of Maryland School of Nursing. High School graduates accepted as freshmen at UMES may enroll for the freshman and sophomore years of study for the Pre-Nursing Program. Following two years of successful study at UMES with a cumulative grade point average of "C" or better, students may make application to transfer to the University of Maryland School of Nursing in Baltimore for completion of the remaining two years required for the B.S. degree. Students not aspiring to attend the University of Maryland School of Nursing should consult with their School of Nursing of choice to determine any additional courses that may be required for admission and tailor their curriculum accordingly.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - Arts & Humanities****9 Credits**Students must select ENGL 203 plus two additional courses

<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences)****6 Credits**

Course	No.	Title	Credits
SOCI	101	Introduction to Sociology	3
PSYC	200	Introduction to Psychology I	3

**C. (Curriculum Area III - Biological and Physical Sciences)****12 Credits**

Course	No.	Title	Credits
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	101	General Chemistry I	3
CHEM	103	General Chemistry I Lab	1
CHEM	102	General Chemistry II	3
CHEM	104	General Chemistry II Lab	1

**D. Curriculum Area IV – (Mathematics)****3 Credits**

Course	No.	Title	Credits
MATH	109	College Algebra <u>or</u>	3
MATH	102	Survey of College Mathematics	3

**E. Curriculum Area V – (English Composition)****6 Credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3

**F. Curriculum Area VI – (Emerging Issues)****4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1

Select from: Sociology, Anthropology, Economics,  
Psychology, Political Science, Geography, History

3

**II. Program Core Requirements****12 Credits****A grade of “C” or better is required in each of the Program Core Requirements.**

Course	No.	Title	Credits
BIOL	231	Human Anatomy & Physiology I	3
BIOL	233	Human Anatomy and Physiology I Lab	1
BIOL	232	Human Anatomy & Physiology II	3
BIOL	234	Human Anatomy & Physiology II Lab	1
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1

**III. Supportive Course Requirements** **14-15 Credits**  
 An overall grade point average of "C" or better is required for the group of courses representing the Supportive Course Requirements.

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
NUDT 210	Elements of Nutrition	3
PSYC 305	Developmental Psychology <u>or</u>	
HUEC 203	Human Development: A Lifespan Perspective	3
ELECTIVES	Select from: Sociology, Anthropology, Economics, Psychology, Political Science, Geography, History	6
	FREE Electives	2-3
<b>TOTAL PROGRAM REQUIREMENT</b>		<b>66</b>

**HONORS PRE-NURSING**  
**Required and Recommended Course Sequence**

This program offers the academic courses required for lower division study in the undergraduate program of the University of Maryland School of Nursing. High School graduates accepted as freshmen at UMES may enroll for the freshman and sophomore years of study for the Pre-Nursing Program. Following two years of successful study at UMES with a cumulative grade point average of "C" or better, students may make application to transfer to the University of Maryland School of Nursing in Baltimore for completion of the remaining two years required for the B.S. degree. Students not aspiring to attend the University of Maryland School of Nursing should consult with their School of Nursing of choice to determine any additional courses that may be required for admission and tailor their curriculum accordingly.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 40 credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts & Humanities)** **9 Credits**

Students must select ENGL 203H plus two additional courses

<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences)** **6 Credits**

<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
SOCI	101	Introduction to Sociology	3
PSYC	200	Introduction to Psychology	3

**C. Curriculum Area III – (Biological and Physical Sciences)** **12 Credits**

<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
BIOL	111H	Honors Principles of Biology I	3
BIOL	113H	Honors Principles of Biology I Lab	1
CHEM	111H	Honors Principles of Chemistry I	3
CHEM	113H	Honors Principles of Chemistry I Lab	1
CHEM	112H	Honors Principles of Chemistry II	3
CHEM	114H	Honors Principles of Chemistry II Lab	1

**D. Curriculum Area IV – (Mathematics)** **3-4 credits**

<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
MATH	110	Trigonometry and Analytic Geometry <u>or</u>	3
MATH	112	Calculus I	4

**E. Curriculum Area V – (English Composition) 6 Credits**

Course	No.	Title	Credits
ENGL	101H	Honors Basic Composition I	3
ENGL	102H	Honors Basic Composition II	3

**F. Curriculum Area VI – (Emerging Issues) 4 Credits**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1
		Select from: Sociology, Anthropology, Economics, Psychology, Political Science, Geography, History	3

**II. Program Core Requirements 12 Credits**

**A grade of “C” or better is required in each of the Program Core Requirements.**

Course No.	Title	Credits
BIOL 231	Human Anatomy & Physiology I	3
BIOL 233	Human Anatomy & Physiology I Lab	1
BIOL 232	Human Anatomy & Physiology II	3
BIOL 234	Human Anatomy & Physiology II Lab	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1

**III. Supportive Course Requirements 14-15 Credits**

Course No.	Title	Credits
NUDT 210	Elements of Nutrition	3
PSYC 307	Human Growth and Development <b>or</b>	
HUEC 203	Human Development: A Lifespan Perspective	3
ELECTIVE	Select from Sociology, Anthropology, Economics, Psychology, Political Science, Geography, History	6
	FREE Electives	2-3

An overall grade point average of “C” or better is required for the group of courses representing the Supportive Course Requirements.

**TOTAL PROGRAM REQUIREMENTS 66**

**PHARMACY PRE-PROFESSIONAL PROGRAM  
Required and Recommended Course Sequence**

This program prepares students for transfer to the UMAB School of Pharmacy or any other school of their choice for the 4-year entry level Pharmacy program. Freshman and sophomore years are taken at the UMES campus. Students with a minimum cumulative average of 2.5 or better may apply to transfer to Baltimore for completion of the four-year program leading to the Pharmacy degree. Students are encouraged to take the Pharmacy College Admission Test (PCAT) in October or February of the year in which admission is sought and forward their scores and official transcripts to the School of Pharmacy's Office of Student Affairs. Applicants must present evidence of having successfully completed the required 62 semester hours of pre-pharmacy course work, or of being able to complete the pre-pharmacy course work before the start of classes in the fall.

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION - 40 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts & Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses:

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401



<b>B. Curriculum Area II – (Social and Behavioral Sciences)</b>		<b>6 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>
SOCI	101	Introduction to Sociology
PSYC	200	Introduction to Psychology
		<b>Credits</b>
		3
		3
<b>C. Curriculum Area III – (Biological and Physical Sciences)</b>		<b>11 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>
BIOL	111	Principles of Biology I
BIOL	113	Principles of Biology Lab I
CHEM	111	Principles of Chemistry I
CHEM	113	Principles of Chemistry Lab I
BIOL	301	Microbiology
		<b>Credits</b>
		3
		1
		3
		1
		3
<b>D. Curriculum Area IV – (Mathematics)</b>		<b>7 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>
MATH	110	Trigonometry and Analytical Geometry
MATH	112	Calculus I
		<b>Credits</b>
		3
		4
<b>E. Curriculum Area V – (English Composition)</b>		<b>6 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>
ENGL	101	Basic Composition I
ENGL	102	Basic Composition II
		<b>Credits</b>
		3
		3
<b>F. Curriculum Area VI – (Emerging Issues)</b>		<b>1 credit</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>
DNSC	100	Freshman Seminar
		<b>Credits</b>
		1
<b>II. Pharmacy Core Courses</b>		<b>20 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
PHYS 161	General Physics I	3
PHYS 163	General Physics Lab I	1
PHYS 262	General Physics II	3
PHYS 264	General College Physics Lab II	1
<b>III. Supportive Course Requirements</b>		<b>9 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ECON 201	Principles of Economics I	3
SOCI	Elective	3
MATH 210	Elementary Statistics	3
	<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>69</b>

**HONORS PHARMACY PRE-PROFESSIONAL PROGRAM**  
**Required and Recommended Course Sequence**

This program prepares students for transfer to the UMAB school of pharmacy or any other school of their choice for the 4 year entry level Pharm D program. Freshman and sophomore years are taken at the UMES campus. Students with a minimum cumulative average of 2.5 or better may apply to transfer to Baltimore for completion of the four year program leading to the Pharmacy degree. Students are encouraged to take the Pharmacy College Admission Test (PCAT) in October or February of the year in which admission is sought, and forward their scores and official transcripts to the School of Pharmacy's Office of Student Affairs. Applicants must present evidence of having successfully completed the required 62 semester hours of pre-pharmacy course work, or of being able to complete the pre-pharmacy course work before the start of classes in the fall.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 40 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts & Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Course	No.	Title	Credits
SOCI	101	Introduction to Sociology	3
PSYC	200	Introduction to Psychology	3

**C. Curriculum Area III – (Biological and Physical Sciences) 11 Credits**

Course	No.	Title	Credits
BIOL	111H	Honors General Zoology	3
BIOL	113H	Honors General Zoology Lab	1
CHEM	111H	Honors Principles of Chemistry I	3
CHEM	113H	Honors Principles of Chemistry Lab	1
BIOL	301	Microbiology	3

**D. Curriculum Area IV – (Mathematics) 7 Credits**

Course	No.	Title	Credits
MATH	110H	Trigonometry and Analytical Geometry	3
MATH	112	Calculus I	4

**E. Curriculum Area V – (English Composition) 6 Credits**

Course	No.	Title	Credits
ENGL	101H	Honors Basic Composition I	3
ENGL	102H	Honors Basic Composition II	3

**F. Curriculum Area VI – (Emerging Issues)**

Course	No.	Title	Credits
DNSC	100	Freshman Seminar	1

**II. Pharmacy Core Courses 20 Credits**

Course No.	Title	Credits
CHEM 112H	Honors Principles of Chemistry II	3
CHEM 114H	Honors Principles of Chemistry II Lab	1

CHEM 211H	Honors Fundamentals of Organic Chemistry I	3
CHEM 213H	Honors Fundamentals of Organic Chemistry I Lab	1
CHEM 212H	Honors Fundamentals of Organic Chemistry II	3
CHEM 214H	Honors Fundamentals of Organic Chemistry II Lab	1
PHYS 181H	Honors Introductory Physics I	3
PHYS 183H	Honors Introductory Physics Lab I	1
PHYS 182H	Honors Introductory Physics II	3
PHYS 184H	Honors Introductory Physics II Lab	1

**III. Supportive Course Requirements 9 Credits**

Course No.	Title	Credits
ECON 201	Principles of Economics I	3
SOCI	Elective	3
MATH 210	Elementary Statistics	3

**TOTAL PROGRAM REQUIREMENTS 69**

**RADIATION THERAPY**

**Required and Recommended Course Sequence**

This program offers the two years of lower division studies (pre-professional) required of a student desiring a career in Radiation Therapy. Upon completion of the pre-professional courses, the student transfers to a Department of Radiation Therapy for two years of upper division courses and clinical experience.

Programs in Radiation Therapy at the University of Alabama in Birmingham and the Medical University of South Carolina are available. UMES students may get information on how to complete their Bachelor of Science program and earn a degree in Radiation Therapy by applying to the Program Director at one of the schools above.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 36 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts & Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

<b>ARTS:</b>	ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H
<b>HISTORY:</b>	HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310
<b>LANGUAGE:</b>	FREN 101, FREN 102, SPAN 101, SPAN 102
<b>LITERATURE:</b>	ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Behavioral Sciences) 6 Credits**

Course	No.	Title	Credits
SOCI	101	Introduction to Sociology	3
PSYC	200	Introduction to Psychology	3

**C. Curriculum Area III – (Biological and Physical Sciences) 8 Credits**

Course	No.	Title	Credits
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry Lab I	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry Lab II	1

**D. Curriculum Area IV – (Mathematics) 3 Credits**

Course	No.	Title	Credits
MATH	110	Trigonometry & Analytical Geometry	3

<b>E. Curriculum Area V – (English Composition)</b>			<b>6 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3
<b>F. Curriculum Area VI – (Emerging Issues)</b>			<b>4 Credits</b>
<b>Course</b>	<b>No.</b>	<b>Title</b>	<b>Credits</b>
EDHE	111	Personalized Health Fitness	3
DNSC	100	Freshman Seminar	1
<b>II.</b>	<b>Program Core Courses Required</b>		<b>20 Credits</b>
<b>Course No.</b>	<b>Title</b>		<b>Credits</b>
BIOL 111	Principles of Biology I		3
BIOL 113	Principles of Biology I Lab		1
BIOL 231	Human Anatomy & Physiology I		4
BIOL 232	Human Anatomy & Physiology II		4
PHYS 121	General College Physics I		3
PHYS 123	General College Physics Lab I <b>or HIGHER</b>		1
PHYS 122	General College Physics II		3
PHYS 124	General College Physics Lab II <b>or HIGHER</b>		1
<b>III.</b>	<b>Supportive Course Requirements</b>		<b>3 Credits</b>
<b>Course No.</b>	<b>Title</b>		<b>Credits</b>
MATH 210	Elementary Statistics		3
NUDT 210	Elements of Nutrition		3
<b>IV.</b>	<b>Free Elective</b>		<b>3 Credits</b>
<b>TOTAL PROGRAM REQUIREMENTS</b>			<b>70</b>

**BIOLOGY NON-TEACHING  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry Lab I	1
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytical Geometry	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
CHEM	112	Principles of Chemistry	3
CHEM	114	Principles of Chemistry Lab	1
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	<u>4</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
CHEM	211	Fund. of Organic Chemistry I	3
CHEM	213	Fund. of Organic Chem. Lab I	1
ENGL	203	Fund. of Contemporary Speech	3
EDHE	111	Personalized Health Fitness	3
		GER CURR. AREA	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	222	Genetics	4
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
CSDP	220	Intro to Computer Program <b>or</b>	
BUED		Elective	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
PHYS	121	General College Physics <b>and</b>	
PHYS	123	General College Physics Lab <b>or</b>	
PHYS	181H	Intro. Physics (Honors) <b>and</b>	
PHYS	183H	Intro. Physics (Honors) Lab	4
BIOL		Elective	4
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
PHYS	122	Gen. College Physics II <b>and</b>	
PHYS	124	Gen. College Physics II Lab <b>or</b>	4
PHYS	182H	Honors Intro. Physics II <b>and</b>	
PHYS	184H	Honors Intro. Physics II Lab	4
		GER CURR. AREA I	3
		GER CURR. AREA II	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
BIOL	497	Seminar	1
BIOL		Elective	3
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry Lab I	1
		FREE Elective	<u>4</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
CHEM	342	Biochemistry II	3
CHEM	344	Biochemistry Lab II	1
MATH	210	Elementary Statistics I	3
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>14</b>

Pre-dental and Pre-medical students follow the recommended course sequence for non-teaching majors in Biology or Chemistry.

**Total Credits Required                    120**

**BIOLOGY TEACHING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology Lab I	1
ENGL	101	Basic Composition	3
		GER CURR. AREA II	3
DNSC	100	Freshman Seminar	1
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
ENGL	102	Basic Composition II	3
MATH	110	Trig & Analytical Geometry	3
		GER CURR. AREA II	3
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	3-4
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
		GER CURR. AREA I	3
EDCI	200	Intro. to Contemporary Ed	<u>3</u>
<b>Semester Total</b>			<b>16-17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	222	Genetics	4
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
PSYC	305	Development Psychology	3
EDSP	200B	Intro to Special Education	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab	1
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chem. I Lab	1
PSYC	307	Education Psychology	3
EDCI	311	Comprehensive Assessment	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
PHYS	122	General College Physics II	3
PHYS	124	General College Physics II Lab	1
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
EDCI	409	Teaching Reading in the Content	
		Areas: Part 1	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	3-4
BIOL		Elective	3
BIOL	497	Seminar	1
EDCI	425A	Curr. & Instru. in Nat. Sci.	3
EDCI	406	Classroom Management	<u>3</u>
<b>Semester Total</b>			<b>13-14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	480-490	Teaching Internship	12
EDCI	400	Senior Seminar in Education	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**      **120**

**HONORS BIOLOGY**  
**(Pre-Medicine/Pre-Dentistry)**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111H	Principles of Biology I	3
BIOL	113H	Principles of Biology I Lab	1
CHEM	111H	Principles of Chemistry I	3
CHEM	113H	Principles of Chemistry I Lab	1
ENGL	101/H	Basic Composition	3
MATH	110/H	Trig & Analytical Geometry	3
		GER CURR. AREA VI	<u>3</u>
		<b>Semester Total</b>	<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
PHYS	122	Gen. College Physics II <b>and</b>	
PHYS	124	Gen. College Physics II Lab <b>or</b>	
PHYS	182H	Honors Intro. Physics II <b>and</b>	
PHYS	184H	Honors Intro Physics II Lab	4
MATH		Elective	4
DNSC	100	Freshman Seminar	<u>1</u>
		<b>Semester Total</b>	<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
CHEM	211H	Fund. of Organic Chem. I	3
CHEM	213H	Fund. of Organic Chem. I Lab	1
ENGL	203H	Fund. of Contemporary Speech	3
		GER CURR. AREA II (Honors)	<u>3</u>
		<b>Semester Total</b>	<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	222	Genetics	3
BIOL	223	Genetics Lab	1
CHEM	212H	Hnrs. Fund. of Organ. Chem. II	3
CHEM	214H	Hnrs. Fund. of Organ. Chem. II Lab	1
CSDP	220	Intro to Computer Program	4
		GER CURR. AREA II (Honors)	3
ENGL	305H	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	<u>3</u>
		<b>Semester Total</b>	<b>18</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
PHYS	181H	Honors Intro. Physics I	3
PHYS	183H	Honors Intro. Physics I Lab	1
BIOL		Elective	4
		GER CURR. AREA I (Honors)	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
PHYS	182H	Honors Intro. Physics II	3
PHYS	184H	Honors Intro Physics II Lab	1
		FREE Elective	3
		GER CURR. AREA I (Honors)	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL		Elective	4
BIOL	497H	Seminar	1
BIOL		Elective	3
CHEM	341H	Biochemistry I	3
CHEM	343H	Biochemistry I Lab	<u>1</u>
		<b>Semester Total</b>	<b>12</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL		Elective (Honors)	4
CHEM	342H	Biochemistry II	3
CHEM	343H	Biochemistry II Lab	1
MATH	210	Elementary Statistics I	3
		FREE Elective	<u>3</u>
		<b>Semester Total</b>	<b>14</b>
		<b>Total Credits Required</b>	<b>120</b>

Students in the Honors, Premedicine/Pre-dentistry programs are required to enroll in all sections designated "H". They are required to take the Medical College Admission Test (MCAT) during the Spring semester of the academic year preceding the year in which admission to the UMAB School of Medicine is sought. Applications to medical school(s) should be made no later than the fall of the senior year.

Genetics, Cell Biology, Histology and Microbiology are strongly recommended.

**BIOLOGY PRE-MED**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
MATH	110	College Math	3
ENGL	101	English Composition I	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
MATH	112	College Math	4
ENGL	102	English Composition	3
ENGL	001	Proficiency Exam	<u>0</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211	Organic Chemistry I	3
CHEM	213	Organic Chemistry I Lab	1
BIOL	211	Principles of Biology III	3
BIOL	213	Principles of Biology III Lab	1
MATH	210	College Math	3
PSYC	200	Introduction to Psychology	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Organic Chemistry II	3
CHEM	214	Organic Chemistry II Lab	1
BIOL	222	Genetics	3
BIOL	223	Genetics Lab	1
ENGL	203	Fund. of Contemporary Speech	3
CSDP	220	Computer Programming	<u>4</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	311	Vertebrate Embryology	4
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab	1
BIOL	322	Comparative Vertebrate Anat.	4
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology3	3
BIOL	303	Microbiology Lab	1
PHYS	122	General College Physics II	3
PHYS	124	General College Physics II Lab	1
BIOL	341	Introductory Physiology	4
ENGL	305	Technical Writing	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	326	Cell Biology	3
BIOL	327	Cell Biology Lab	1
BIOL	420	Animal Histology	3
BIOL	421	Animal Histology Lab	1
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry I Lab	1
BIOL	497	Senior Seminar	1
ENGL	218	Approaches to Grammar	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	436	General Endocrinology	3
CHEM	342	Biochemistry II	3
CHEM	344	Biochemistry II Lab	1
SOCI	101	Introduction to Sociology	3
HIST	334	African American History II	3
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**Total Credits Required                    120**



**CHEMISTRY NON-TEACHING  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytical Geometry	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	4
		GER CURR. AREA I: Foreign Language I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
MATH	211	Calculus II	4
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chem. I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
		GER CURR. AREA I: Foreign Language II	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
PHYS	161	General Physics I <b>and</b>	
PHYS	163	General Physics Lab <b>or</b>	
PHYS	181H	Honors Intro. Physics I <b>and</b>	3
PHYS	183H	Honors Intro. Physics I Lab	1
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	311	Analytical Chemistry I	4
PHYS	182H	Honors Intro. Physics II <b>and</b>	
PHYS	184H	Honors Intro. Physics II Lab <b>or</b>	
PHYS	262	General Physics II <b>and</b>	3
PHYS	264	General Physics II Lab	1
CSDP*	220	Intro. to Computer Program.	4
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry I Laboratory	1
CHEM	312	Analytical Chemistry II	4
CHEM	497	Seminar	1
CHEM	498	Independent Study	3
		GER CURR. AREA II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA II	3
CHEM	401	Principles of Physical Chem. I	4
CHEM	420	Advanced Inorganic Chemistry	4
CHEM	421	Instrumental Analysis	<u>4</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOUR</b>
		FREE Elective	3
CHEM	402	Principles of Physical Chem. II	4
CHEM		Elective with lab component	4
CHEM		Elective	3~4
CHEM	499	Undergraduate Research	<u>3</u>
<b>Semester Total</b>			<b>17</b>
<b>Total Credits Required</b>			<b>120</b>

Two semesters of foreign language highly recommended to fulfill free elective or general education requirement.

**CHEMISTRY TEACHING OPTION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
MATH	110	Trig. & Analytical Geometry	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition I	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chem. II Lab	1
MATH	112	Calculus I	4
EDCI	200	Intro. to Contemporary Ed.	3
EDHE	111	Personalized Health Fitness	<u>1</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP*	220	Intro. to Computer Program.	4
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chem. I Lab	1
MATH	211	Calculus II	4
		GER CURR. AREA II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
PSYC	305	Development Psychology	3
EDSP	200	Intro. to Special Education	3
PSYC	307	Educational Psychology	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	311	Analytical Chemistry I	4
CHEM	497	Seminar	1
EDCI	311	Comprehensive Assessment	3
		GER CURR. AREA I	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
PHYS	161	General Physics I <b>and</b>	
PHYS	163	General Physics I Lab <u>or</u>	
PHYS	181H	Honors Intro. Physics I <b>and</b>	3
PHYS	183H	Honors Intro. Physics Lab I	1
EDCI	406	Classroom Management	3
CHEM	499	Undergraduate Research	1
		GER CURR. AREA II	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	401	Principals of Physical Chem. I	4
PHYS	182H	Honors General Physics II <b>and</b>	3
PHYS	184H	Honors General Physics II Lab <u>or</u>	1
PHYS	262	Introductory Physics II <b>and</b>	3
PHYS	264	Introductory Physics II Lab	1
EDCI	425A	Curri. & Instr. Mthds Nat. Sci.	3
EDCI	409	Teaching Reading in the Content Areas: Part I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	480-490	Teaching Internship & Seminar	<u>12</u>
<b>Semester Total</b>			<b>15</b>
<b>Total Credits Required</b>			<b>120</b>

\*Two semesters of foreign language highly recommended to fulfill free elective or general education requirement.

**HONORS CHEMISTRY (PRE-MEDICINE)  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Honors English Composition	3
CHEM	111H	Hnrs. Prin. of Inorgan. Chem. I	3
CHEM	113H	Hnrs. Prin. of Inorgan. Chem. I Lab	1
MATH	110	Trig. & Analytical Geometry <u>or</u>	3
MATH	111H	Honors Elem. Math Analysis	4
BIOL	111H	Honors Prin. of Biology I	3
BIOL	113H	Honors Prin. of Biology I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15-16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102H	Honors English Composition II	3
		GER CURR. AREA I	3
CHEM	112H	Honors Prin. of Chem. II	3
CHEM	114H	Honors Prin. of Chem. II Lab	1
MATH	112	Calculus I	<u>4</u>
<b>Semester Total</b>			<b>14</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211H	Hnrs. Fund. of Organ. Chem I	3
CHEM	213H	Hnrs. Fund. of Organ. Chem I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
MATH	211	Calculus II	4
		GER CUR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212H	Hnrs. Fund. of Organ. Chem. II	3
CHEM	214H	Hnrs. Fund. of Organ. Chem II Lab	1
BIOL	112H	Hnrs. Prin. of Biology II	3
BIOL	114H	Hnrs. Prin. of Biology II Lab	1
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
		GER CURR AREA	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	311	Analytical Chemistry I	4
CSDP	220	Intro to Computer Program.	4
		GER CURR. AREA II	3
CHEM	341H	Honors Biochemistry I	3
CHEM	343H	Honors Biochemistry I Lab	1
PHYS	181H	Honors Intro. Physics I	3
PHYS	183H	Honors Intro. Physics Lab I	<u>1</u>
<b>Semester Total</b>			<b>19</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	312	Analytical Chemistry II	4
PHYS	182H	Honors Intro. Physics II	3
PHYS	184H	Honors Intro. Physics Lab II	1
		FREE Elective	3
CHEM	497H/M	Chemistry Seminar	1
CHEM	498H	Independent Study	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	421	Instrument Analysis	4
CHEM	420	Advanced Inorganic Chemistry	4
CHEM	401	Prin. of Physical Chemistry I	4
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	402	Prin. of Physical Chemistry II	4
CHEM		Elective	3
CHEM		Elective with lab component	4
CHEM	499H	Honors Undergraduate Research	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**Total Credits Required      120**

Students in the Honors, Premedicine/Pre dentistry programs are required to enroll in all sections designated "H". They are required to take the Medical College Admission Test (MCAT) during the Spring Semester of the academic year preceding the year in which admission to medical school is sought. Applications to medical school(s) should be made no later than the fall of the senior year. Genetics, Cell Biology, Histology and Microbiology are strongly recommended.

**ENVIRONMENTAL CHEMISTRY OPTION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytical Geometry	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	4
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211	Fund. of Organic Chem. I	3
CHEM	214	Fund. of Organic Chem. I Lab	1
CSDP	220	Intro to Computer Science	4
ECON	201	Principles of Economics I	3
PHYS	121	General College Physics I <b>and</b>	3
PHYS	123	General College Physics I lab <b>or</b>	1
PHYS	181H	Introductory Physics I	3
PHYS	183H	Introductory Physics I Lab	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab 1	1
MATH	210	Elementary Statistics	3
ECON	202	Principles of Economics II	3
PHYS	122	General College Physics II <b>and</b>	3
PHYS	124	General College Physics II Lab <b>or</b>	1
PHYS	182H	Honors Intro. Physics II <b>and</b>	3
PHYS	184H	Honors Intro. Physics Lab II	<u>1</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
CHEM	311	Analytical Chemistry	4
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry I Laboratory	<u>1</u>
<b>Semester Total</b>			<b>12</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3
ENVS	221	Principles of Environ. Sci.	3
ENVS	222	Principles of Environ. Sci. Lab	1
CHEM	312	Analytical Chemistry II	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENVS	411	Water Pollution	4
ENVS	497	Seminar	1
		Program Elective: Area IV	3-4
		Program Area Elective	4
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15-16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENVS	434	Air Pollution	4
ENVS	498	Independent Study <b>or</b>	
ENVS	499	Undergraduate Research	3
		GER CURR. AREA II: Behavioral Sciences	3
		Program Elective	2
		FREE Elective	<u>2</u>
<b>Semester Total</b>			<b>14</b>
<b>Total Credits Required</b>			<b>120</b>

**MARINE SCIENCE OPTION  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Anal Geometry	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	4
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	<u>1</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	202	Marine Botany	3
BIOL	203	Marine Botany Lab	1
ENVS	202	General Oceanography	3
ENVS	204	General Oceanography Lab	1
CHEM	211	Fund. of Organ. Chem. I	3
CHEM	213	Fund. of Organ. Chem. I Lab	1
		Program Elective	<u>4</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDHE	111	Personalized Health Fitness	3
CHEM	212	Fund. of Organ. Chem. II	3
CHEM	214	Fund. of Organ. Chem. II Lab	1
BIOL	201	Marine Zoology	4
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	<u>4</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	121	General College Physics I	3
PHYS	123	General College Physics Lab I	1
ENVS	221	Prin. of Environ. Science	3
ENVS	222	Prin. of Environ. Science Lab	1
CSDP	220	Intro to Computer Program.	4
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
PHYS	122	General College Physics II	3
PHYS	124	General College Physics Lab II	1
		GER CURR. AREA II	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	<u>3</u>
<b>Semester Total</b>			<b>10</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	402	Ecology	4
MATH	210	Elementary Statistics	3
ENVS	411	Water Pollution and Purifi.	3
ENVS	413	Water Pollution and Purifi. Lab	1
ENVS	497	Environmental Science Seminar	1
		GER CURR. AREA I	3
		GER CURR. AREA II	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Program Elective	3
		Program Elective	4
		GER CURR. AREA I	3
		FREE Elective	3
ENVS	498	Independent Study <u>or</u>	
ENVS	499	Undergraduate Research	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**Total Credits Required      120**

**BS/MS ENVIRONMENTAL CHEMISTRY OPTION**  
**Recommended Course Sequence**

<b>FRESHMAN YEAR</b>			
<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	4
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chem. I Lab	1
CSDP	220	Intro to Computer Program.	4
PHYS	121	General College Physics I <b>and</b>	
PHYS	123	General College Physics I Lab <b>or</b>	
PHYS	181H	Honors Intro. Physics I <b>and</b>	3
PHYS	184H	Honors Intro. Physics I Lab	1
MATH	211	Calculus II	<u>4</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3
MATH	210	Elementary Statistics	3
PHYS	122	General College Physics II <b>and</b>	
PHYS	124	General College Physics II Lab <b>or</b>	
PHYS	182H	Introductory Physics II <b>and</b>	
PHYS	184H	Introductory Physics Lab II	<u>4</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201	Principles of Economics I	3
CHEM	311	Analytical Chemistry I	4
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
		FREE Elective	1-3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15-16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
ECON	202	Principles of Economics II	3
ENVS	221	Principles of Environ. Sci.	3
ENVS	222	Principles of Environ. Sci. Lab	1
CHEM	312	Analytical Chemistry II	4
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry I Laboratory	1
CHEM	621	Environmental Chemistry	4
ENVS	411/611	Water Pollution	4
ENVS	497	Seminar	<u>1</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENVS	434/634	Air Pollution	4
ENVS	460/660	Earth Science	4
ENVS	498	Independent Study <b>or</b>	
ENVS	499	Undergraduate Research	3
		GER CURR. AREA II: Behavioral Science	3
		Program Electives Area IV	<u>3-4</u>
<b>Semester Total</b>			<b>17-18</b>

<b>SUMMER AFTER SENIOR YEAR</b>			<b>HOURS</b>
MEES	799	Thesis Research	3

**FIFTH YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	632	Applied Water Chemistry	3
ENVS	639	Sources of Pollutant	3
MEES	608	Seminar	1
MATH	410	Advanced Statistics <b>or</b>	
CSDP	604	Computer Methods in Statistics	3
		Program Elective AREA IV	<u>3-4</u>
<b>Semester Total</b>			<b>13-14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Program Elective AREA IV	3
MEES	799	Research	3
ENVS	684	Natural Resource Management	<u>3</u>
<b>Semester Total</b>			<b>9</b>

**Total Credits Required      149**

**BS/MS MARINE SCIENCE OPTION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOUR</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytical Geometry	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
MATH	112	Calculus I	4
BIOL	112	Principles of Biology 1	3
BIOL	114	Principles of Biology I Lab	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
MATH	211	Calculus	4
CHEM	211	Fund. of Organ. Chem. I	3
CHEM	213	Fund. of Organ. Chem. I Lab	1
ENVS	202	General Oceanography	3
ENVS	204	General Oceanography Lab	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
		GER CURR. AREA II	3
CHEM	212	Fund. of Organ. Chem. II	3
CHEM	214	Fund. of Organ. Chem. II Lab	1
		GER CURR. AREA I	3
BIOL	201	Marine Zoology	<u>4</u>
<b>Semester Total</b>			<b>17</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	121	General College Physics I	3
PHYS	123	General College Physics Lab I	1
BIOL	202	Marine Biology	3
BIOL	203	Marine Biology Lab	1
BIOL	402	Ecology	4
CSDP	220	Intro to Comp. Programming	<u>4</u>
<b>Semester Total</b>			<b>16</b>

**SPRING SEMESTER**

			<b>HOURS</b>
PHYS	122	General College Physics II	3
PHYS	124	General College Physics Lab II I	
		GER CURR. AREA II	3
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
ENVS	221	Prin. of Environmental Sci.	3
ENVS	222	Prin. of Environmental Sci. Lab	1
MATH	210	Elementary Statistics	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SUMMER SESSION**

			<b>HOURS</b>
		Program Elective	4
ENVS	498	Independent Study <u>or</u>	
ENVS	499	Undergraduate Research	<u>4</u>
<b>Semester Total</b>			<b>8</b>

**SENIOR YEAR**

**FALL SEMESTER**

			<b>HOURS</b>
		Program Elective	4
MEEES		Elective	3
ENVS	411/611	Water Pollution and Purification	4
ENVS	497	Senior Seminar	<u>1</u>
<b>Semester Total</b>			<b>12</b>

**SPRING SEMESTER**

			<b>HOURS</b>
MEEES		Elective	3
		GER CURR. AREA I	3
CSDP	604	Computer Methods in Statistics	3
MEEES		Elective	4
MEEES	608	MEEES Seminar	<u>1</u>
<b>Semester Total</b>			<b>14</b>

**SUMMER SESSION**

			<b>HOURS</b>
MEEES	799	Research	3
MEEES		Elective	<u>3</u>
<b>Semester Total</b>			<b>6</b>

**FIFTH YEAR**

**FALL SEMESTER**

			<b>HOURS</b>
MEEES		Elective	3
MEEES	608	MEEES Seminar	<u>1</u>
<b>Semester Total</b>			<b>4</b>

**SPRING SEMESTER**

			<b>HOURS</b>
MEEES	799	Research	3
MEEES		Elective	<u>3</u>
<b>Semester Total</b>			<b>6</b>

**Total Credits Required**      **149**

**DENTAL HYGIENE**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	101	General Chemistry I	3
CHEM	103	General Chemistry I Lab	1
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
CHEM	102	General Chemistry II	3
CHEM	104	General Chemistry II Lab	1
MATH	210	Elementary Statistics	3
SOCI	101	Introduction to Sociology	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anat. and Physi. I	3
BIOL	233	Human Anat. And Physi. I Lab	1
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
PSYC	200	Introduction to Psychology	3
SOCI		Elective	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	232	Human Anat. & Physi. II	3
BIOL	234	Human Anat. & Physi. II Lab	1
CHEM	331	Elementary Organic Chemistry	4
ENGL	203	Fund. of Contemporary Speech	3
NUDT	391	Nutritional Science I <u>or</u>	
NUDT	210	Elements of Nutrition	3
SOCI		Elective	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**Total Credits Required**      **65**

**NURSING PRE-PROFESSIONAL PROGRAM**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
CHEM	101	General Chemistry I	3
CHEM	103	General Chemistry I Lab	1
MATH	109	College Algebra	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA I	3
SOCI	101	Introduction to Sociology	3
CHEM	102	General Chemistry II	3
CHEM	104	General Chemistry II Lab	1
ENGL	102	Basic Composition II	3
		FREE Elective	2-3
		GER CURR. Area I	<u>3</u>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	200	Introduction to Psychology	3
BIOL	231	Human Anat. & Physi. I	3
BIOL	233	Human Anat. & Physi. I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
BIOL	301	Microbiology	3
BIOL	303	Microbiology	1
		GER CURR. AREAVI	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
NUDT	210	Elements of Nutrition	3
BIOL	232	Human Anat. & Physi. II	3
BIOL	234	Human Anat. & Physi. II Lab	1
PSYC	305	Developmental Psychology	3
		GER CURR. AREA VI	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**Total Credits Required**      **120**



**PHARMACY PRE-PROFESSIONAL PROGRAM**  
Recommended Course Sequence

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytical Geometry	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
		GER CURR. AREA I	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition	3
MATH	112	Calculus I	4
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
SOCI	101	Introduction to Sociology	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211	Fund. of Organic Chem. I	3
CHEM	213	Fund. of Organic Chem. I Lab	1
PHYS	161	General College Physics I <b>and</b>	
PHYS	163	General College Physics I Lab <b>or</b>	
PHYS	181H	Honors Intro. Physics I <b>and</b>	
PHYS	183H	Honors Intro. Physics I Lab	4
ENGL	203	Fund. of Contemporary Speech	3
ECON	101	Interpretive Analysis	3
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	<u>1</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212	Fund. of Organic Chem. II	3
CHEM	214	Fund. of Organic Chem. II Lab	1
PHYS	182H	General College Physics I <b>and</b>	
PHYS	184H	Honors Gen. College Physics I Lab <b>or</b>	
PHYS	262	Introductory Physics I <b>and</b>	
PHYS	264	Introductory Physics Lab I	4
PSYC	200	Introduction to Psychology	3
SOCI		Elective	3
MATH	210	Elementary Statistics	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**Total Credits Required      70**

**RADIATION THERAPY**  
**PRE-PROFESSIONAL PROGRAM**  
Recommended Course Sequence

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition	3
MATH	110	Trig. & Analytical Geometry	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1
MATH	210	Elementary Statistics	3
PSYC	200	Introduction to Psychology	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
BIOL	231	Human Anat. & Physi. I	3
BIOL	233	Human Anat. & Physi. I Lab	1
SOCI	101	Intro to Sociology	3
PHYS	121	General College Physics I	3
PHYS	123	General College Physics Lab I	1
		GER CURR AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
NUDT	210	Elements of Nutrition	3
BIOL	232	Human Anat. & Physi. II	3
BIOL	234	Human Anat. & Physi II Lab	1
		FREE Elective	3
PHYS	122	General College Physics II	3
PHYS	124	General College Physics Lab II	1
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**Total Credits Required      65**

**HONORS PRE-NURSING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Honors Basic Composition I	3
BIOL	111H	Honors Prin. of Biology I	3
BIOL	113H	Honors Prin. of Biology I Lab	1
CHEM	101	General Chemistry I	3
CHEM	103	General Chemistry I Lab	1
MATH	109	College Algebra	3
		GER CURR. AREA I	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOCI	101H	Intro to Sociology	3
CHEM	102	General Chemistry II	3
CHEM	104	General Chemistry II Lab	1
ENGL	102H	Honors Basic Composition II	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	200	Introduction to Psychology	3
BIOL	231	Human Anatomy & Physi.	3
BIOL	233	Human Anatomy & Physi. I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	1
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
NUDT	210	Elements of Nutrition	3
BIOL	232	Human Anat. & Physi. II	3
BIOL	234	Human Anat. & Physi. II Lab	1
PSYC	305	Developmental Psychology <u>or</u>	
HUEC	102	Human Dev: Life Span Perspec.	3
		GER CURR. AREA	<u>3</u>
<b>Semester Total</b>			<b>13</b>
<b>Total Credits Required</b>			<b>120</b>

**HONORS PRE-PHARMACY**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Basic Composition I	3
MATH	111H	Elementary Math Analysis	3
CHEM	111H	Honors Principles of Chemistry I	3
CHEM	113H	Hon. Principles of Chem. I Lab	1
BIOL	111H	Honors Principles of Biology I	3
BIOL	113H	Hon. Principles of Biology I Lab	1
		GER CURR. AREA I	3
DNSC	100	Freshman Seminar	<u>1</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102H	Basic Composition II	3
MATH	112	Calculus I	4
CHEM	112H	Honors Prin. of Chem. II	3
CHEM	114H	Hon. Prin. of Chem. II Lab	1
		GER CURR. AREA II: Social Sciences	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	211H	Hon. Fund. of Organ. Chem. I	3
CHEM	213H	Hon. Fund. of Organic Chem. I Lab	1
PHYS	181H	Introductory Physics I	3
PHYS	183H	Introductory Physics Lab I	1
ENGL	203	Fund. of Contemporary Speech	3
ECON	101	Interpretive Analysis	3
BIOL	301	Microbiology	3
BIOL	303	Microbiology Lab	<u>1</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	212H	Hon. Fund. of Organ. Chem. II	3
CHEM	214H	Hon. Fund. of Organ. Chem. II Lab	1
PHYS	182H	Introductory Physics II	3
PHYS	184H	Introductory Physics Lab II	1
PSYC	200	Introduction to Psychology	3
SOCI		Elective (Honors)	3
MATH	210	Elementary Statistics	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**Total Credits Required**      **69**

## COURSE DESCRIPTION

### BIOLOGY

#### **BIOL 101 Theories and Applications of Biological Sciences 3 cr.**

This course provides an introduction to Biological principles as they apply to our daily lives. The course is designed to partially meet general education requirements in the Natural Sciences. Consideration is given to organisms, their components and activities. Emphasis is on the development and use of knowledge, skills and attitudes expected to be of value in future decision-making as it relates to Biology, our present environmental conditions and problems facing each of us today. This course is comprised of three hours lecture per week.

#### **BIOL 103 Biological Science Laboratory 1 cr.**

This course emphasizes student involvement in investigations related to Biology. Emphasis is placed on the scientific method, biological molecules, cellular respiration and dissection. Laboratory is designed to partially meet general education requirements in Natural Sciences. Prerequisite: One year of high school biology. The laboratory fee is \$25.

#### **BIOL 111/111H Principles of Biology I 3 cr.**

This course is an introduction to the basic concepts of biology, with emphasis on molecular, cellular and genetic concepts related to living organisms. Basic concepts are considered, and major topics deal with (1) organization of cells and the molecular basis of life, (2) energetics and metabolism, (3) cell growth and reproduction, and (4) genetics and evolution. This course is for Natural Sciences majors and others in the related sciences. Co-requisite: BIOL 113/113H. This course is comprised of three hours per week and one hour discussion for the Honors section only.

#### **BIOL 112/112H Principles of Biology II 3 cr.**

This course is an introduction to the basic concepts of biology with emphasis on structure and function, focusing on adaptations of plants and animals. The course also includes an introduction to the study of plants; their structure and function, and their role in the environment and society. Included in the course is the study of the anatomy, morphology, physiology, plant ecology, and life cycles of representative species of the plant kingdom. Prerequisites: BIOL 111/111H (grade of C or better). This course is comprised of three hours of lecture per week.

#### **BIOL 113/113H Principles of Biology I Laboratory. 1 cr.**

This laboratory course is designed to accompany BIOL 111/111H and to reinforce the basic biological concepts of cellular biology, molecular biology, Mendelian and molecular genetics discussed in the corresponding lecture. Supervised laboratory sessions enhance the student's skills in experimental manipulation, data collection, data interpretation and analysis, and data presentation in an effort to stimulate logical thinking and scientific reasoning.

Co-requisites: BIOL 111/111H (grade of C or better). The laboratory fee associated with this course is \$25.00.

#### **BIOL 114/114H Principles of Biology II Laboratory 1 cr.**

This laboratory course is designed to accompany BIOL 112/112H. Laboratory exercises focus on first-hand experience with plants, their growth and development, internal and external anatomy, physiology, genetics, and various representatives of the plant kingdom. Laboratory also gives consideration to biological concepts related to the physiological mechanisms of living organisms. Emphasis is placed on experimental manipulation, data collection, data interpretation and analysis, and data presentation. Co-requisites: BIOL 112/112H (grade of C or higher). The laboratory fee associated with this course is \$25.00.

#### **BIOL 201 Marine Zoology 4 cr.**

This course is a study of the nature of life in the sea, adaptations, patterns of distribution and production of plankton, nekton and benthos, and their interrelationships. The course is comprised of two hours of lecture and a three-hour laboratory per week. Prerequisite: BIOL 111/111H. Laboratory Fee: \$25.00

#### **BIOL 202 Marine Botany 3 cr.**

This course is designed for both environmental science and biology majors. The course focuses on the environmental and ecological aspects of marine and estuarine plants and includes discussions of systematics and the ecology of micro and macroalgae, marine fungi, and vascular plants. The various aspects of the Chesapeake Bay watershed are discussed. Field trips to various marine environments are conducted during the semester for which attendance is mandatory. Prerequisites for this course include: BIOL 112/112H (grade of C or higher). Corequisites: BIOL 203. Students must be enrolled in BIOL 202 and BIOL 203 during the same semester. This course is comprised of three hours of lecture per week.

#### **BIOL 203 Marine Botany Laboratory 1 cr.**

This four-hour/week laboratory course is designed to introduce the student to marine plants in the pelagic open-ocean and coastal environments. This class focuses on both phytoplankton and benthic marine plant communities and introduces field and laboratory techniques for research on the biology and ecology of marine plants. These include micro- and macro-algal identification, the determination of algal primary productivity and growth rates, and field sampling techniques in marine plant ecology. A service learning project is required as part of the laboratory grade. Co-requisites: BIOL 202. Students must be enrolled in BIOL 202 and BIOL 203 during the same semester. This course is comprised of four hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 211 Principles of Biology III 3 crs.**

This course is an introduction to the principles of Biology with emphasis on biodiversity, evolution, and ecology. The course focuses on (1) biodiversity within five kingdom systems, (2) principles of evolution, and (3) population and community ecology with applications to environmental issues. Principles of Biology I is intended for the Biology major and persons in the related sciences. Prerequisites: BIOL 111/111H (grade of C or higher). The course is comprised of three hours of lecture per week.

**BIOL 213 Principles of Biology III Laboratory 1 cr.**

The laboratory activities of this course are related to principles of Biology with emphasis on biodiversity, evolution, and ecology. Topics of discussion include a survey of the five kingdoms, experimental tests of evolution and ecological concepts. This course is intended for the Biology major and persons in the related sciences. Prerequisites include: BIOL 111/111H (grade of C or higher). Co-requisites include: BIOL 211. The course is comprised of one three-hour laboratory per week. The Laboratory fee associated with this course is \$25.00.

**BIOL 222 Genetics 3 crs.**

Basic principles governing transmission of traits from generation to generation in humans are covered in this course. Course material focuses on the structure and functions of DNA, RNA, proteins and chromosomes in eukaryotes, the mode of transmission of genes to the next generation, how genes are damaged and repaired, use of recombinant DNA technology as a treatment option, and the consequences of mutations and chromosomal abnormalities in producing human disorders. Lectures also include discussions on determinations of gene and allele frequencies in populations and how they affect evolution. Prerequisites: BIOL 111/111H (grade of C or higher). This course is comprised of three hours lecture per week.

**BIOL 223 Genetics Laboratory 1 cr.**

This course is designed to introduce students to experimental approaches to studying problems in molecular genetics. Upon completion of the course, students should have a working knowledge of how problems pertaining to hereditary disorders are addressed. Students are taught techniques of how to extract DNA and protein, how to analyze these molecules by electrophoresis, spectrophotometry, polymerase chain reaction, and mammalian cell culture. Prerequisites: BIOL 111/111H; and BIOL 113/113H. This course is comprised of three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 231 Human Anatomy and Physiology I 3 crs.**

This course provides an introduction to the structure and function of the human body. Topics included are chemistry and the cell, integument, skeletal, muscular and nervous systems. Prerequisites: BIOL 111/111H (grade of C or higher); BIOL 113/113H (grade of C or higher), BIOL 112/112H (grade of C or higher); BIOL 114 (grade of C or higher). Co-requisite: BIOL 233. This course may not be used as a Biology Program Elective for credit toward the

Biology major. This course is comprised of three hours of lecture per week.

**BIOL 232 Human Anatomy and Physiology II 3 crs.**

This course provides discussion of the respiratory, circulatory, excretory, endocrine, digestive, and reproductive functions of the human body. Pre-requisites: BIOL 231 and BIOL 233. Co-requisite: BIOL 234. This course may not be used as a Biology Program Elective for credit toward the Biology major. This course is comprised of three hours of laboratory per week.

**BIOL 233 Human Anatomy and Physiology 1 cr. Lab I**

This course accompanies BIOL 231 and emphasizes student involvement in investigations related to human anatomy and physiology. The course provides practical experience with subject matter and includes written as well as practical examinations. Prerequisites: Biology 111/111H (grade of C or higher) or equivalent. Co-requisite: BIOL 231. This course is comprised of three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 234 Human Anatomy and Physiology 1 cr. Lab II**

This course complements the BIOL 232 course and emphasizes student involvement in investigations related to human anatomy and physiology. The course is designed to provide practical experience with subject matter and includes written as well as practical examinations. Prerequisites: BIOL 231 and BIOL 233 or equivalent. Co-requisite: BIOL 232. The laboratory fee associated with this course is \$25.00.

**BIOL 261 Invertebrate Zoology 4 crs.**

This course is presented as a survey of invertebrate animals with emphasis on the relationship between structure and function, evolution of major groups. Life history, strategies, and behaviors and are major topics of discussion. Laboratory emphasis is on examination of animals. Prerequisites: BIOL 111/111H (grade of C or higher) or consent of the instructor. This course is comprised of two hours of lecture and two two-hour laboratories per week. The laboratory fee associated with this course is \$25.00.

**BIOL 301 Microbiology 3 crs.**

This course examines the basic life processes of various microscopic organisms and their relevance to humans focusing on pathogenicity. Discussion also encompasses chemotherapy and the immune response to infection. The course focuses on an introduction to the study of microorganisms; and their diversity, growth, life cycle, physiology and control. The role of microorganisms in diseases, the environment and industry, as well as other economic considerations, in these areas of studies are explored. Prerequisites: BIOL111/BIOL111H or equivalent (grade of C or better); one year of Chemistry, or permission of the instructor. This course is comprised of three hours of lecture per week.

**BIOL 303 Microbiology Laboratory 1 cr.**

This course is designed to expose students to laboratory activities that will acquaint the student with procedures for the proper and safe handling of microorganisms to facilitate investigations using microorganisms. Co-requisite: BIOL 301. This course is comprised of two two-hour laboratory sessions per week. The laboratory fee associated with this course is \$25.00.

**BIOL 311/311H Vertebrate Embryology 4 crs.**

This course provides the student with a study of the development of the vertebrate body as exemplified by early development of pre-chordate, early chordate, amphibians, birds and mammalian embryos. The course offers the student a descriptive study of the normal morphology of the fundamental morphological aspects of development. In addition, to increase the student's understanding of the mechanisms underlying the development of form to function, experimental, molecular, and genetic approaches are studied. Pre-requisites: BIOL 111/111H (grade of C or higher). This course is comprised of three hours of lecture and three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 322 Comparative Vertebrate Anatomy 4 crs.**

This course is a study of the general features of chordate development, and comparative study of the anatomy of the vertebrate classes. Evolution is the unifying theme. This course serves the need of students intending to pursue careers in medicine, biology, other biomedical sciences and environmental science. Prerequisites for this course include: BIOL 111/111H (grade of C or higher) and BIOL112/112H (grade of C or higher). This course is comprised of two hours of lecture and four hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 326 Cell Biology 3 crs.**

Course material of cell biology focuses on understanding the roles of nucleic acids, lipids, proteins and carbohydrates in development and maintenance of eukaryotic organelles and cells. Discussions will target processes in each major organelle including the nucleus, plasma membrane, smoother and rough endoplasmic reticulum, Golgi, lysosomes, cytoplasm, and mitochondria. Students learn how events such as ADP ribosylation, methylation, phosphorylation/dephosphorylation and cleavage of polypeptides influence the activities of proteins and enzymes. Other topics include enzyme kinetics and inhibition, how mutations in DNA are produced and corrected, recombinant DNA technology, cloning, the cell cycle, and cancer. Prerequisites: BIOL 111/111H (grade of C or higher) and BIOL 222 (grade of C or higher). This course is comprised of three hours of lecture per week.

**BIOL 327 Cell Biology Laboratory 1 crs.**

This course is designed to familiarize students to experimental approaches to studying problems in cell and molecular biology. Upon completion of the course, students should be able to participate in research projects aimed at studying molecular and cellular processes.

Students are taught techniques of how to study DNA, RNA, and protein using computer databases and existing software, how to extract these molecules from cells and tissues, analyze them, and utilize them in subsequent studies such as the polymerase chain reaction, restriction enzyme analysis, SDS-PAGE, and Western Blot. Prerequisites: BIOL 111 (grade of C or higher), BIOL 113 (grade of C or higher), BIOL 222 (grade of C or higher), and BIOL 223 (grade of C or higher). The laboratory fee associated with this course is \$25.00.

**BIOL 330 Evolution 3 crs**

This course is an advanced exploration of the evolutionary perspective on Biology, including genetic and ecological aspects of evolutionary processes. Topics of discussion focus on the mechanisms of evolutionary change, adaptation, and the history of living organisms. Examples of evolutionary principles in medicine and environmental science are explored to relate concepts to practical application. Prerequisites: BIOL 111/111H (grade of C or higher), BIOL 211, and BIOL 222. This course is comprised of three hours of lecture per week.

**BIOL 335 Biogeography 3 crs.**

Exploration of the environmental factors and historical perspectives that explain distributions of organisms are strongly emphasized in this course. Focus is placed on mechanisms of distribution, environmental constraints and phylogenetic perspectives. Prerequisites: BIOL 111/111H (grade of C or higher); and BIOL 211. This course is comprised of three hours of lecture per week.

**BIOL 341 Introductory Physiology 4 crs.**

This course is an examination of the mechanisms involved in control of body functions. Basic chemical and physical principles of animal function are discussed. Prerequisites: BIOL 111/111H (grade of C or higher), BIOL 112/112H (grade of C or higher), and one year of Chemistry. A course in vertebrate anatomy is recommended. This course is comprised of three hours of lecture per week and three laboratory hours per week. The laboratory fee associated with this course is \$25.00.

**BIOL 361 Animal Behavior 4 crs.**

This course involves an investigation of the concepts and applications of animal behavior, with emphasis on the evolutionary basis of behavior. Topics include both proximate influences on behavior and adaptive perspectives on reproductive and social behavior. The laboratory component of this course includes bench work and fieldwork to illustrate specific concepts. Prerequisites: BIOL 111/111H (grade of C or higher), and BIOL 112/112H (grade of C or higher). This course is comprised of two hours of lecture per week, three hours of laboratory, and one hour of discussion per week. The laboratory fee associated with this course is \$25.00.

**BIOL 402 Ecology 4 crs.**

This course is designed to provide the student with a study of the basic interrelations of plants and animals with physical and biotic factors of the environment. Prerequisites: BIOL 111/111H (grade of C or higher), and BIOL 112/112H (grade of C or higher). This course is comprised of two hours of lecture, one hour of discussion, and three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 404 Conservation Biology 3 crs.**

This course provides an introduction to the principles of conservation biology. Topics of discussion emphasize the application of ecological principles, management tools, and case history studies related to conservation issues. Prerequisites: BIOL 402 or equivalent.

**BIOL 420 Animal Histology 3 crs.**

This course is a study of the microscopic structure of vertebrate tissues and organs. Functional correlates are discussed. Prerequisites: BIOL 111/111H (grade of C or better), BIOL 112/112H (grade of C or better), and consent of the instructor. This course is comprised of three hours of lecture per week.

**BIOL 421 Animal Histology Laboratory 1 crs.**

This course is designed to accompany BIOL 420 and provides hands-on experience using the light microscope to examine vertebrate tissues discussed in lecture. Prerequisites: BIOL 111/111H (grade of C or better), BIOL 113/BIOL113H (grade of C or better), BIOL 112/112H (grade of C or better), BIOL 114/114H (grade of C or higher), and permission of the instructor. Co-requisites for this course include: BIOL 420. A course in anatomy is recommended. The laboratory fee associated with this course is \$25.00.

**BIOL 426M Biotechnology 4 crs.**

This course studies the basic principles of biotechnology and its applications to areas such as medicine, agriculture, and the industry. Emphasis is placed on recombinant DNA technology (gene cloning), metabolites of proteins, and animal and plant biotechnology. The weekly three-hour laboratory component of this course exposes students to various laboratory techniques employed in: gene cloning, cultivation components, sterile tissue culture, and study of cell-surface molecules. In addition to the scheduled three-hour component of this course, additional unscheduled time is required to complete assignments. Unscheduled time is dependent on specific techniques employed. This course is reserved primarily for advanced undergraduate students in the MARC Program. Prerequisites: BIOL 222 (grade of C or higher), BIOL 326 and CHEM 342/342H/342M. Co-requisites: CHEM 342/342H/342M. The laboratory fee associated with this course is \$25.00.

**BIOL 431 Mammalogy 4 crs.**

This course provides a detailed investigation of mammalian biology, with emphasis on special physiological and

ecological adaptations within the group. Topics of discussion include classification, physiological adaptations,

ecological specializations and biogeography of mammals. Prerequisites: BIOL 111/111H (grade of C or higher) and BIOL 211, or permission of the instructor. This course is comprised of three hours of lecture and three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 432 Herpetology 3 crs.**

This course is a concentrated study of the ecology, behavior, and physiological characteristics of amphibians and reptiles. Topics of discussion include classification, adaptations and diversity of groups within the two vertebrate classes. Prerequisites: BIOL 111/111H (grade of C or higher), and BIOL 112/112H (grade of C or higher). This course is comprised of three hours of lecture per week.

**BIOL 436 General Endocrinology 3 crs.**

This course provides discussions of the importance of hormones in regulating body functions, integrating biological systems, protecting the body against stress and various diseases, and maintaining day-to-day life processes. The course also emphasizes a review of concepts relative to mechanisms of hormone action. Consideration is given to classic endocrine case studies. Prerequisites for this course include: BIOL 111/111H (grade of C or better). A course in Cell Biology is recommended. This course is comprised of three hours of lecture per week.

**BIOL 441 Comparative Physiology 4 crs.**

This course is a study of the major functional adaptations in animal systems providing for maintenance of homeostasis. The function of vertebrate and invertebrate systems is discussed. Prerequisites: BIOL 341, and CHEM 341, or permission of the instructor. This course is comprised of three hours of lecture and three hours of laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 462 General Parasitology 4 crs.**

The identification of parasites common to man and domesticated animals is the primary focus of this course. Epidemiological aspects of zoonotic diseases are discussed. Other subjects to be covered are host habitats, vectors, types of hosts, and transmission methods, life cycles, and control and prevention measures. Prerequisites: BIOL 111/111H (grade of C or higher); and BIOL 112/112H (grade of C or higher); or consent of the instructor. A course in Invertebrate Zoology is recommended. This course is comprised of three hours of lecture and one four-hour laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 463 Wildlife Management 4 crs.**

In this course, students develop an understanding of the theories, principles, and practices associated with wildlife management. Emphasis is placed on research design, sampling techniques, and field methodologies. Students gain theoretical knowledge and applied management techniques to work as professional wildlife biologists in

natural resource professions. All terrestrial vertebrate taxonomic groups are addressed, including mammals, birds, amphibians, and reptiles. Graduate students are required to complete one additional research paper approved by the professor. Prerequisites: BIOL 111/111H (grade of C or higher), or permission of the instructor. The laboratory fee associated with this course is \$25.00.

**BIOL 464 Medical and Veterinary Entomology 4 crs.**  
This course provides a study of the arthropod (especially insects) species that are economically important pests, and vectors of diseases of man and domesticated animals. Epidemiological aspects of zoonotic diseases are discussed. Prerequisites: BIOL 111/111H (grade of C or better), and BIOL112/112H (grade of C or better), or BIOL 261, or consent of the instructor. This course is comprised of three hours lecture and one four-hour laboratory per week. The laboratory fee associated with this course is \$25.00.

**BIOL 466 Medical Parasitology 3 crs.**  
This course provides students in the biological, agricultural, and medical sciences with the knowledge necessary to know and identify metazoan parasites common to all organisms including man and his domesticated animals. Detailed information on how to recognize and diagnose parasitic diseases, infections, histopathology, and infestations is discussed. Epidemiological aspects of zoonotic diseases are discussed, including detailed information on host habitats, vectors, types of hosts, and transmission. Life cycles, control measures, disease prevention, treatment, and location of parasites in relation to the hosts are considered. Prerequisites: BIOL 111/111H (grade of C or higher). This course is comprised of three hours of lecture per week.

**BIOL 497/497H/497M Biology Seminar 1 cr.**  
This course focuses on the discussion of various topics in biology, with the contents varied each semester. Student presentations are required. The BIOL 497M section is reserved for students in the MARC Program. Prerequisite: Senior level classification. This course is comprised of one hour of lecture per week.

**BIOL 498 Independent Study 1-3 crs.**  
This course focuses on readings of significant publications in selected subjects and discussions with a Biology faculty member. The course is designed to enhance the student's knowledge base of a subject area related to the biological sciences. Credits and hours are by arrangement. Prerequisites: Junior or Senior level classification and permission of the instructor.

**BIOL 499 Undergraduate Research 1-4 crs.**  
This course is designed for the undergraduate student who has an interest in pursuing a special problem as an independent research project. Credits and hours are by arrangement. Prerequisites: Junior and Senior level classification and permission of instructor.

## CHEMISTRY

**CHEM 101 General Chemistry I 3 crs.**  
This course provides an introduction to inorganic chemistry and includes lectures on matter, dimensional analysis, elements (nomenclature, atomic structure, atomic formula and atomic orbital), compounds (nomenclature, molecular bonding, molecular structure, and molecular formulas), molecular conversions, solutions, acids, bases, and gases. This course satisfies General Education Requirements Area III (Biological and Physical Sciences). This course is recommended for the non-science major, pre-health professionals (including pre-nursing students and nutrition majors), agriculture and home economics. Note: Students requiring a lab-based course must also register for CHEM 103. Prerequisite or Co-requisite: MATH 101 or equivalent.

**CHEM 101W General Chemistry 3 crs.**  
This course is a web-based version of CHEM 101. It provides an introduction to inorganic chemistry and includes lectures on matter, dimensional analysis, elements (nomenclature, atomic structure, atomic formula, and atomic orbital), compounds (nomenclature, molecular bonding, molecular structure, and molecular formulas), molecular conversions, solutions, acids, bases and gases. This course satisfies General Education Requirements Area III (Biological and Physical Sciences). This course is recommended for the non-science major, pre-health professionals (including pre-nursing students and nutrition majors), agriculture and home economics. Note: Students requiring a lab-based course must also register for CHEM 103. Prerequisite or Co-requisite: MATH 101 or equivalent.

**CHEM 102 General Chemistry II 3 crs.**  
This course provides an introduction to organic and biological chemistry and includes lectures on carbon chemistry, organic nomenclature, basic organic reactions, saccharides, amino acids, proteins, and DNA. This course satisfies General Education Requirements Area III (Biological and Physical Sciences). This course is recommended for the non-science major, pre-health professionals (including nursing students and nutrition majors), agriculture, and home economists. Note: Students requiring a lab-based course must also register for CHEM 104. Prerequisite or Co-requisite: CHEM 101 or equivalent.

**CHEM 102W General Chemistry II 3 crs.**  
This course is a web-based version of CHEM 101. It provides an introduction to organic and biological chemistry and includes lectures on carbon chemistry, organic nomenclature, basic organic reactions, saccharides, amino acids, proteins, and DNA. This course satisfies General Education Requirements Area III (Biological and Physical Sciences). This course is recommended for the non-science major, pre-health professionals (including nursing students, nutrition majors and physician assistants), agriculture, and home economists. Note: Students requiring a lab-based course must also register for CHEM

104. Prerequisite or co-requisite: CHEM 101 or equivalent.

**CHEM 103 General Chemistry Laboratory I 1 cr.**

This two-hour per week laboratory includes experiments that illustrate the basic principles discussed in General Chemistry I. This course satisfies the laboratory component for General Education Requirements Area III (Biological and Physical Sciences Lab). This course is recommended for the non-science major, pre-health professionals, (including pre-nursing students and nutrition majors), agriculture and home economics. Prerequisite or Co-requisite: CHEM 101. Laboratory Fee: \$25.00

**CHEM 104 General Chemistry Laboratory II 1 cr.**

This two-hour per week laboratory includes experiments that illustrate the basic principles discussed in General Chemistry II. This course satisfies the laboratory for General Education Requirements Area III (Biological and Physical Sciences Lab). This course is recommended for the non-science major, pre-health professionals (including nursing students and nutrition majors), agriculture, and home economists. Pre-requisite or Co-requisite: CHEM 102. Laboratory Fee: \$25.00

**CHEM 111/111H Principles of Chemistry I 3 crs.**

This course deals with the basic concepts in chemistry (the study of the changes in matter and energy). The student learns logical problem-solving skills, including strategies to attack complicated problems by using a step-by-step procedure. The concepts studied in this course include density, basic atomic and molecular theory, chemical nomenclature, reaction stoichiometry, and the gas laws. The course is intended for science majors. Prerequisite: High School Chemistry or CHEM 101. Pre or Co-requisite MATH 109. Pre or Co-requisite: CHEM 113/113H or consent of instructor.

**CHEM 112/112H Principles of Chemistry II/ Honors Principles Chemistry II 3 crs.**

This course explores more advanced topics in chemistry, building on the concepts covered in CHEM 111/111 H. The concepts studied in this course will include VSPER theory, intermolecular forces, properties of liquids and solids, chemical kinetics, chemical equilibrium, acid/base chemistry and electrochemistry. The course is intended for science majors. Prerequisite: CHEM 111/113, CHEM 111H/113H. Pre or Co-requisite: CHEM 114/CHEM 114 or consent of instructor.

**CHEM 113/113H Principles of Chemistry Lab I/ Honors Principles of Chemistry Lab I 1 cr.**

This course is the laboratory companion to CHEM 111/111H. It is designed to deepen the students' understanding of topics discussed in the lecture, increase their skill with common laboratory equipment, and indoctrinate them in proper chemical safety practices. The students will learn to perform a valid experiment in a safe manner, to observe and record any data acquired, and interpret the data using various equations and graphs. Laboratory skills such as filtration, titration, and the

accurate measurement of masses and volumes will be developed. The lab period will be a three hour session. Prerequisite or Co-requisite CHEM 111/111H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 114/114H Principles of Chemistry Lab II /Honors Principles of Chemistry Lab II 1 cr.**

This course is the laboratory companion to CHEM 112/112H. It is designed to deepen the students' understanding of topics discussed in the lecture, increase their skill with common laboratory equipment, and indoctrinate them in proper chemical safety practices. The students will learn to perform a valid experiment in a safe manner, to observe and record any data acquired, and interpret the data using various equations and graphs. Laboratory skills such as spectroscopic measurement, pH measurement, and qualitative analysis will be developed. The lab period will be a three hour session. Pre or Co-requisite CHEM 112/112H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 211/211H Fundamentals of Organic I/ Honors Fundamentals of Organic Chemistry I 3 crs.**

Topics presented in this course include molecular structure, isomerism, and stereochemistry. The chemistry of alkanes, alcohols, ethers, alkenes, and aromatic hydrocarbons will also be discussed. Interpretation of spectra of major functional classes will be explained. Three hours of lecture, a one hour discussion, and one three hour lab (see below) must be taken concurrently. Prerequisite: The successful completion of CHEM 111/111H and CHEM 112/112H. Pre or Co-requisite: CHEM 213/213H or consent of instructor.

**CHEM 213/213H Fundamentals of Organic Chemistry I Lab/Honors 1 cr.**

This is the laboratory part of CHEM 211/211H. This course covers the practical application of theory presented in the lecture. Laboratory record keeping, neatness, laboratory note books, manipulation of common laboratory glassware, and safe practice and handling of chemicals will be stressed. Analysis of preparations by UV-Vis, FTIR, NMR etc., will be done. Careful recording of laboratory data and its interpretation will be covered. The lab period will be a three hour session. Pre or Co-requisite CHEM 211/211H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 212/212H Fundamentals of Organic Chemistry II/Honors 3 cr.**

This course is a continuation of CHEM 211/211H. Preparation and functional group reactions of carboxylic acids and their derivatives, aldehydes, carbanions, amines, polycyclic and heterocyclic aromatics, and macromolecules will be presented. Three hours of lecture, a one hour discussion, and a three hour laboratory (see below) must be taken concurrently. Prerequisite: successful completion of CHEM 211/CHEM 211H. Pre or Co-requisite: CHEM 214/CHEM 214H or consent of instructor.



**CHEM 214/214H Fundamentals of Organic Chemistry Lab II/Honors 1 cr.**

This course is the laboratory part of CHEM 212/212H. The course is designed to refine the skills of safe practice and effective handling of chemicals and common laboratory equipment presented in CHEM 213. Spectroscopic analysis, laboratory data keeping and interpretation skills acquired in the previous laboratory course will be extended. The lab period will be a three hour session. Prerequisite: CHEM 211, 213/211H, 213H. Pre or Co-requisite: CHEM 212/212H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 311 Analytical Chemistry I 4 crs.**

This is a general course in quantitative analysis, including gravimetric, volumetric and instrumental analysis. The emphasis is placed on the understanding of the reaction stoichiometry involved for the various methods. Statistical analysis using spreadsheet programs is also introduced. The course consists of three hours of lecture and one three hour laboratory period per week. Prerequisites: CHEM 112/112H and CHEM 212/212H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 312 Analytical Chemistry II 4 crs.**

This is a continuation of the quantitative analysis begun in CHEM 311. Analytical methods based on electrochemistry such as potentiometry will be explored. An introduction to some modern analytical techniques and instrumentation is also presented. This introduction includes uv-visible spectroscopy as well as infrared spectroscopy. Separation methods such as gas chromatography and high performance liquid chromatography are also introduced. The course consists of three hours of lecture and one three hour laboratory per week. Prerequisites: CHEM 311, CHEM 112/112H and CHEM 212/212H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 331 Elementary Organic Chemistry 4 crs.**

This is a short course in the elementary principles of organic chemistry. This course is primarily intended for education, human ecology, and agriculture majors. It is not recommended for chemistry majors. The course consists of three hours lecture and one three hour laboratory per week are required. Prerequisites: CHEM 101 and CHEM 102 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 332 Biochemistry 4 crs.**

This course is a survey of the chemical properties of compounds of biological significance, integrated with the study of fundamental metabolic and genetic processes at the molecular level. Three hours lecture and a three hours laboratory per week. Prerequisite: CHEM 211 or CHEM 331 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 341 Biochemistry I 3 crs.**

This course is a study of the physical and chemical properties of the four major biomolecules: carbohydrates, lipids, proteins, enzymes, and nucleic acid. The course includes an introduction to intermediary metabolic pathways and their involvement in the generation and use of energy. The student will learn how to incorporate basic

chemical principles to the biological function of organisms. This course consists of three hours of lecture per week. Prerequisite: Passing CHEM 211/211H, 212/212H with a letter grade of C or better. Co-requisite: CHEM 343 or consent of instructor.

**CHEM 341H Honors Biochemistry 3 crs.**

This course is more an intense study of the physical and chemical properties of the four major biomolecules: carbohydrates, lipids, proteins, enzymes, and nucleic acid. The course includes an introduction to intermediary metabolic pathways and their involvement in the generation and use of energy. The student will learn how to incorporate basic chemical principles to the biological function of organisms. This course consists of three hours of lecture per week. Prerequisite: passing of CHEM 211/211H, 212/212H with a letter grade of C or better. Co-requisite: CHEM 343H or consent of instructor.

**CHEM 342 Biochemistry II 3 crs.**

This course is a continuation of CHEM 341. This course is more intense study on the detail of biochemical processes which include energy yielding metabolic pathways, the copying, transfer and decoding of genetic information, the regulation of gene expression and recombinant DNA techniques. This course consists of three hours of lecture per week. Prerequisite: Passing of CHEM 341/341H with a letter grade of C or better. Co-requisite: CHEM 344 or consent of instructor.

**CHEM 342H Honors Biochemistry II 3 crs.**

This course is a continuation of CHEM 341H. Students will focus on the detail of biochemical processes which include energy yielding metabolic pathways, the copying, transfer and decoding of genetic information, the regulation of gene expression and recombinant DNA techniques. This course consists of three hours of lecture per week. Prerequisite: Passing of CHEM 341H with a letter grade of C or better. Co-requisite: CHEM 344H or consent of instructor.

**CHEM 343 Biochemistry Laboratory I 1 cr.**

This is the co-requisite/laboratory part of CHEM 341. This laboratory includes three hours of work per week on experiments that expose students to methods covering isolation and characterization of biomolecules. Co-requisite: CHEM 341 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 343H Honors Biochemistry Laboratory I 1 cr.**

This is the co-requisite/laboratory part of CHEM 341H. This laboratory includes three hours of work per week on experiments that expose students to methods covering isolation and characterization of biomolecules. Students are required to perform literature searches. Co-requisite: CHEM 341H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 344 Biochemistry Laboratory II 1 cr.**

This is the co-requisite/laboratory part of CHEM 342. This laboratory includes three hours of work per week in experiments that expose students to methods covering isolation and characterization of biomolecules. Co-requisite CHEM 342 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 344H Honors Biochemistry Laboratory II 1 cr.**

This is the co-requisite/laboratory part of CHEM 342H. This laboratory includes three hours of work per week on experiments that expose students to methods covering isolation and characterization of biomolecules. Students are required to perform literature searches. Co-requisite CHEM 342H or consent of instructor. Laboratory Fee: \$25.00

**CHEM 401 Principles of Physical Chemistry I 4 crs.**

This course covers the laws of thermodynamics with emphasis on their application to chemical systems. Topics covered include: thermochemistry, equation of state, physical and chemical equilibrium and electrochemistry. The course consists of three hours of lecture and one three hour laboratory period per week. Prerequisites: CHEM 112/112H, Pre or Co-requisite: PHYS 161/181H, PHYS262/182H, MATH 211 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 402 Principles of Physical Chemistry II 4 crs.**

This course is the continuation of CHEM 401. The course will cover molecular structure and bonding, interpretation of spectra, elementary quantum and statistical mechanics, kinetic, theory of gases, chemical kinetics and the theory or rate processes. The course consists of three hours of lecture and one three hour laboratory period per week. Prerequisite: CHEM 401 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 420 Advanced Inorganic Chemistry 4 crs.**

This course builds upon introductory courses that cover elementary principles of chemical bonding and structure, thermodynamics, kinetics and descriptive chemistry of the elements. This course consists of three hours of lecture and one three hour laboratory period per week. Prerequisites: CHEM112/112H, CHEM114/114H or permission of the instructor. Laboratory Fee: \$25.00

**CHEM 421 Instrumental Analysis 4 crs.**

This course is an introduction to the various instruments in current use in analytical laboratories. The course is designed to afford the student an opportunity to develop an appreciation of the fundamental functions and importance of specialized instruments. The principles underlying their construction are gained through the performance of selected experiments. The methods studied in this course include uv-visible spectroscopy, infrared spectroscopy, nuclear magnetic resonance spectroscopy, gas chromatography-mass spectrometry, and thermogravimetric analysis. This course consists of three hours of lecture and three hours of laboratory per week. Prerequisite: CHEM

112/112H, CHEM 311 or consent of instructor. Laboratory Fee: \$25.00

**CHEM 422M Bio-Inorganic Chemistry 3 crs.**

This course deals with the functions of metallic elements in biology. Consequently the roles of metal ions and a variety of non-metals in crucial life processes will be discussed. The course, which is interdisciplinary in nature, is intended for pre-medical biology and chemistry majors and those who aspire to become researchers in the bio-medical field. It will also serve the needs of final year undergraduates in inorganic chemistry, as coordination chemistry will be emphasized. Prerequisites: CHEM 212/212H, CHEM 214/214H, CHEM 341/341H, BIOL 326 or permission of the instructor.

**CHEM 488A Advanced Environmental Chemistry 4 crs.**

This course is a study of the origin, transport and effects of atmospheric and aquatic pollutants with emphasis on energy-related pollutants including coal, oil and synthetic fuels. The material is divided into a study of source, fate, distribution and toxicity of inorganic and organic substances of current environmental interest. The subject matter is divided into inorganic course material consisting of metals, nutrients, greenhouse gases, and vehicular emissions and organic chemical content including pesticides and petroleum hydrocarbon source material and products. The course consists of three hours of lecture and one three hour laboratory period per week. The laboratory includes gas chromatography, gas chromatography-mass spectrometry and high performance liquid chromatography experiments to supplement class discussion. Prerequisites: CHEM 112/112H, CHEM 211/211H and CHEM 311 or permission of the instructor. Laboratory Fee: \$25.00

**CHEM 497/H/M Chemistry Seminar 1 cr.**

This course focuses on current issues in the chemical field. Student participation is required. Both oral and written presentations will be required. Prerequisite: CHEM 112/112H or consent of instructor.

**CHEM 498 Independent Study 3 crs.**

The hours for this course are by arrangement with the individual instructor. This course will explore current and historic chemical topics and projects. It will also cover chemical information retrieval. Written presentations will be required. Oral presentation will be encouraged. Students should finish a contract with instructor during the first week of the class. Prerequisite: CHEM 112/112H or consent of instructor.

**CHEM 499 Undergraduate Research 3-4 crs.**

The hours for this course are by arrangement with the individual instructor. The student will be exposed to research methodology and have an opportunity to work closely with a faculty research advisor. It usually requires the use of advanced concepts, a variety of experimental techniques, and state-of-the-art instrumentation. This course is open to undergraduate students with an interest in pursuing a special problem as an independent research project. A written final report is required and an oral

presentation is encouraged. Students should finish a contract with the instructor during the first week of the class. The students must follow American Chemical Society guidelines for preparing the final research report. Pre- or Co-requisite: CHEM 498 or consent of instructor.

### **DEPARTMENT OF NATURAL SCIENCE**

**DNSC 100 Freshman Seminar 1 cr.**  
This course is designed to facilitate the adjustment of freshman science majors to college life. Aspects of preparing students for career opportunities, professional development, adjustments needed to succeed in college, study and test taking skills, crisis or stress management, and understanding the significance of the land-grant system will be discussed. Other topics include note taking, time management, conflict resolution, proper use of a science textbook, analyzing graphs and figures, test taking skills, preparing laboratory reports, and adapting to instructor style.

### **ENTOMOLOGY**

**ENTO 313 Entomology 3 crs.**  
This course provides students in the biological, agricultural and environmental sciences with the knowledge necessary to identify and study selected arthropodan groups that influence man (*Homo sapiens*) directly or indirectly. Detailed information on how to recognize and correctly identify the organism directly or from the damage caused by it is provided. A significant part of the course is devoted to aquatic insects, parasitoids, and ectoparasites. This information enables students to work in many settings including medical technology, fisheries and wildlife biology, forensic sciences and molecular biology. Detailed information on habitats, life cycles, control measures, disease prevention, Integrated Pest Management (IPM) principles and techniques, ecology, physiology, behaviors, survival strategies, and insect/plant interactions are discussed in detail. The prerequisites for this course include: BIOL/111H (grade of C or higher). This course is comprised of three hours of lecture per week.

### **ENVIRONMENTAL SCIENCES**

**ENVS 101 Introduction to Environmental Sciences 3 crs.**  
This is an introductory lecture-based course in environmental science for the non-science majors. This course surveys the scope and extent of man's environmental problems and also deals with socioeconomic and scientific aspects of pollution and control methods. The course emphasizes man's disruption of the environment, population, growth, urbanization, public policy, and environmental trade-offs and is also designed to discuss the scientific processes that have been applied to the identification of environmental problems.

**ENVS 202 General Oceanography 3 crs.**  
This is a survey course of the physical and chemical processes associated with the ocean environment. Topics

discussed include earth history and ocean basin evolution, global plate tectonics, the marine provinces, the chemistry of sea water, air-sea interaction, oceanic control of climate, oceanic sediments, major currents, waves, tides, water column stratification, deep-sea research, coastal and estuarine processes, and marine resources. Co-requisite: ENVS 204.

**ENVS 204 General Oceanography Laboratory 1cr.**  
This is a laboratory experience to accompany ENVS 202. Laboratory exercises are designed to acquaint the student with basic oceanographic methods, instruments, and data analysis. Exercises include ocean floor geology, plate tectonics and basin evolution, marine charts and navigation, salinity, beach profile determinations, bathymetry, marine weather, and seismic reflection data analysis. Field trips are also conducted during which students gain practical experience using oceanographic apparatus. Co-requisite: ENVS 202. Laboratory Fee: \$25.00

**ENVS 221 Principles of Environmental Science 3 crs.**  
This is an interdisciplinary course that examines human influences on the world's environments. This course integrates biological, physical, and chemical sciences to study the problems affecting our environment and engages social, political, and economic concepts to understand why these problems exist and the complexity of these issues. Various topics will be discussed, including ecology of natural systems, population growth, air and water pollution, global climate change, extinction of species, use of water, land, and food resources, energy use, toxic compounds, solid wastes, and legal and economic aspects of environmental degradation. This course is for science majors only. Prerequisites: BIOL 112/112H, CHEM 112/112H.

**ENVS 222 Principles of Environmental Science Lab 1 cr.**

This course presents applications of basic principles in environmental sciences through experimental exercises in the laboratory, demonstration of field techniques in a problem solving setting and visits to sites that illustrate these basic principles. Co-requisite: ENVS 221. Laboratory Fee: \$25.00

**ENVS 301 Marine Chemistry 3 crs.**  
The course provides understanding of the dynamic nature of marine ecosystems. Basic oceanography, the role of the oceans in geochemical cycles, the resident time of different elements in the ocean, the chemical cycling of elements important to biological systems, effects of the chemistry of the oceans on the future of planet Earth, and examples of human impacts on ocean chemistry will be covered. Prerequisite: BIOL 111/111H, BIOLL13/113H and CHEM 212/212H, CHEM 214/214H.

**ENVS 333 Energy, Environment and Economics 3 cr.**  
This course examines the scientific, social, and economic factors affecting energy consumption in the United States and world wide. The effects of global energy production on the environment are emphasized as well as the potential effects of new energy sources. Because of the potential

political, social and economic ramifications, the course involves discussions and readings into the role of these factors in influencing regional and global patterns of energy consumption and resultant environmental change. Prerequisite: PHYS 122, ENVS 221.

**ENVS 403/601 Marine Ecotoxicology 3 crs.**

This course cuts across traditional subject boundaries by integrating different disciplines, such as chemistry and biochemistry, through ecology and statistics. It provides students with a distinct approach to solving marine environmental pollution issues stemming from stable pollutants how they interact with biotic and abiotic components of the marine ecosystem. Pre-requisites: CHEM 112/112H, CHEM 211/211H, BIOL 112/112H and MATH 210.

**ENVS 411 Water Pollution and Purification 3 crs.**

This course discusses biological, chemical, and physical impurities in water, with emphasis on agricultural, industrial, and municipal water pollution, including acid mine drainage, detergents and eutrophication, thermal pollution, oil spills, and other non-point source pollution. Further study of the physical and biochemical processes for waste-water treatment, sludge handling and disposal, and land disposal of wastewaters. Prerequisites: BIOL 111, BIOL 112/112H, CHEM 112/112H, PHYS 122/182H, ENVS 221, Junior class standing or consent of the instructor.

**ENVS 413 Water Pollution and Purification 1 cr.  
Lab**

This course consists of a three-hour laboratory session every week, designed to provide hands-on experiences in the determination of dissolved and suspended volatile solids in liquids, biochemical oxygen demand, chemical oxygen demand, turbidity, free and residual chlorine, nutrients and metals in water and wastewaters. Co-requisite: ENVS 411. Laboratory Fee: \$25.00

**ENVS 434 Air Pollution 4 crs.**

This course discusses air quality measurements and air pollution control legislation classification of atmospheric pollutants and their effects on visibility, inanimate, and animate receptors are discussed. Evaluation of source emissions and principles of air pollution control governing the distribution of air pollutants are studied. The laboratory section includes hand-on experiments to study the effect of smoke on living cells, thermal inversion; particulate collection using an impactor, effects of air pollutants on materials and field trips to electric power plant and other facilities. Prerequisites: BIOL 112/112H, CHEM 112/112H, PHYS 122/182H, ENVS 221, Junior class standing or consent of the instructor. Laboratory Fee: \$25.00.

**ENVS 456 Future Sources of Energy 3 crs.**

This course examines various sources of energy used in the United States and globally. Sources discussed include fossil fuels, hydro-electricity, and nuclear energy; alternative sources of energy, including geothermal, solar, photovoltaic cells, wind, tidal, hydrogen fuels from wastes

and biomass, and ocean thermal gradient. Students also study processes dealing with energy conservation and energy policy and discuss current issues. Prerequisite: PHYS 122.

**ENVS 460 Earth Science 3 crs.**

This course is an interdisciplinary examination of the grand challenges confronting the environmental sciences in the 21st Century. Topics examined include biogeochemical cycles, biodiversity and ecosystem functioning, climate variability, hydrologic forecasting, infectious disease and the environment, legal control of resource use, land-use dynamics, and the re-use of materials. The practical and scientific importance of each topic is discussed as well as the readiness of the scientific establishment to meet important areas for future research. Students are expected to research and answer a series of practical hypothetical environmental problems in each area discussed. Prerequisites: ENVS 221, 222, or consent of the instructor.

**ENVS 497 Environmental Science Seminar 1 cr.**

The course covers discussions on current issues in Environmental Sciences and includes student presentations. Topics such as global warming, green house effects, eutrophication, desertification, and other pertinent issues on the environment are covered. The course is opened to juniors and seniors only.

**ENVS 498 Independent Study 1-3 crs.**

In this course, students conduct literature survey under the supervision of a faculty member. It is designed to enhance student comprehension of specific environmental science specialty areas. Students are required to read significant literature in selected subjects followed by discussions with the instructor. The hours and credits for this course are by arrangement with the individual instructor.

**ENVS 499 Undergraduate Research 1-4 crs.**

In this course, students conduct independent research project under the supervision of a faculty member. Apart from the research, students are also expected to present oral and written reports. The course is designed for juniors or seniors who have an interest in pursuing a special problem as a research project. The hours and credits for this course are by arrangement with the individual instructor.

## PHYSICS

**PHYS 101 Theories and Applications of Physical Science 3 crs.**

Physical Science is about the rules of the physical world- physics, chemistry, astronomy, geology and meteorology. This is a one-semester course intended for the non-science major. Because of the scope of these sciences, Physical Science is usually team taught whenever resources permit. Until team teaching becomes possible, choice of subject has been limited to Physics. As we assume little or no preparation on the part of the student, our choice of topics and how far to develop them is limited to emphasis on the basic concepts of each subject. It satisfies the UMES general education requirement curriculum area III. There

are three one-hour lectures per week. Prerequisites: High School Algebra or MATH 101.

**PHYS 103 Physical Science Laboratory 1 cr.**  
The course consists of two hours laboratory work per week. Selected fundamental experiments basic to physical science are designed to provide the student opportunities to learn practical knowledge necessary for a well-rounded understanding of physical science. Laboratory Fee: \$25.00

**PHYS 121 General College Physics I 3 crs.**  
This is the first semester of the two-semester course designed to provide the student with an overall view of the concepts, together with the ability to set-up and solve simple problems in physics. Areas covered include particle mechanics, heat, thermodynamics, and sound. This is a non-calculus based physics course. The course consists of three hours lecture per week. Prerequisite: MATH 109. Co-requisite: PHYS 123. Laboratory Fee: \$25.00

**PHYS 122 General College Physics II 3 crs.**  
This is the second semester of the two-semester course in non-calculus based physics. Areas covered include: electricity, magnetism, light, and selected topics in modern physics. The course consists of three hours lecture per week. Prerequisite: PHYS 121. Co-requisite: PHYS 124.

**PHYS 123 General College Physics I Lab 1 cr.**  
The course consists of two hours laboratory work per week. Standard laboratory experiments are selected to provide the student with practical knowledge of Physics and to enhance knowledge gained in the classroom. This course should be taken in concurrence with PHYS 121. Laboratory Fee: \$25.

**PHYS 124 General College Physics II Laboratory 1 cr.**  
The course consists of two hours laboratory work per week. Standard laboratory experiments are selected to provide the student with practical knowledge of Physics and to enhance knowledge gained in the classroom. This course should be taken in concurrence with PHYS 122. Laboratory Fee: \$25

**PHYS 161 General Physics I Mechanics and Particle Dynamics 3 crs.**  
This is the first semester of a three-semester calculus based course in general physics (see PHYS 262, PHYS 263). Areas covered include laws of motion, energy conservation, linear momentum, collisions, rotation and angular momentum, universal gravitation and fluid mechanics. Registration in the laboratory part of the course is required. Three lectures per week. Prerequisites: High School Physics and MATH 112. Co-requisite: PHYS 163. Concurrent registration in MATH 211 is recommended.

**PHYS 163 General Physics Laboratory I 1 cr.**  
This is a three-hour per week laboratory course associated with General Physics I. Laboratory exercises relate to the material covered in the lectures. The course introduces students to the modern tools of collecting and analyzing data. Labs are computer based, and extensive use of a spreadsheet program is made to analyze, plot, and interpret data. Pre-requisites: High school physics and basic

knowledge of using a computer and a spreadsheet program. Co-requisite: PHYS161. Laboratory Fee: \$25.00.

**PHYS 181H Introductory Physics I (Honors) 3 crs.**  
This is the first semester of a two-semester calculus-based sequence in introductory physics. Topics include Newtonian mechanics, hydrostatics, thermal physics, and mechanical waves. The detailed subject matter for the course is chosen to emphasize physical principles and their applications, which are essential to an understanding of contemporary physics. Registration in the laboratory part of the course is required. Three lectures and one-hour discussion session per week. Prerequisites: High School Physics and MATH 112. Co-requisite: PHYS 183H. Concurrent enrollment in MATH 211 is recommended.

**PHYS 182H Introductory Physics II (Honors) 3 crs.**  
This is the second half of the two-semester course in calculus-based introductory physics. Areas covered include electrostatics, electrodynamics, geometrical and physical optics, and selected topics in modern physics. Three lectures and one-hour discussion session per week. Registration in the laboratory part of the course is required. Prerequisites: PHYS 181H and PHYS 183H. Co-requisite: PHYS 184H.

**PHYS 183H Introductory Physics Laboratory I 1 cr.**  
The course consists of one three-hour laboratory session per week to accompany PHYS181H. Laboratory exercises are designed to relate to the material covered in the accompanying course. Experiments are computer based, and a spreadsheet program is used to analyze, plot, and interpret data. Pre-requisites: High school physics and basic knowledge of using a computer and a spreadsheet program. Co-requisite: PHYS181H. Laboratory Fee: \$25.

**PHYS 184H Introductory Physics Laboratory II 1 cr.**  
The course consists of one three-hour laboratory session to accompany PHYS182H. Laboratory exercises are designed to reinforce the material covered in the accompanying course. Most experiments are computer based. Pre-requisites: PHYS181H and PHYS 183H. Co-requisite: PHYS182H. Laboratory Fee: \$25.

**PHYS 262 General Physics II Waves, Heat, Electricity 3 crs.**  
This course consists of three lecture sessions per week. This is a second semester of a calculus based, three-semester course in general physics. Areas covered include: vibrations, waves, heat kinetic theory, thermodynamics, electrostatics, and D C circuits. Registration in the laboratory part of the course is required. Prerequisites: PHYS 161 and PHYS 163. Co-requisite PHYS 264.

**PHYS 263 General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics 3 crs.**  
This is the third semester of a calculus-based general physics course. Areas covered include: Magnetism, electrodynamics, geometrical and physical optics, and selected topics in modern physics. Registration in the laboratory part of the course is required Three lectures per

week. Prerequisites: PHYS 262 and PHYS 264, or PHYS 182H and PHYS 184H. Co-requisite: PHYS 265.

**PHYS 264 General Physics Laboratory II 1 cr.**

This is a three-hour per week laboratory session associated with General Physics II. Several of the laboratory exercises are computer based and focus on reinforcing the material covered in the accompanying course. Prerequisites: PHYS161 and PHYS163. Co-requisite: PHYS262. Laboratory Fee: \$25.

**PHYS 265 General Physics Laboratory III 1 cr.**

This is a three-hour per week laboratory course intended for students enrolled in General Physics III. Experiments are designed to reinforce the material covered in the accompanying course. Modern tools are used to gather, analyze and plot data. Pre-requisites: PHYS262 and PHYS264; or PHYS 182H and PHYS 184H. Co-requisite: PHYS263. Laboratory Fee: \$25.00

**PHYS 283 Modern Optics 3 crs.**

This course presents an in-depth discussion of the principles of geometrical and physical, optics. Approximately one-fourth of the course is devoted to geometrical optics and one-half to wave optics, including wave motion and interference, diffraction, polarization, and dispersion, etc. The remaining one-fourth of the semester is devoted to quantum optics which includes recent developments in the fields of lasers. Prerequisites: PHYS 182H and PHYS 184H; or PHYS 263 and PHYS 265.

**PHYS 423 Modern Physics 3 crs.**

This course is a survey of atomic and nuclear phenomena, special relativity, origin of quantum theory. Bohr atom, wave mechanics, atomic structure and optical spectra. This course consists of three one- hours lecture per week. Prerequisites: PHYS 182H and PHYS 184H; or PHYS 263 and PHYS 265.

**PHYS 497 Physics Seminar 1 cr.**

This course will discuss various current topics in physics. Prerequisite: One year of physics with "B" or better grade. It is open only with consent of instructor. Designed for juniors or seniors who have an interest in pursuing a special problem as a research project.

**PHYS 498 Independent Study 1-3 crs.**

This course is designed to enhance student comprehension of specific physics subject area. It is open to juniors and seniors with consent of instructor only.

**PHYS 499 Undergraduate Research 1-4 crs.**

This course is designed for juniors or seniors who have an interest in pursuing a special problem as a research project. It is open only with the consent of instructor. Prerequisite: One year of Physics with "B" or better grade.

**FACULTY****Aighewi, Isoken Tito**

Lecturer

B.S., M.S., Tuskegee University

Ph.D. University of Minnesota

**Bass, Eugene L.**

Associate Professor

B.S., Brooklyn College, C.U.N.Y.

Ph.D., University of Massachusetts at Amherst

**Boucaud, Dwayne, W.**

Assistant Professor

B.S., Ph.D., State University of New York at Buffalo

**Counts, Clement**

Assistant Professor

B.A., M.S., Marshall University

Ph.D., University of Delaware

**Dodoo, Joseph**

Lecturer

B. S. Polytechnic of South Bank

M.S., Bedford College, University of London

Ph.D., King's College, University of London

**Gupta, Gian C.**

Professor

B.S., B.T., Panjab University, India

M. S., Vikaram University, India

Ph.D., Roorkee University, India

**Hebel, Angela K.**

Lecturer

B.S., M.S., Edinboro University of Pennsylvania

**Ishaque, Ali B.**

Lecturer

B.Sc., University of Science &amp; Technology,

Kumasi, Ghana

M.Sc., Free University of Brussels, Belgium

Ph.D., Free University of Brussels, Belgium

**Jesien, Roman**

Assistant Professor

B.A., Villanova University

M.S., University of Wisconsin

Ph.D., University of Maryland College Park

**Johnson, Linda**

Assistant Professor

B.S., Lincoln University

M.S., Ph.D., Temple University

**Kananen, Gerald**

Assistant Professor

B.S., John Carroll University

Ph.D., Duquesne University

**Lewis, V. Pernell**

Lecturer

B.S., University of South Carolina

M.S., Ph.D., North Carolina State

**Mack, Kelly**

Associate Professor

B. S., University of Maryland Eastern Shore

Ph.D., Howard University

**Mandouma, Ghislain**

Assistant Professor

B.S. Imperial College, University of London, UK

M.S. Universite de Paris-Sud, Orsay-France

Ph.D., City University of New York Graduate Center

**May, Eric**

Distinguished Research Scientist

B.S. Oregon State University

M.S. North Arizona State University

Ph.D. Oregon State University

**Mitra, Madhumi**

Lecturer

B.S., Presidency College, India

M.S., Calcutta University, India

Ph.D. North Carolina State University

**Okoh, Joseph**

Chair and Associate Professor

B. S., University of Lagos, Nigeria

Ph.D., Howard University

**Potter, Amelia**

Lecturer

B.S., Birmingham University

M.S., University of Maryland Eastern Shore

**Ruby, Douglas**

Associate Professor

B.S., Gettysburg College

M.S., Ph.D., University of Michigan

**Singh, Gurbax**

Professor

B.S., M.S., Delhi University

Ph.D., University of Maryland College Park

**Singleton, Jeurel**

Lecturer

B.A. (B.S.), M.S., University of North Dakota

Ph.D., University of Ottawa, Canada

**Waguespack, Yan**

Associate Professor

B.S., Beijing Polytechnic University

Ph.D., Tulane University

**White, Shawn**

Assistant Professor

B.S., Shippensburg University of Pennsylvania

Ph.D., Clemson University

## DEPARTMENT OF PHYSICIAN ASSISTANT

### Dean:

Carolyn Brooks, Ph.D.

### Chair and Clinical Assistant Professor:

Darlene L. J. Robinson, MPAS, PA-C

### Medical Director:

Christjon Huddleston, M.D.

### Clinical Coordinator and Clinical Assistant Professor:

Kevin Reese, MPAS, PA-C

### Academic Coordinator and Lecturer:

Chasity Adams-Savage, BS, PA-C

- prepare graduates to provide compassionate quality health care with the direction and responsible supervision of a Doctor of Medicine or Osteopathy;
- prepare students to analyze and critically interpret information and to formulate appropriate decisions;
- expose students to the breadth and depth of academic knowledge and experiences necessary to achieve the mastery of skills and techniques as a physician assistant;
- develop and support a cadre of competent faculty, staff, students and alumni dedicated to excellence in scholarly productivity, research, and community service that will provide solutions to challenging health care issues impacting local, national and international communities.

## MISSION

The Physician Assistant Department is a baccalaureate degree granting educational program of the University of Maryland Eastern Shore. The program promotes health and wellness through the provision of quality primary care health education in a diverse environment that values the discovery of knowledge and the development, dissemination, and practical application of that knowledge through community outreach and service. The department aims to prepare students through instruction, research, and service with the professional and technical knowledge, skills and values to serve as compassionate health care providers in local, state, national and global environments.

## GOALS

The Physician Assistant Department seeks

- to prepare well-educated, baccalaureate-prepared mid-level health professionals for a challenging career as a Physician Assistant;
- to develop culturally and ethnically sensitive health care providers to contribute to the promotion of quality health and well being in diverse environments. To offer a dynamic curriculum that is adaptive to changes in the health care environment.
- to offer a dynamic curriculum that is adaptive to changes in the health care environment.

## OBJECTIVES

The Physician Assistant Department will

- offer a didactic and clinical curriculum to educate physician assistant students to perform evaluative, diagnostic, therapeutic, preventive, and health maintenance services to diverse communities and populations;

## PROGRAM REQUIREMENTS

The Physician Assistant Department requires that all students maintain a "C" in each course and a 2.5 GPA in the program core, program electives, general education and supportive course requirements. Students entering the professional program are required to meet physical, mental and social technical standards necessary to become a competent physician assistant.

## DESCRIPTION OF PROGRAM

The Physician Assistant Department offers a Bachelor of Science Degree (B.S.) in Physician Assistant studies. The Physician Assistant Program constitutes the professional preparation for students desiring to become physician assistants. Graduates of the program will be prepared to deliver primary health care services to diverse patient populations with acute to chronic medical and surgical conditions in both rural and urban communities. The four-year course of study is comprised of a two-year Pre-Professional Phase and a 24-month Professional Phase. Upon successful completion of the prerequisite courses in the Pre-Professional Phase, students will be qualified to apply for entry into the Professional Phase. Entry into the Professional Program is competitive and not guaranteed. UMES students receive preferential acceptance into the Professional Program. Upon graduation, physician assistants are eligible to take a national certification examination developed by the National Commission on Certification of Physician Assistants (NCCPA) in conjunction with the National Board of Medical Examiners. The UMES Physician Assistant Department has acquired provisional accreditation through the Accreditation Review Committee on Education for the Physician Assistant, Inc., (ARC-PA).



**PHYSICIAN ASSISTANT**  
**Required and Recommended Courses for the Bachelor of Science Degree**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 credits**

Students must select ENGL 203 plus two additional courses:

**ARTS:** ARTS 101, ARTS 310 MUSI 100, MUSI 101, MUSI 109, MUSI 310H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341 HIST 360

**LANGUAGES:** FREN 101, FREN 102, SPAN 101, 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218,  
ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 credits**

Course No.	Title	Credits
SOCI 101	Introduction to Sociology	3
PSYC 200	Introduction to Psychology I	3

**C. Curriculum Area III – (Biological and Physical Science) 12 credits**

Course No.	Title	Credits
BIOL 111	General Zoology	3
BIOL 113	General Zoology Lab.	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab.	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab.	1

**D. Curriculum Area IV - (Mathematics) 3 credits**

Course No.	Title	Credits
MATH 110	Trigonometry and Analytical Geometry or Higher	3

**E. Curriculum Area V – (English Composition) 9 credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305/H	Technical Writing/Honors <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 4 credits**

Course No.	Title	Credits
EDHE 111	Personalized Health Fitness	3
GNST 100	First-Year Experience	1

**II. Major Core Courses** **83 Credits**  
 A grade of "C or better is required in each of the program core requirements. (\*course requirements)

<b>Courses No.</b>	<b>Title</b>	<b>Credits</b>
PHAS 200	Introduction to Physician Assistant	1
PHAS 201	Medical Terminology	1
PHAS 300	Advanced Anatomy	3
PHAS 301	Advanced Physiology	3
PHAS 200	Introduction to Physician Assistant	1
PHAS 201	Medical Terminology	1
PHAS 300	Advanced Anatomy	3
PHAS 301	Advanced Physiology	3
PHAS 302	Clinical Chemistry	3
PHAS 303	Clinical Laboratory Procedures	2
PHAS 304	Clinical Medicine I	3
PHAS 305	Clinical Medicine II	3
PHAS 306	Clinical Medicine III	3
PHAS 307	Clinical Medicine IV	3
PHAS 308	Community Health and Epidemiology	2
PHAS 309	Health Care Ethics and Law	2
PHAS 310	Nutrition	2
PHAS 311	Pathophysiology	3
PHAS 312	Pharmacology I	3
PHAS 313	Pharmacology II	3
PHAS 314	Physical Assistant Role	1
PHAS 315	Physical Diagnosis I	2
PHAS 316	Physical Diagnosis II	2
PHAS 317	Physical Diagnosis III	3
PHAS 400	Internal Medicine Clerkship	4
PHAS 401	Pediatric and Adolescent Medicine Clerkship	4
PHAS 402	Surgery Clerkship	4
PHAS 403	Clinical Transition I	1
PHAS 404	Clinical Transition II	1
PHAS 405	Clinical Transition III	1
PHAS 406	Psychiatry Clerkship	4
PHAS 407	Emergency Medicine Clerkship	4
PHAS 408	Obstetrics and Gynecology Clerkship	4
PHAS 409	Family Practice I Clerkship	4
PHAS 410	Family Practice II Clerkship	4

**III. Supportive Core Requirements** **26 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUED 212	Computer Concepts	3
BIOL 231	Introductory Anatomy and Physiology I	3
BIOL 233	Introductory Anatomy and Physiology I Lab.	1
BIOL 232	Introductory Anatomy and Physiology II	3
BIOL 234	Introductory Anatomy and Physiology Lab.	1
CHEM 211	Fundamentals of Organic Chemistry	3
CHEM 213	Fundamentals of Organic Chemistry Lab.	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
MATH 210	Elementary Statistics	3

**IV. Program Electives (Choose any course from the following Electives): 4 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PHAS 411	Gastroenterology Subspecialty Clerkship	4
PHAS 412	Rehabilitation Medicine Subspecialty Clerkship	4
PHAS 413	Geriatric Subspecialty Clerkship	4
PHAS 415	Otolaryngology Subspecialty Clerkship	4
PHAS 416	Dermatology Subspecialty Clerkship	4
PHAS 417	Neurology Subspecialty Clerkship	4
PHAS 418	Radiology Subspecialty Clerkship	4

**TOTAL PROGRAM REQUIREMENTS****152**

Science and Mathematics Courses must have been completed within the last seven years



**DEPARTMENT OF PHYSICIAN ASSISTANT**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
BIOL	111 Principles of Biology I	3
BIOL	113 Principles of Biology I Lab.	1
BUED	212 Computer Concepts	3
CHEM	111 Principles of Chemistry I	3
CHEM	113 Principles of Chem. I Lab.	1
ENGL	101 Basic Composition I	3
GNST	100 First Year Experience	1
MATH	110 Trig & Analy. Geome. <u>or</u> Higher	<u>3</u>
<b>Semester Total</b>		<b>18</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
	GER CURR. AREA I	3
BIOL	301 Microbiology	3
BIOL	303 Microbiology Lab.	1
CHEM	112 Principles of Chemistry II	3
CHEM	114 Principles of Chem. II Lab.	3
EDHE	111 Personalized Health Fitness	3
ENGL	102 Basic Composition II	<u>3</u>
<b>Semester Total</b>		<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
	GER CURR. AREA I	3
BIOL	231 Human Anat. and Physiology I	3
BIOL	233 Human Anat. and Physio. I Lab.	1
CHEM	211 Fund. of Organic Chem.	3
CHEM	213 Fund. of Organic Chem. I Lab.	1
ENGL	305/H Technical Writing <u>or</u>	3
ENGL	310 Advanced Composition	3
SOCI	101 Introduction to Sociology	<u>3</u>
<b>Semester Total</b>		<b>17</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
BIOL	232 Human Anat. and Physio. II	3
BIOL	234 Human Anat. and Physio. II Lab.	1
ENGL	203 Fund. of Contemporary Speech	3
MATH	210 Elementary Statistics	3
PHAS	201 Medical Terminology	1
PHAS	302 Clinical Chemistry	3
PSYC	200 Introduction to Psychology	<u>3</u>
<b>Semester Total</b>		<b>17</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
PHAS	200 Intro. to Physician Assistant	1
PHAS	300 Advanced Anatomy	3
PHAS	301 Advanced Physiology	3
PHAS	311 Pathophysiology	3
PHAS	312 Pharmacology I	3
PHAS	315 Physical Diagnosis I	<u>2</u>
<b>Semester Total</b>		<b>15</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
PHAS	303 Clinical Lab. Procedures	2
PHAS	304 Clinical Medicine I	3
PHAS	305 Clinical Medicine II	3
PHAS	308 Comm. Health & Epidermiology	2
PHAS	313 Pharmacology II	3
PHAS	316 Physical Diagnosis II	<u>2</u>
<b>Semester Total</b>		<b>15</b>

<b>FALL SEMESTER</b>		<b>HOURS</b>
PHAS	306 Clinical Medicine III	3
PHAS	307 Clinical Medicine IV	3
PHAS	309 Health Ethics Law	2
PHAS	310 Nutrition	2
PHAS	314 Physician Assistant Role	1
PHAS	317 Physical Diagnosis III	<u>3</u>
<b>Semester Total</b>		<b>14</b>

**SENIOR YEAR**

<b>SPRING SEMESTER</b>		<b>HOURS</b>
PHAS	400 Internal Medicine Clerkship	4
PHAS	401 Pedia. and Adoles. Med. Clrkshp.	4
PHAS	402 Surgery Clerkship	4
PHAS	403 Clinical Transition I	<u>1</u>
<b>Semester Total</b>		<b>13</b>

<b>SUMMER SESSION</b>		<b>HOURS</b>
PHAS	404 Clinical Transition II	1
PHAS	406 Psychiatry Clerkship	4
PHAS	407 Emergency Medicine Clerkship	4
PHAS	408 Obstetrics and Gyn. Clerkship	<u>4</u>
<b>Semester Total</b>		<b>13</b>

<b>FALL SESSION</b>		<b>HOURS</b>
PHAS	405 Clinical Transition II	1
PHAS	409 Family Practice I Clerkship	4
PHAS	410 Family Practice II Clerkship	4
PHAS	411 Gastroenterology Subspecialty	<u>4</u>
<b>Semester Total</b>		<b>13</b>

**PROGRAM ELECTIVE CLERKSHIPS**

PHAS	412 Rehab Medicine Subspc. Clrkshp.	4
PHAS	413 Geriatric Subspecialty Clerkship	4
PHAS	414 Orthopedics Subspc. Clerkship	4
PHAS	415 Otolaryngology Subspc. Clrkshp.	4
PHAS	416 Dermatology Subspc. Clerkship	4
PHAS	417 Neurology Subspc. Clerkship	4
PHAS	418 Radiology Subspc. Clerkship	<u>4</u>
<b>Semester Total</b>		<b>4</b>

**Total Credits Required      152**

*Clerkships may occur in any order; Elective clerkship to be chosen by student with assistance and approval of the department. Each clerkship is four (4) semester hours for five (5) weeks each.*

## COURSE DESCRIPTIONS

### PHYSICIAN ASSISTANT

**PHAS 200 Introduction to Physician Assistant 1 cr.**  
This course focuses on the history, present practices, and future trends of the profession.

**PHAS 201 Medical Terminology 1 cr.**  
This course is designed in a programmed format to introduce the learner to a systematic approach to mastering medical and scientific vocabulary.

**PHAS 300 Advanced Anatomy 3 crs.**  
This course is an in-depth study of the structure of the entire human body, utilizing lectures, cadaver dissection, and clinical correlation for the medical practitioner. Prerequisite: Departmental consent and/or admission to Professional Program.

**PHAS 301 Physiology 3 crs.**  
This course involves the examination of the mechanisms involved in control of body functions. The basic chemical and physical principles of human function are discussed. Prerequisite: Departmental consent and/or admission to Professional Program.

**PHAS 302 Clinical Chemistry 3 crs.**  
This course examines the chemical and molecular control and reactions in the human body. Clinical correlations of various biochemical parameters measured in body fluids under a variety of abnormal conditions are considered. Prerequisite: Departmental consent and/or admission to Professional Program.

**PHAS 303 Clinical Laboratory Procedure 2 crs.**  
This course applies scientific Laboratory methods to diagnostic and therapeutic problems of clinical medicine; it focuses on the enhancement of diagnostic accuracy, as well as how to monitor a patient's response to therapy and order Lab. tests in a timely, appropriate, and cost effective manner. Prerequisite: Departmental consent and/or admission to Professional Program.

**PHAS 304 Clinical Medicine I 3 crs.**  
This course provides a systematic analysis of major diseases encountered in primary care medicine by utilizing an organ systems approach. Emphasis on etiology, Pathophysiology, presentation, diagnosis, management, and prevention of diseases is provided. Prerequisites: Successful completion of PHAS 300 and PHAS 301, Departmental consent and/or admission to Professional Program.

**PHAS 305 Clinical Medicine II 3 crs.**  
This course is a continuation of Clinical Medicine I. Prerequisites: Successful completion of PHAS 300 and PHAS 301, Departmental consent and/or admission to Professional Program.

**PHAS 306 Clinical Medicine III 3 crs.**  
This course addresses the etiology, presentation, diagnosis, and management of diseases most prevalent in Pediatrics, Obstetrics and Gynecology, and Geriatric subspecialties. Prerequisites: Successful completion of PHAS 304 and PHAS 305, Departmental consent and/or admission to Professional Program.

**PHAS 307 Clinical Medicine IV 3 crs.**  
This course addresses the etiology, presentation, diagnosis, and management of diseases most prevalent in surgery, emergency medicine, and psychiatry. Prerequisite: Successful completion of PHAS 306, Departmental consent, and/or admission to Professional Program.

**PHAS 308 Community Health and epidemiology 2 crs.**  
This course will review epidemiological factors affecting health maintenance and development of programs of disease prevention, intervention, and health promotion.

**PHAS 309 Health Care Ethics and Law 2 crs.**  
This course provides a focused review of current philosophies, policies, and ethical issues in contemporary health care targeted at the Physician Assistant profession.

**PHAS 310 Nutrition 2 crs.**  
This course explores the process of nutritional assessment and intervention for healthy living and maintenance.

**PHAS 311 Pathophysiology 3 crs.**  
This course analyzes the abnormal human structure or function responsible for various disease processes. It is concerned with the etiology, clinical manifestation, and progress of human disease.

**PHAS 312 Pharmacology I 3 crs.**  
This course explores the general principles of pharmacology, including pharmacokinetics and pharmacodynamics, classes of therapeutic agents, mechanisms of action, proper routes of administration, common side effects, and drug interactions and contraindications. Prerequisite: Departmental consent and/or admission to Professional Phase.

**PHAS 313 Pharmacology II 3 crs.**  
This course is a continuation of Pharmacology I. Prerequisites: Successful completion of PHAS 312, Departmental consent, and/or admission to Professional Phase.

**PHAS 314 Physician Assistant Role 1 cr.**  
This course entails discussions of issues relevant to the Physician Assistant practice. Concepts relevant to the Physician Assistant Role are explored.

**PHAS 315 Physical Diagnosis I 2 crs.**  
This course teaches the student how to elicit and perform a comprehensive history and physical examination, as well as how to properly document and present findings. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 316 Physical Diagnosis II 2 crs.**  
This course will teach the student how to perform a history and physical examination directed toward specific age groups throughout the life cycle. The differentiation of abnormal physical findings will be explored on an organ systems approach. The development of differential diagnoses and management plans will be performed. Prerequisites: Successful completion of PHAS 315, Departmental consent, and/or admission to the Professional Phase.

**PHAS 317 Physical Diagnosis III 3 crs.**  
This course covers the indications, contraindications, step-by-step procedures, and complications of hands-on clinical skills, which are commonly performed in medical practice, such as phlebotomy, injections, IV therapy, urethral and nasogastric catheterization, pulmonary function testing, suturing, casting and splinting, various ENT procedures, electrocardiogram, and use of various types of monitoring devices. The students will be required to complete an Advanced Cardiac Life Support Course. Prerequisites: Successful completion of PHAS 315 and PHAS 316, Departmental consent, and/or admission to the Professional Phase.

**PHAS 400 Internal Medicine Clerkship 4 crs.**  
This course is a clinical rotation of five weeks in a community based or institutional setting. The student will obtain in depth clinical exposure in the areas of cardiology, pulmonology, gastroenterology, and rheumatology. The student will perform history and physical examinations as appropriate to the medical condition and participate in evaluation, management, and treatment of acute and chronic medical problems. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 401 Pediatric and Adolescent Medicine Clerkship 4 crs.**  
This course is a five week clinical rotation that takes place in a physician's office or institutional setting. The students will have clinical exposure to newborn and infant exams, well child care, anticipatory guidance for parents, routine care of the newborn including feeding, sleeping, bowel habits, and identification of common congenital deformities or malformations. The student will perform history and physical examinations and participate in evaluation, management, and treatment of acute and chronic medical conditions. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 402 Surgery Clerkship 4 crs.**  
This course is a five week clinical rotation that takes place in an inpatient and outpatient setting. The student will develop skills and knowledge in performing initial pre-

operative as well as post-operative evaluations including post-operative complications. The student will perform an *Assessment of Operative Risk* and be able to compose and record accurate, concise post-operative notes, orders, evaluation, and treatment. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 403 Clinical Transition I 1 cr.**  
This course enables students to make the transition from the University of Maryland Eastern Shore Physician Assistant Program to the workforce. The following activities are included: National Certification Examination preparation, resume writing, contract negotiations, third party reimbursement, malpractice, licensure, quality assurance, risk management and clinical skills refinement. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 404 Clinical Transition II 1 cr.**  
This course is a continuation of PHAS 403. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 405 Clinical Transition III 1 cr.**  
This course is a continuation of PHAS 403 and PHAS 404. Departmental consent and/or admission to the Professional Phase. Prerequisite: PHAS 404.

**PHAS 406 Psychiatry Clerkship 4 crs.**  
This course is a five-week clinical rotation in Psychiatry and related psycho-pharmacology outpatient setting. The student will perform a psychiatric history, mental status examination, identify and evaluate common psychiatric disorders. The student will have exposure to pharmacologic as well as non-pharmacologic interventions, their indications, contraindications, and relative merit thereof. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 407 Emergency Medicine Clerkship 4 crs.**  
This course is a five-week clinical rotation in a hospital setting. The student will have exposure to cardiovascular, pulmonary, neurologic, psychologic/psychiatric, obstetrical, gynecological infectious disease, thermal, allergic, soft tissue, ear, nose and throat, and orthopedic emergencies, amongst many others. The student will perform a history, physical exam, and evaluation of the particular conditions presented. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 408 Obstetrics and Gynecology Clerkship 4 crs.**  
This course is a five-week clinical rotation that takes place in an outpatient and or inpatient setting. The student will obtain a history and perform an examination appropriate to the female patient. The student will have exposure to techniques employed in a routine physical examination of the female reproductive system, clinical manifestations, diagnosis, and management of common gynecological and obstetric conditions. The student will employ diagnostic tests and procedures as they are clinically significant in the OB/GYN patient. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 409 Family Practice I Clerkship 4 crs.**  
This course is a five-week clinical rotation in an outpatient office setting. The student will have overall exposure to common ear, nose and throat, cardiac, respiratory, gastroenterology, hematology, oncology, endocrinology, gynecology, genitourinary, musculoskeletal, dermatology, psychiatry, and neurology disease entities. The student will be called upon to perform routine in office procedures to assist in the evaluation and management of the patient. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 410 Family Practice II Clerkship 4 crs.**  
This course is a nine-week clinical rotation as a further extension of Family Practice I. This rotation will allow the student to apply expanded skills and knowledge (obtained in Family Practice I) of ambulatory care environment under the direction and supervision of a physician. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 411 Gastroenterology Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation with in-depth study and application of disorders of the esophagus, stomach, liver, gallbladder, pancreas, and colon. The student will be exposed to the clinical manifestations, physical exam finding, diagnostic workup, treatment, complications, and prognoses of various disease entities as they relate to the gastrointestinal system. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 412 Rehabilitation Subspecialty Clerkship 4 crs.**  
This course is a five week clinical rotation in which the student will be exposed to common surgical problems and evaluation of patient injuries, complication of injuries, and the current needs for durable medical equipment such as wheel chairs, crutches, casts, etc. The student will be able to recognize, evaluate, and discuss the most common injuries and assess needs for Occupational, Physical, and Respiratory Therapy and other ancillary allied health personnel. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 413 Geriatric Subspecialty Clerkship 4 crs.**  
This course is a five week clinical rotation in an outpatient, assisted living, or nursing home setting. The student will have clinical exposure to eliciting an appropriate, well organized medical history and performing an examination related to the elderly and the particular complaint. The student will develop competency in selecting appropriate laboratory and diagnostic procedures with attention to correct sequencing, patient preparation requirements, and risk. The student will be exposed to physiological patterns, psychosocial changes, normal age-related changes, management, complications, and management of disease entities specific to the elderly. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 414 Orthopedics Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation in which the student is assigned to an attending, senior resident and or a PA, and will function as a member of his /her Orthopedic or ER trauma team. The student will elicit a thorough and well-organized history from a patient and perform a physical exam relevant to the patient's problem. The student will develop competency in selecting and interpreting appropriate radiographic views required for fractures and other musculoskeletal complaints and the necessary skills for casting, splinting, and suturing. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 415 Otolaryngology Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation in which the student is assigned to an attending physician, resident or team. The student is exposed to history, physical evaluation, and management of hearing loss, ear canal, eustachian tube, middle and inner ear, nose and paranasals, mouth and pharynx and laryngeal disorders. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 416 Dermatology Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation in which the student is exposed to evaluating, diagnosing, and managing acute and chronic dermatological conditions. The student utilizes procedures particular to the disease entity. The student is also expected to describe the etiology, presentation, differential diagnosis, complications, and applicable laboratory findings and management of fungal, infectious bacterial, parasitic, allergic, follicular, glandular, circulatory, benign, pre-malignant, malignant, systemic, pigmentary, and pruritic dermatologic entities. Prerequisite: Departmental consent and/or admission to the Professional Phase.

**PHAS 417 Neurology Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation in which the student develops comprehension of neuroanatomy, with regard to expected physical and neurobehavioral findings and lesion localization. The student is exposed to common, urgent/emergent neurological disorders and develops competency in performing a physical, history, evaluation and management as relative to those entities. Prerequisite: Departmental consent and/or Admission to the Professional Phase.

**PHAS 418 Radiology Subspecialty Clerkship 4 crs.**  
This course is a five-week clinical rotation in which the student develops competency in understanding the varied uses of radiologic examination as a diagnostic tool for patient evaluation. The student will recognize the grossly normal versus abnormal radiologic findings in soft tissue and bony structures. Prerequisite: Departmental consent and/or Admission to the Professional Phase.

**FACULTY****Huddleston, Christjon**

Medical Director  
M.D. University of Maryland  
B.A. Stanford University

**Robinson, Darlene**

Chair & Program Director  
MPAS, University of Nebraska  
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**Reese, Kevin L. MPAS, BS, PA-C**

B.S., Rehabilitation Services, UMES  
Masters of Physician Assistant Studies, Arcadia University

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B.S. Physician Assistantship, UMES  
B.S., Medical Technology, Morgan State University



## DEPARTMENT OF REHABILITATION SERVICES

### Dean:

Carolyn B. Brooks, Ph.D.

### Chair:

William Talley, Rh.D., C.R.C.  
Associate Professor

### Associate Professor:

Clayton Faubion, Ph.D., C.R.C.  
Joan Fobbs, Ph.D., C.R.C.  
Maryam Rahimi, Ph.D., C.R.C.

### Clinical Coordinator:

Gail Lankford, M.Ed., LCDAC

## MISSION

The mission of the undergraduate program in rehabilitation services is to prepare students for entry-level employment in a variety of human services and rehabilitation-related settings, especially those serving individuals with physical, emotional, and developmental disabilities. The program is also designed to prepare its graduates to enter master's level programs in rehabilitation, psychology, physical therapy, related allied health fields, and human services.

## GOALS

The goals of the Rehabilitation Services Program are multifaceted:

- a. to prepare highly qualified health care professionals for entry-level positions in public and private health care and rehabilitation settings, and
- b. to prepare those students desiring to continue their education to enter graduate programs in Rehabilitation, Psychology, Physical Therapy, Occupational Therapy and numerous other allied health and human service programs.

## OBJECTIVES

The objectives of the programs offered in Rehabilitation Services are as follows:

- To offer instruction which reflects the philosophy and mission of the National Council on Rehabilitation Education.
- To meet the academic requirements established by the University.

- To meet the professional requirements and standards set by rehabilitation and related professional organizations.
- To provide courses and learning experiences which prepare students for employment in rehabilitation, as well as the allied health and related human service professions.
- To guide students in the development of leadership skills through participation in rehabilitation-related programs and student organizations.
- To provide course offerings and professional programs to the University and the general community.
- To provide an intellectual environment designed to facilitate academic growth and creative development.
- To prepare students for graduate school and continued professional development.

## DESCRIPTION OF PROGRAM

While "rehabilitation" is a term used in many fields, for us it means the vocational rehabilitation of individuals who have disabilities and need assistance as they pursue their vocational goals. While our historical and legislative roots are firmly embedded in vocational rehabilitation, the field has greatly expanded. Graduates may go on to provide a variety of services to people with disabilities, including, but not limited to, vocational services.

The Rehabilitation Services Program leads to the Bachelor of Science (B.S.) Degree. This four year course of study prepares students to become rehabilitation professionals, i.e., case managers, and to successfully assume the role of care professionals in hospitals, mental health centers, developmental disability centers, residential chemical dependency treatment centers, etc.

Two distinct tracks are offered: one for those students interested in pursuing careers in the behavioral science orientation of rehabilitation, i.e. psychology, counseling, or vocational employment; the other for students interested in pursuing careers in the allied health fields, i.e. occupational therapy or physical therapy.

The student is initially provided with a liberal arts foundation that includes the arts, the humanities, the natural sciences, and the social sciences. Upon this foundation is built a basic understanding of the physiological concerns which impact individuals with disabilities.

The student acquires skills, such as counseling, assessment, and case management. Mastery of these skills and the related knowledge provides the student with the means to assist disabled individuals to lead more productive and satisfying lives. Well planned use of electives and the field

work allows for some specialization. A 300 clock hour field work experience (6 credits) is provided under the supervision of field counselors in human service agencies primarily in Maryland. These intensive practical experiences frequently lead to entry level jobs, since the field work is completed during the senior year. Students are encouraged to participate in volunteer activities and courses providing an opportunity for involvement with disabled individuals to augment skills and knowledge gained through the 36 credit hour major core requirements.

Three general, post-baccalaureate possibilities exist, depending on the needs and interests of students:

1. Employment in a wide-range of rehabilitation-related and human services areas, including public rehabilitation services, rehabilitation centers, sheltered workshops, chemical dependency programs, senior citizens centers, community mental health facilities, developmental disability centers, corrections systems, and hospitals. Increasing opportunities are available in private-for-profit/insurance rehabilitation programs for the industrially injured, rapidly developing employee assistance programs within business/industry, case managers, and disability student services in colleges and universities. Students interested in employment opportunities in these areas should consider taking the Behavioral Rehabilitation track.
2. Graduate study in rehabilitation, physical therapy or a variety of allied health professions. Students interested in employment opportunities in the allied

health professions should consider taking the Allied Health track.

3. Employment or graduate study in other career areas which emphasize human relations or interpersonal skills.

### **REHABILITATION SERVICES OPTIONS**

Courses in the Rehabilitation Services Program are consistent with the recommendations of the National Council on Rehabilitation Education and the State of Maryland General Education requirements. Students pursuing the career specific options will need to incorporate these into the sequence of classes which are consistent with the concentration requirements as identified for either Chemical Dependency Provisional Certification, American Sign Language Studies, or Allied Health. This blending can result in a total of 129 credit hours. Students not following any of these concentrations can graduate with a minimum of 120 credit hours. However, to increase competitive advantages in the field of rehabilitation and graduate schools, students are advised to select upper level elective classes during the senior year which are consistent with career objectives.

The two tracks have been designed to take into account the prerequisites for most graduate schools. Students interested in attending specific graduate programs should contact those programs and include any additional prerequisites required for admission to those programs into the course sequence as "Electives."

## REHABILITATION SERVICES

### Required and Recommended Courses for the Bachelor of Science Degree

#### I. General Education Requirements

##### TOTAL REQUIRED FOR GENERAL EDUCATION — 41 Credits Minimum

Students should consult with their freshman or departmental advisor when making course selections.

#### A. Curriculum Area I – (Arts and Humanities) 9 credits

Students must select ENGL 203 plus two additional courses:

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 328, ENGL 329, ENGL 327, ENGL 401

#### B. Curriculum Area II – (Social and Behavioral Sciences) 9 credits

Students must select one course in each of two disciplines plus an extra in Behavioral Science:

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H, HIST 102 or  
 HIST 112H, POLI 200 or POLI 200H, POLI 342, **SOCI 101\***  
 or **SOCI 111H\***

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 220, HUEC 361,  
 HUEC 380, SOWK 200 or SOWK 200H,  
**PSYC 200\***, **SOCI 201\***

#### C. Curriculum Area III – (Biological and Physical Sciences) 7 Credits

Students must select two science courses which must include at least one laboratory:

ANSC 114, BIOL 101, BIOL 103 (lab), BIOL 112, BIOL 114 (lab), CHEM 102, CHEM 103 (lab),  
 CHEM 104 (lab), CHEM 111, CHEM 113 (lab), PHYS 101, PHYS 103 (lab), PHYS 121, PHSY 123 (lab),  
 PHYS 122, PHYS 124 (lab), PHYS 161, PHYS 181H, PHYS 183H (lab), PHYS 182H, PHYS 184H (lab),  
 PHYS 263, PLSC 184, **CHEM 101\***, **BIOL 111\***, **BIOL113\*(lab)**

#### D. Curriculum Area IV – (Mathematics) 3 credits

One course at or above the level of MATH 102. Students must select one course as required by their major department and/or results of their Mathematics Placement Exam.

Course No.	Title	Credits
MATH 102	Applications of College Mathematics	3
MATH 110	Trigonometry and Analytic Geometry	3
MATH 111H	Honors Elementary Mathematical Analysis	3
MATH 112	Calculus I	3
<b>MATH 109*</b>	College Algebra	3

#### E. Curriculum Area V – (English Composition) 9 credits

Course No.	Title	Credits
<b>ENGL 101*</b>	Basic Composition I <u>or</u>	
ENGL 101H*	Basic Composition I (Honors)	3
<b>ENGL 102*</b>	Basic Composition II <u>or</u>	
ENGL 102H*	Basic Composition II	3
ENGL 305(H)	Technical Writing (Honors) <u>or</u>	
ENGL 310 (H)	Advanced Composition (Honors)	3

- F. Curriculum Area VI – (Emerging Issues) 4 credits**  
 Courses identified as being essential to a full program of general education for UMES students  
**GNST 100\*, EDHE 111\***

**\*Required for the Rehabilitation Services Program.**

MATH 110 and CHEM 111 are authorized substitutes for MATH 109 and CHEM 101.

- II. Program Core Requirements 36 credits**  
 A grade of "C" or better is required in each of the Program Core Requirements

Course No.	Title	Credits
REHA 201	Introduction to Rehabilitation*	3
REHA 301	Health & Medical Information**	3
REHA 302	Theories of Counseling	3
REHA 303	Case Recording & Case Management	3
REHA 304	Assessment in Rehabilitation	3
REHA 305	Vocational, Development, Counseling & Employment	3
REHA 306	Counseling Skills & Techniques	3
REHA 401	Field Work in Rehabilitation Services I***	6
REHA 402	Rehabilitation of the Developmentally Disabled	3
REHA 403	Rehabilitation of the Psychiatrically Disabled	3
REHA 406	Seminar in Rehabilitation	3

**\* REHA 201 is a prerequisite for all other REHA courses.**

\*\*BIOL 231 and BIOL 233 are prerequisites for this course. Students must complete their sophomore year prior to registering for this course.

\*\*\*Students must complete their junior year and meet with the Clinical Coordinator before applying for this field work. The student is responsible for the cost of liability insurance (through UMES).

**OPTIONS**

The Rehabilitation Options require a minimum of six (6) hours from the following:

Course No.	Title	Credits
REHA 311	Independent Living	3
REHA 404	Rehabilitation Services for the Addict	3
REHA 405	Human Relations in Rehabilitation	3
REHA 407	Pharmacology of Chemical Dependency Rehabilitation	3
REHA 408	Technology in Rehabilitation	3
REHA 411	Field Work in Rehabilitation Services II	1- 6
REHA 412	Special Topics in Rehabilitation	3
REHA 421	Practicum in Rehabilitation	1- 6
REHA 499	Independent Study in Rehabilitation	1- 6
ASLS 202	Orientation to Deafness	3
ASLS 203	American Sign Language I	3
ASLS 204	American Sign Language II	3
ASLS 307	American Sign Language III	3
ASLS 308	American Sign Language IV	3
ASLS 421	Practicum in American Sign Language	3

- III. Supportive Core Requirements (for both tracks) 19 credits**

Course No.	Title	Credits
BIOL 231	Human Anatomy and Physiology I	3
BIOL 233	Human Anatomy and Physiology I Lab	1
MATH 210	Elementary Statistics	3
SOCI 202	Social Deviance and Social Control	3
EDSP 200B	Introduction to Special Education	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PSYC 371	Abnormal Psychology	3
PSYC 305	Developmental Psychology <b>or</b>	
HUEC 203	Human Development: A Lifetime Perspective	3
<b>IV.</b>	<b>Supportive Core Requirements (for the Behavioral Rehabilitation track)</b>	<b>9 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PSYC 303	Adolescent Psychology	3
PSYC 401	Introduction to Personality Theory	3
REHA or PSYC	300 or 400 level Rehabilitation or Psychology course	3
<b>V.</b>	<b>Supportive Core Requirements (for the Allied Health track)</b>	<b>30 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 111	Principles of Chemistry I (instead of CHEM 101)	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
BIOL 232	Human Anatomy and Physiology II	3
BIOL 234	Human Anatomy and Physiology II Lab	1
BUED 212	Computer Concepts/Applications I	3
MATH 110	Trigonometry and Analytic Geometry	3
PHYS 121	General College Physics I	3
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	1
BIOL 301	Microbiology with Lab (BIOL 303) <b>or</b>	
BIOL 326	Cell Biology with Lab (BIOL 327) <b>or</b>	
BIOL 420	Animal Histology with Lab (BIOL 421)	4

#### **VI. Elective Courses**

If students are following the Behavioral Rehabilitation Track, they must take at least nine credits in courses that are consistent with their career goals. Students are encouraged to select courses from the following list of recommended electives if they wish to fulfill requirements for Chemical Dependency Provisional Certification, American Sign Language Studies or other rehabilitation specializations. Select 100, 200, 300, or 400 level courses parallel with the first, second, third or fourth year of college.

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ASLS 202	Orientation to Deafness	3
ASLS 203	American Sign Language I	3
ASLS 204	American Sign Language II	3
ASLS 307	American Sign Language III	3
ASLS 308	American Sign Language IV	3
ASLS 421	Practicum in American Sign Language	3
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Lab	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1
EXSC 302	Prevention and Cure of Athletic Injuries	3
EXSC 341	First Aid, Safety and CPR	1
EXSC 352	Exercise and Sport Psychology	3
EXSC 363	Motor Development	3
MATH 110	Trigonometry and Geometry	3
PHYS 121	General College Physics I	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	1
PSYC 301	Child Psychology	3
PSYC 303	Adolescent Psychology	3
PSYC 307	Educational Psychology	3
PSYC 401	Personality Theory	3
RECR 413	Therapeutic Recreation	3
SOCI 301	Rural Sociology	3
SOCI 303	Inequality in America	3
SOCI 311	Anthropology	3
SOCI 313	Criminology and Penology	3
SOCI 315	Urban Sociology	3
SOCI 316	Marriage and Family Life	3
SOCI 329	Sociology of Medicine	3
SOCI 331	American Minority Groups	3
SOCI 334	Sociology of Mental Health	3
SOCI 361	Social Gerontology	3
SOCI 430	The Black Family	3
SOWK 455	Substance Abuse: Issues/Services	3
EDGC 640	Group Process in Guidance and Counseling*	3

**\* Approval of the instructor is required for seniors taking this course to fulfill requirements for Chemical Dependency Provisional Certification.**

#### **CHEMICAL DEPENDENCY PROVISIONAL CERTIFICATION REQUIREMENTS**

The following courses fulfill the educational requirements for the Chemical Dependency Provisional Certification through the Board of Professional Counselors. These are in addition to required Rehabilitation Services Program Core Courses.

**15 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
REHA 404	Rehabilitation Services for the Addict	3
REHA 405	Human Relations in Rehabilitation	3
REHA 407	Pharmacology for Chemical Dependence Rehabilitation	3
SOWK 455	Substance Abuse: Issues and Services	3
EDGC 640	Group Process in Guidance and Counseling (Program Approval Required)	3

#### **AMERICAN SIGN LANGUAGE STUDIES CONCENTRATION**

The following courses prepare individuals who are interested in developing communication skills for interacting with the Deaf community. The Program is open to other academic units at the University of Maryland Eastern Shore and to the community for individuals who are interested in acquiring sign language skills. The courses are cross-listed under Elective Courses IV. ASLS courses are authorized substitutions for the two required Rehabilitation Options.

**18 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ASLS 202	Orientation to Deafness	3
ASLS 203	American Sign Language I	3
ASLS 204	American Sign Language II	3
ASLS 307	American Sign Language III	3
ASLS 308	American Sign Language IV	3
ASLS 421	Practicum in American Sign Language	3

**REHABILITATION SERVICES PROGRAM**  
**Course Sequence**  
**Behavioral Rehabilitation Track**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
SOCI	101	Intro. to Sociology	3
GNST	100	First Year Experience Sem.	1
EDHE	111	Personalized Health Fitness	3
CHEM	101	General Chemistry I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab.	1
ENGL	102	Basic Composition II	3
PSYC	200	Intro. to Psychology	3
		GER CURR. AREA I: A	3
SOCI 201		Social Problems	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anatomy & Physio. I	3
BIOL	233	Human Anat. & Physio. I Lab	1
ENGL	203	Fund. of Contemp. Speech	3
MATH	210	Basic Statistics	3
		Elective	3
		GER CURR AREA I: A	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
REHA	201	Intro. to Rehabilitation	3
SOCI	202	Social Deviance	3
PSYC	303	Adolescent Psychology	3
EDSP	200B	Intro to Special Education	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
REHA	306	Counseling Skills/ Tech.	3
REHA	301	Health & Medical Info.	3
REHA	303	Case Record/ Case Mgmt.	3
PSYC	305	Developmental Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
REHA	302	Theories of Counseling	3
REHA	305	Vocation. Counsel./Dev.	3
PSYC	371	Abnormal Psychology	3
		Rehab. Option from II	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
REHA	304	Assessment	3
REHA	403	Rehab Psychiatric Disabled	3
		Rehab. Option from II	3
PSYC	401	Intro. to Personality Theo.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
REHA	406	Seminar in Rehabilitation	3
REHA	401	Field Work in Rehab	6
		REHA or PSYC Course	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**Total Credits Required**      **120**

**REHABILITATION SERVICES PROGRAM**  
**Course Sequence**  
**Allied Health Track**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
SOCI	101	Intro. to Sociology	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab.	1
GNST	100	First Year Experience Sem.	1
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab.	1
ENGL	102	Basic Composition II	3
SOCI	201	Social Problems	3
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab.	1
PSYC	200	Intro to Psychology	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anatomy & Physio. I	3
BIOL	233	Human Anat. & Physio. I Lab.	1
BUED	212	Computer Concepts I	3
ENGL	203	Fund of Contemp. Speech	3
SOCI	202	Social Deviance/Control	3
GER CURR. AREA I: A			<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	232	Human Anat. & Physio. II	3
BIOL	234	Hum. Anat./Physio. II Lab	1
REHA	201	Intro. to Rehabilitation	3
EDSP	200B	Intro. to Special Education	3
MATH	210	Basic Statistics	3
GER CURR. AREA I: A			<u>3</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
REHA	306	Counseling Skills/ Tech.	3
REHA	301	Health & Medical Info	3
REHA	303	Case Record/Case Mgmt.	3
PHYS	121	General College Physics I	3
PHYS	123	Gen. College Physics I Lab	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
REHA	302	Theories of Counseling	3
REHA	305	Voca. Counseling/Dev.	3
PSYC	305	Developmental Psyc.	3
PSYC	371	Abnormal Psychology	3
PHYS	122	Gen. College Physics II	3
PHYS	124	Gen. Col. Physics. II Lab.	<u>1</u>
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
REHA	304	Assessment	3
REHA	402	Rehab. of Deve. Disabled	3
REHA	403	Rehab Psychiatric Disabled	3
Rehab. Option from II			3
MATH	110	Trig. & Analytic Geometry	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
REHA	406	Seminar in Rehabilitation	3
REHA	401	Field Work in Rehab	6
Rehab. Option from II			3
BIOL	301	Microbiology with Lab. <b>or</b>	
BIOL	326	Cell Biology with Lab. <b>or</b>	
BIOL	420	Animal Histology with Lab.	4
<b>Semester Total</b>			<b>16</b>

**Total Credits Required**      **129**



**COURSE DESCRIPTIONS****AMERICAN SIGN LANGUAGE STUDIES**

- ASLS 202 Orientation to Deafness 3 crs.**  
This course provides an overview of deafness focusing on four major topics: the nature and experience of deafness, the education and training of children and adults who are deaf, the deaf adult community, and deafness culture. ASLS 202 or substantial experience with the deaf culture is a prerequisite for other ASLS courses.
- ASLS 203 American Sign Language I 3 crs.**  
This course prepares students to develop expressive and receptive skills in American Sign Language (ASL). The course will include the conceptual sign vocabulary and grammar from ASL. Prerequisite: ASLS 202.
- ASLS 204 American Sign Language II 3 crs.**  
This course expands the knowledge of expressive and receptive skills in American Sign Language (ASL) beyond knowledge acquired in ASLS 203. The course will focus on structure, grammar, syntax, and vocabulary. Prerequisite: ASLS 202 and ASLS 203, or proficiency evaluation.
- ASLS 307 American Sign Language III 3 cr.**  
This course provides a more extensive knowledge of expressive and receptive skills in American Sign Language (ASL). Emphasis is placed on cognitive preparation incorporating visual and motor activities. Exposure to other forms of communication used by individuals who are deaf will be introduced. Prerequisites: ASLS 202, ASLS 203 and ASLS 204 or proficiency evaluation.
- ASLS 308 American Sign Language IV 3 cr.**  
This course provides an advanced preparation of knowledge in expressive and receptive skills in American Sign Language (ASL). Students become more sensitive to the experiences of the deaf consumer and have instructional activities which lead to the development of visual, spatial, and motor learning memory. Prerequisite: ASLS 202, ASLS 203, ASLS 204 and ASLS 307 or proficiency evaluation.
- ASLS 421 Practicum in American Sign Language 3 cr.**  
This course requires a minimum of 135 hours of direct interaction with the deaf community, a group of deaf individuals, or a human services agency providing services to the deaf. Prerequisites: ASLS 202, ASLS 203, ASLS 204, ASLS 307 and ASLS 308 or demonstrated advance knowledge of ASL and permission of the Rehabilitation Services Program's Clinical Coordinator.

**REHABILITATION SERVICES**

- REHA 201 Introduction to Rehabilitation 3 cr.**  
The history, philosophy, and legislation of rehabilitation are examined. The course covers the rehabilitation process from referral to closure. Legal issues, professional ethics, consumer advocacy, and community resources will be investigated. REHA 201 is prerequisite for other REHA courses.
- REHA 301 Health/Medical Information 3 cr.**  
This course provides an overview of health information. Study of basic medical terminology, medical information, and review of body systems will be explored. Review of common disabling conditions, their symptomatology, prognosis, and treatment will be examined. Prerequisites: BIOL 231, BIOL 233 and REHA 201.
- REHA 302 Theories of Counseling 3 cr.**  
This course provides study of counseling theories and techniques and their application in counseling with individuals who have a disability. Prerequisite: REHA 201.
- REHA 303 Case Recording & Case Management 3 cr.**  
This course examines principles and practices of obtaining, recording, evaluating, and utilizing case data in rehabilitation. Techniques of managing caseload of individuals with a disability are explored. Prerequisite: REHA 201.
- REHA 304 Assessment in Rehabilitation 3 cr.**  
In this course students conduct a survey of psychological, social and vocational tests. The nature and use of tests in counseling, test analysis and test interpretation are examined. Prerequisite: REHA 201.
- REHA 305 Vocational Development Counseling and Employment 3 cr.**  
This course examines theories of vocational choice, and vocational counseling, and vocational assessment. Job development and placement techniques are discussed. Problems relating to placement of disabled persons in employment are investigated. Prerequisite: REHA 201.
- REHA 306 Counseling Skills and Technology 3 cr.**  
This course is designed to expose students to the basic skills and techniques of counseling. Students who participate in this course acquire counseling skills through participation in intensive classroom counseling scenarios. Prerequisite: REHA 201.
- REHA 311 Independent Living 3 cr.**  
This course assists students in developing leadership skills and knowledge which will enable them to work with individuals with chronic disabilities. Students will learn the ways these individuals live independently and productively in the community.

**REHA 401 Field Work in Rehabilitation Services 6 cr.**

This course is a part-time supervised practicum in agencies and institutions providing rehabilitation services essential to employment. Prerequisites: REHA 301, REHA 302, REHA 303, REHA 304, REHA 305 and REHA 306 and permission of the Clinical Coordinator.

**REHA 402 Introduction to Development Disabilities 3 cr.**

This course provides a study of the etiology, treatment, terminology, and related process of rehabilitation to include programs, personnel, and facilities; community resources, and current trends in developmental disabilities.

**REHA 403 Rehabilitation of the Psychiatrically Impaired 3 cr.**

This course is a study of the history and current practices; programs, personnel, and facilities; community organizations; and trends of the psychiatrically impaired.

**REHA 404 Rehabilitation Services for the Addict 3 cr.**

This course is a study of the physical, social, psychological, and vocational aspects of the people who have become addicted. Assessment, prevention and treatment techniques are explored.

**REHA 405 Human Relations in Rehabilitation 3 cr.**

This course provides a study of social and cultural relationships of ethnic and racial groups. Emphasis is on factors relating to employment of culturally diverse individuals with disabilities.

**REHA 406 Seminar in Rehabilitation 3 cr.**

Current trends, problems, and development in rehabilitation are discussed. Students pursue a special interest area, such as cultural diversity, disability determination, work adjustment, work evaluation, legal and ethical issues, etc., and share information and experience mutually with the class. Lecture, guest speakers, reports, and class discussions are utilized.

**REHA 407 Pharmacology of Chemical Dependency Rehabilitation 3 cr.**

The medical, psychological, and sociological effects of legal and illegal drugs are discussed. Focus is on the pharmacological actions and behavior effects of cocaine, amphetamines, alcohol, depressants, psychiatric drugs, opiates, marijuana, hallucinogens and other prescription/over-the-counter drugs.

**REHA 408 Technology in Rehabilitation 3 cr.**

This course provides an overview of technology focused on adaptive and assistive rehabilitation technology, including aids for daily living.

**REHA 411 Field Work in Rehabilitation Services II 1-6cr.**

This course is a part-time supervised practicum in agencies and institutions providing rehabilitation services essential to employment. Students must have completed 6 credit hours of REHA 401 to enroll in this course.

**REHA 412 Special Topics in Rehabilitation 3 cr.**

This course prepares students to understand current issues and policies regarding disabilities and how those policies influence the rehabilitation process.

**REHA 421 Practicum in Rehabilitation 1-6 cr.**

This course provides for an expanded elective opportunity for students to become exposed to and experience the operations within an agency, organization, or institution. This is a part-time supervised opportunity.

**REHA 499 Independent Study 1-6 cr.**

This course is an intensive study of specialized topics in rehabilitation for advanced students. Permission to take an independent study must be obtained from the instructor when the course is otherwise unavailable.

**FACULTY****Faubion, Clayton**

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Certified Rehabilitation Counselor (C.R.C.)

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**Lankford, Gail**

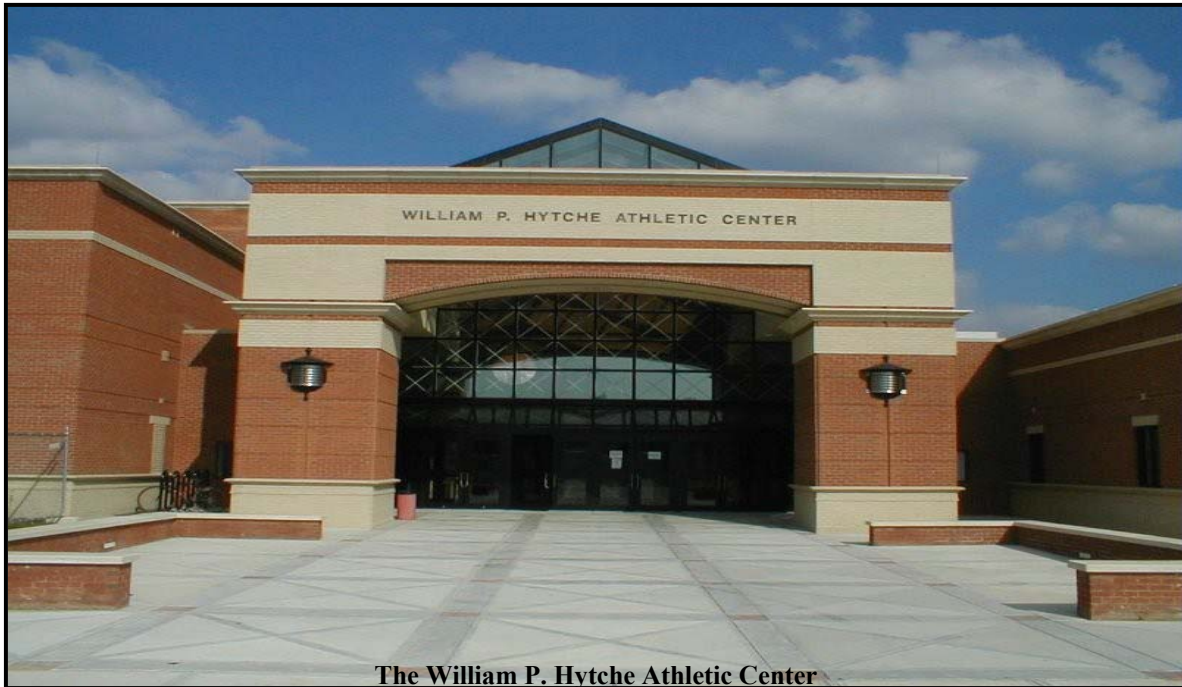
Clinical Coordinator  
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Certified Chemical Dependence Counselor (C.C.D.C.)  
Licensed Clinical Drug Alcohol Counselor (LCDAC)

**Rahimi, Maryam**

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**Talley, William**

Associate Professor and Chair  
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M.A., South Carolina State University  
Rh.D., Southern Illinois University at Carbondale  
Certified Rehabilitation Counselor (C.R.C.)



## THE SCHOOL OF THE ARTS AND PROFESSIONS

The School of the Arts and Professions includes six undergraduate academic departments: Criminal Justice, Education, English and Languages, Fine Arts, Physical Education and Social Sciences. Areas of concentration within the School include exercise science, music and art education, special education, telecommunications, and sociology/social work. School faculty routinely conduct research and development initiatives with the National Institutes of Health, the National Aeronautics and Space Administration, the National Security Agency, and the Maryland State Department of Education. The General Studies Program, The Honors Program, and the Center for Drug and Alcohol Prevention are located in the School. Graduate programs are offered at both the master's and doctoral levels in the following areas: Special Education (M.Ed.), Guidance and Counseling (M.Ed.), Masters of Arts in Teaching (MAT), Criminology and Criminal Justice (M.S.), Organizational Leadership (Ph.D.) and a proposed program in Educational Leadership (Ed.D.). For more information about graduate program offerings, please contact the Office of Graduate Studies and request a catalog.

## DEPARTMENT OF CRIMINAL JUSTICE

### Dean:

Brenda Anderson, Ed.D.

### Chair and Associate Professor:

Robert A. Harleston, J.D.

### Associate Professor:

Ihekwoaba D. Onwudiwe, Ph.D.

### Assistant Professors:

Nancy A. Horton, Ph.D.

Thomas Mosley, Ph.D.

Jonathan C. Odo, Ph.D.

Emmanuel Onyeozili, Ph.D.

### MISSION

The mission of the Department of Criminal Justice is to prepare students for careers in a variety of criminal justice-related settings. The program is also designed to prepare its graduates to enter master's level programs in criminology and criminal justice.

### GOALS

The goals of the Department of Criminal Justice are two-fold: (a) to provide a broad academic background for students in the area of criminal justice, thereby providing greater employment and graduate school opportunities and (b) to provide criminal justice practitioners with pertinent college courses to assist them in public service.

### OBJECTIVES

The specific objectives of the Criminal Justice program are to develop in each student

- an understanding of the principles underlying the functions of the criminal justice system and its relationship to the larger society in which it is embedded;
- the ability to think clearly, independently, and critically about the fundamental issues in criminal justice;
- the ability to do research, analysis, and writings about criminal justice issues; and
- the foundations necessary for graduate study and for careers in the field of criminal justice.

## DESCRIPTION OF PROGRAM

The Criminal Justice Program leads to the Bachelor of Science (B.S.) Degree in criminal justice. The four-year course of study was developed by blending the various disciplines-history, sociology, political science, psychology, social work, and law. The curriculum at the University of Maryland Eastern Shore is interdisciplinary, which enables the student to understand more clearly the interrelationships among justice systems and the impact of these systems on society. Students in the Criminal Justice Department complete the UMES general education requirements, acquiring knowledge and skills in general areas such as languages, the social sciences, the humanities, and health and physical education.

As a foundation for its curriculum, the Department's courses consists of

- legal, philosophical, political, moral and social issues of the justice system;
- theories and research about the nature and causes of crime and criminal behavior;
- analyses of the operations of the criminal, juvenile, and civil justice systems and their impact on society;
- investigation of the broad range of formal and informal mechanisms for dealing with crime, conflict, and injustice in society;
- theories of planning and management for courts, law enforcement, corrections, and juvenile justice; and
- strategies for implementing constructive change in the criminal justice system.

The curriculum allows for supervised field experience as well as seminar and laboratory work which generally takes place in the junior/senior year. Students may elect to concentrate in a particular strand or functional area within the criminal justice system by their choice of electives. The concentrations are corrections, law enforcement, and pre-law.

The minor program in Criminal Justice is designed to provide a secondary concentration for students majoring in other disciplines. The program objectives are to promote informed understanding of the manner in which the criminal justice system functions, to closely examine the functional issues in criminal justice, and to explore criminological theory. The program consists of eighteen credit hours in criminal justice.

The advisor for the UMES Pre-Law advisor concentration is located in the Department of Criminal Justice. There is no Pre-Law major as such. Interested students are invited to meet with the Pre-Law Advisor in the Department.

**CRIMINAL JUSTICE**  
**Required and Recommended Course Sequence**

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 41-43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - Arts and Humanities 9 credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III - (Biological and Physical Sciences) 7 or 8 Credits**

Students must select two science courses which must include Laboratories:

ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102,  
 CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101,  
 PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184C

**D. Curriculum Area IV - (Mathematics) 3 or 4 credits**

Student must select one mathematics course at or above the level of Math 102 - College Algebra.

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <u>or</u>	
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <u>or</u>	
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305	Technical Writing <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 7 Credits**

Course No.	Title	Credits
GNST 100	First Year Orientation Seminar	1
EDHE 111	Personalized Health Fitness	3
CRJS 230	Criminal Law	3

**II. Program Core Requirements 24 Credits**

Course No.	Title	Credits
CRJS 101	Introduction to Criminal Justice	3
CRJS 235	Courts	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 236	Law Enforcement	3
CRJS 290	Research Methods in Criminology and Criminal Justice	3
CRJS 291	Introduction to Corrections	3
CRJS 312	Criminology	3
CRJS 350	Juvenile Delinquency	3
CRJS 374	Statistical Methods in Criminology and Criminal Justice	3
<b>III.</b>	<b>Major Electives</b>	<b>21 Credits</b>
(21 credits in Criminal Justice related electives) Course options are:		
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 323	Organizational and Governmental Deviance	3
CRJS 352	Law Enforcement Community Relations	3
CRJS 359	Field Training in Criminology/Criminal Justice	1-6
CRJS 359A	Field Training w/Juvenile Justice	3
CRJS 360	Specialized Criminal Justice Education/Training (Land Management Law Enforcement)	9
CRJS 373	Criminal Justice Administration	3
CRJS 375	Judicial Process	3
CRJS 376	Victimology	3
CRJS 432	Law of Corrections	3
CRJS 450	Treatment and Control of Criminals and Delinquents	3
CRJS 451	Crime and Delinquency Prevention	3
CRJS 454	Contemporary Criminology Theory	3
CRJS 455	Psychology of Criminal Behavior	3
CRJS 457	Dynamics of Planned Change in Criminal Justice	3
CRJS 492	Special Topics:	3
CRJS 492A	Special Topics in Criminology & Corrections	3
CRJS 492B	Special Topics: Women in Corrections	3
CRJS 492C	Special Topics: Crime, Class, and Ideology	3
CRJS 492D	Special Topics: Unequal Justice	3
CRJS 492E	Special Topics: Terrorism	3
CRJS 492F	Special Topics: Police, Law and Society	3
CRJS 498	Independent Study	3
SOCI 305	Sociology of Law	3
SOWK 455	Substance Abuse: Issues and Services	3
SOWK 460	Social Work in Corrections	3
SOWK 484	Social Work and the Law	3
<b>IV.</b>	<b>Supportive Course Requirements</b>	<b>15-16 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
SOCI 101	Introduction to Sociology	
SOCI 202	Social Deviance in a Comparative Perspective <u>or</u>	3
SOCI 201	Social Problems	3
PSYC 200	Introduction to Psychology <u>or</u>	
PSYC 371	Abnormal Psychology	3
CSDP 220	Introduction to Programming <u>or</u>	4
BUED 212	Computer Concepts/Applications	<u>3</u>
		15/16
<b>V.</b>	<b>Free Electives *</b>	<b>18 or 19 Credits</b>
<b>TOTAL PROGRAM REQUIREMENTS</b>		<b>120</b>

## RECOMMENDED ELECTIVES BY STRAND OPTIONS

## CORRECTIONS

**Major Electives**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 359	Field Training in Criminology/Criminal Justice	3
CRJS 432	Law of Corrections	3
CRJS 450	Treatment and Control of Criminal and Delinquents	3
CRJS 454	Contemporary Criminology Theory	3
CRJS 455	Psychology of Criminal Behavior	3
CRJS 492B	Special Topics: Women in Corrections	3
SOWK 455	Substance Abuse: Issues and Services	3
SOWK 460	Social Work in Corrections	3

**Free Elective:**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 234	The Law of Evidence	3

**Law Enforcement: Major Electives**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 323	Organizational and Governmental Deviance	3
CRJS 352	Law Enforcement Community Relations	3
CRJS 360	Specialized Criminal Justice Education/Training (Land Management Law Enforcement)	3
CRJS 373	Criminal Justice Administration	3
CRJS 451	Crime and Delinquency Prevention	3
CRJS 457	Dynamics of Planned Change in Criminal Justice	3
CRJS 492C	Special Topics: Crime, Class, and Ideology	3
CRJS 492E	Special Topics: Terrorism	3
CRJS 492F	Special Topics: Policies, Law, and Society	3
CRJS 498	Independent Study	3
SOWK 455	Substance Abuse: Issues and Services	3

**Free Elective:**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 234	The Law of Evidence	3

**Pre-Law: Major Electives**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 323	Organizational and Governmental Deviance	3
CRJS 375	Judicial Process	3
CRJS 432	Law of Corrections	3
CRJS 492D	Special Topics: Unequal Justice	3
CRJS 492F	Special Topics: Policies, Law, and Society	3
SOCI 305	Sociology of Law	3
SOWK 484	Social Work and The Law	3

**Free Electives:**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CRJS 234	The Law of Evidence	3
ECON 201	Principles of Economics	3
ENGL 318	Argumentation and Persuasion	3
**PHIL 101	Introduction to PHIL	3
POLI 311	Political Systems	3

\*\*Course offered at Salisbury University



### CRIMINAL JUSTICE MINOR PROGRAM

The minor program in Criminal Justice is designed to provide a secondary concentration for students majoring in other disciplines. The program objectives are as follows: (1) to promote informed understanding of the manner in which the criminal justice system functions, (2) to examine closely the fundamental issues in criminal justice, and (3) to explore criminological theory. The program consists of eighteen credit hours in Criminal Justice courses.

#### Minor Core Requirements

18 Credits

Course No.	Title	Credits
CRJS 101	Introduction to Criminal Justice	3
CRJS 235	Courts	3
CRJS 312	Criminology	3
CRJS 236	Law Enforcement	3
CRJS 291	Introduction to Corrections	3
CRJS 454	Contemporary Criminology Theory	3



Office of Public Safety

**CRIMINAL JUSTICE PROGRAM**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
CRJS	101	Intro Criminal Justice	3
MATH		Elective 102 or above	3
EDHE	111	Personalized Health Fitness	3
SOCI	101	Intro Sociology	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	
SOCI	201	Social Problems <b>or</b>	3
SOCI	202	Social Deviance	3
		GER CURR. AREA III	4
PSYC	200	Introduction to Psychology	3
CRJS	236	Law Enforcement	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund of Contemporary Speech	3
		GER CURR. AREA I	3
		GER CURR. AREA II	3
		GER CURR. AREA III	3
CRJS	290	Research Methods	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3
CRJS	291	Intro. to Corrections	3
CSDP	220	Intro to Computer Program. <b>or</b>	4
BUED	212	Computer Concepts/Apps. I	3
CRJS	235	Courts	3
		Free Electives	<u>3</u>
<b>Semester Total</b>			<b>15/16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA I	3
		GER CURR. AREA VI	3
CRJS		300/400 Elective	3
CRJS		300/400 Elective	3
CRJS	312	Criminology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
PSYC	370	Abnormal Psych.	3
		GER CURR. AREA II	3
CRJS		300/400 Elective	3
CRJS	350	Juvenile Delinquency	3
CRJS	374	Statistical Methods	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CRJS		Elective (300/400)	3
CRJS		Elective (300/400)	3
CRJS		Elective (300/400)	3
		Free Elective	3
		Free Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Free Elective	3
		Free Elective	3
CRJS		Elective (300/400)	3
		Free Elective (s)	<u>3/4</u>
<b>Semester Total</b>			<b>12/13</b>
<b>Total Credits Required</b>			<b>120</b>

## COURSE DESCRIPTIONS

### CRIMINAL JUSTICE

- CRJS 101 Introduction to Criminal Justice 3 crs.**  
This course presents an overview of the functioning of the criminal justice system and its relationship to society.
- CRJS 230/230H Criminal Law and Procedures/Honors 3 crs.**  
This course deals with the nature, sources, and types of criminal law; behavioral and legal aspects of criminal acts; classification and analysis of selected criminal offenses; and general principles and theories of criminal procedures. Prerequisite: CRJS 101.
- CRJS 234/234H The Law of Evidence/Honors 3 crs.**  
This course involves the study and evaluation of evidence and proof. Prerequisite: CRJS 101.
- CRJS 235 Courts 3 crs.**  
This course presents an introduction to the structure, jurisdiction, policies, procedures, and processes of local, state, and federal courts and the role of the defense attorney, prosecutor, and judge. Special focus on adjudication, sentencing, and the jury. Prerequisite: CRJS 101.
- CRJS 236 Law Enforcement 3 crs.**  
This course is an introduction to law enforcement, with emphasis on police organizations and functions. It covers the recruitment, training, and socialization of police officers, the use of deadly force and selective enforcement of the law, and other critical issues in policing. Prerequisite: CRJS 101.
- CRJS 290 Research Methods in Criminology and Criminal Justice 3 crs.**  
This course deals with qualitative and quantitative methodology in criminological research, design, analysis, logic, data collection, research writing, planning, and elementary statistics. There is emphasis on computer analysis. Prerequisite: CRJS 101.
- CRJS 291 Introduction to Corrections 3 crs.**  
This course presents an introduction to the origin, history, practices, procedures, and traditional and contemporary philosophies of corrections. Prerequisite: CRJS 101
- CRJS 312/312H Criminology/Honors 3 crs.**  
This course is an introduction to the analysis and explanation of criminal behavior from differing perspectives. Prerequisite: CRJS 101, SOCI 201, or SOCI 202.
- CRJS 323/323H Organizational and Governmental Deviance/Honors 3 crs.**  
This course is an analysis of internal (pilfering, embezzlement, corruption, violence, drug abuse) and external (chemical dumping, hazardous product sales, etc.) forms of organizational deviance and control. Prerequisite: CRJS 101.

- CRJS 350/350H Juvenile Delinquency/Honors 3 crs.**  
This course is an analysis of historical and contemporary factors underlying juvenile delinquency, its treatment, and its prevention. Prerequisites: CRJS 101, SOCI 202 or 201.
- CRJS 352 Law Enforcement Community Relations 3 crs.**  
This course examines factors affecting the relationship between law enforcement agencies and the communities in which they are embedded. Police strength, use of deadly force, assaults on police, and other indices will be discussed. Prerequisites: CRJS 101, CRJS 236.
- CRJS 359 Field Training in Criminology and Criminal Justice 1-6 crs.**  
This course entails a supervised research project in a criminal justice agency. Prerequisites: Junior or Senior Standing.
- CRJS 359A Field Training in Criminology and Criminal Justice (with Juvenile Services) 3 crs.**  
This is a service-learning course which requires students to serve as mentors to juvenile delinquents.
- CRJS 360 Specialized Criminal Justice Education/Training (Land Management Law Enforcement) 9 crs.**  
This course provides intensive basic parks and land management law enforcement training. The course includes education/training in legal aspects, behavioral science, enforcement techniques, patrol operations, enforcement skills, and National Park Service specific subjects, such as history, philosophy, guidelines and policies. Successful completion of the course will enable students to be commissioned as Level II law enforcement rangers. Prerequisites: Junior or Senior standing or permission of the appropriate Department Head.
- CRJS 373 Criminal Justice Administration 3 crs.**  
This course deals with the principles of structure, process, and procedure in criminal justice administration. Prerequisite: CRJS 101.
- CRJS 374 Statistical Methods in Criminal Justice and Criminology 3 crs.**  
This course involves the statistical analysis of data including statistical computations, interpretations, and reporting of findings. Prerequisite: CRJS 101.
- CRJS 375 Judicial Process 3 crs.**  
This course examines the impact of judicial decision on social policy as it relates to criminology and criminal justice administration. Emphasis is placed on the federal constitutional courts, the growth of law, and the law making of the courts. Prerequisite: CRJS 101.
- CRJS 376 Victimology 3 crs.**  
This course examines the impact of victimization upon the victim; new emphasis on the role of the victim in criminal justice practice; and victim impact statement, assistance, and restitution. Prerequisite: CRJS 101.

- CRJS 432/432H Law of Corrections/Honors 3 crs.**  
This course examines the evolution and current status of the law governing correctional institutions, prisoners' rights, and their relationship to society. Prerequisites: Junior Standing, CRJS 101, CRJS 291
- CRJS 450/450H Treatment of Control of Criminals and Delinquents/Honors 3 crs.**  
This course examines alternative institutional and non-institutional approaches to treatment and control of criminal and delinquent populations. Prerequisites: Junior Standing, CRJS 101, CRJS 291
- CRJS 451/451H Crime and Delinquency Prevention/Honors 3 crs.**  
This course is an analysis of types of crime and delinquency prevention. Prerequisites: CRJS 101 and CRJS 312.
- CRJS 454/454H Contemporary Criminological Theory/Honors 3 crs.**  
This course examines advances in criminological theory and research from biological, psychological, and sociological perspectives. Prerequisites: Junior or Senior Standing, CRJS 312 .
- CRJS 455 Psychology of Criminal Behavior 3 crs.**  
This course entails an in-depth examination of psychological factors in criminal behavior, the role of the psychologist in constructing profiles of different types of criminals, and problems in validation. Prerequisites: Junior or Senior Standing, CRJS 101.
- CRJS 457 Dynamics of Planned Change in Criminal Justice 3 crs.**  
This course deals with the use of research, social science, and management theory as tools in the planning and evaluation of change in the criminal justice system. Prerequisites: Junior or Senior Standing, CRJS101.
- CRJS 492 Special Topics in Criminology and Corrections 3 crs.**  
This course examines special topics in criminology and corrections. Prerequisites: CRJS 312 and Approval of Instructor.
- CRJS 492A Special Topics: Criminology & Corrections 3 crs.**
- CRJS 492B Special Topics: Women in Corrections 3 crs.**
- CRJS 492C Special Topics: Crime, Class, and Ideology 3 crs.**
- CRJS 492D Special Topics: Unequal Justice 3crs.**
- CRJS 492E Special Topics: Terrorism 3crs.**
- CRJS 492F Special Topics: Police, Law and Society 3 crs.**
- CRJS 492G Special Topics: Forensics 3 crs.**
- CRJS 498 Independent Study 3 crs.**  
This course entails guided reading on special topics in criminal justice. Prerequisites: Junior or Senior Standing, CRJS 101, CRJS 290

**FACULTY****Harleston, Robert**

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M.P.A., Texas Southern University  
Ph.D., University at Albany, State  
University of New York

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**MISSION**

The mission of the Department of Education is to advance the science and practice of education and to promote related careers in counseling and mental health. Toward this end, the Department of Education offers state-of-the-art undergraduate and graduate teacher education programs, a Master of Arts in Teaching, and a graduate Guidance and Counseling Program. The Department of Education seeks to nurture minds, to advance knowledge, and to promote life-long learning.

The undergraduate teacher education programs lead to the baccalaureate degree in a variety of specialty areas. This course of study prepares students to become qualified teachers and to assume the complex role of a teacher in the classrooms of the twenty-first century. The primary goal of the undergraduate teacher education program is to ensure success within the teaching profession by: 1) providing a comprehensive knowledge base that ensures competency in the subject matter and in the processes of education and 2) providing the opportunity to develop appropriate clinical skills. This program reflects current trends in the field of education and emphasizes excellence in both the theoretical and applied domains.

The Department of Education also offers basic undergraduate psychology courses which complement the teacher education program. These psychology courses are designed to give direct support to other academic departments by providing a substantial course of study in the area of psychology. The department does not offer a psychology major.

**GOAL**

The overarching goal of the teacher education programs is to develop culturally and ethnically sensitive instructional leaders who work to elevate the quality of schools and to improve achievement for all students, regardless of their environmental circumstances. The program strives to educate a diverse population of teachers who are able to address the unique challenges of the twenty-first century. Emphasis is placed on preparing minority and rural educators.

**OBJECTIVES**

The objectives of the Department of Education are delineated as follows:

- To equip teacher candidates with the professional knowledge base of change strategies that enables them to participate in school restructuring
- To prepare teacher candidates to become engaged critical and creative thinkers, problem solvers, and reflective professionals
- To enable teacher candidates to review and embrace their personal heritage in order to facilitate learning for individuals from diverse ethnic and cultural backgrounds
- To develop teachers who are consumers, brokers, and generators of school-based research
- To prepare teacher candidates who are innovative users of and advocates for content technology-based instruction including internet resources and interactive dialogue
- To produce educational and community leaders who integrate state, national, and international priorities into instructional and assessment strategies
- To prepare teacher candidates who incorporate national and state professional standards, including INTASC principles, into their practice
- To prepare teacher candidates who incorporate the Professional Education Unit's Conceptual Framework into their practice
- To demonstrate appropriate human, conceptual, and technical skills when working with students and other educational stakeholders
- To prepare teacher candidates with a commitment to the moral obligations of teaching so as to ensure equitable access to and engagement in the best

possible P-12 education for all children and youth including those with disabilities, those for whom

English is a second language, and those who are gifted and talented

### CONCEPTUAL FRAMEWORK

The University of Maryland Eastern Shore's Professional Education Unit's programs prepare **professionals** who are **reflective**, and **innovative**, who value **diversity**, and who are **effective (PRIDE)**. Our candidates are **professionals** who are dedicated and committed to excellence and have specialized knowledge and intensive academic preparation. They continuously **reflect** on and evaluate their practices and demonstrate a willingness to make changes that enhance student growth and learning. Moreover, candidates are **innovative** in employing the best contemporary practices using creative problem-solving techniques and connections to real world experiences. Our paradigm for valuing **diversity** centers on understanding and interacting with individuals in various educational, social, and cultural environments. Finally, our candidates demonstrate the knowledge, skills and dispositions that support **effective** student learning outcomes.

### INTASC PRINCIPLES

The Teacher Education Program at the University of Maryland Eastern Shore subscribes to the principles of the Interstate New Teacher Assessment and Support Consortium (INTASC). It is our goal that our teacher candidates will strive to achieve these guiding principles:

#### Principle #1:

**The teacher understands the central concepts, tools of inquiry, and the structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.**

#### Principle #2:

**The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.**

#### Principle #3:

**The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.**

#### Principle #4:

**The teacher understands a variety of instructional strategies to encourage students' development of critical thinking, problem-solving, and performance skills.**

#### Principle #5:

**The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.**

#### Principle #6:

**The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.**

#### Principle #7:

**The teacher plans instruction based upon knowledge of subject matter, the community, and curriculum goals.**

#### Principle #8:

**The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.**

#### Principle #9:

**The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and professionals in the learning community) and who actively seeks out opportunities to grow professionally.**

#### Principle #10:

**The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.**

### DESCRIPTION OF PROGRAMS

#### MAJOR PROGRAMS

The University offers and the Department of Education directs a variety of state-approved (accredited) undergraduate programs in the field of teacher education. The undergraduate department is organized into two (2) primary program areas: 1) Specialty Education and 2) Secondary Education. These primary program areas have met stringent accreditation standards, or accreditation is pending. After passing State requirements, all Education majors completing an approved program qualify for teacher certification through the Maryland State Department of Education (MSDE).

All undergraduate Education majors are enrolled, full or part-time, in a four (4) year formal, state-approved program of study. Every Education major selects either the Specialty or Secondary program area. All Education majors also choose a specific area of specialization within their general program area. The specialization curriculum offers the students the opportunity to become competent, confident, and effective educational practitioners in a highly specialized content area. Students may not minor in Education.

#### SPECIALTY EDUCATION

The Specialty Education Program is distinctive in that it offers three (3) highly specialized areas of study. These include:

Art Education	(PreK-12)
Music Education	(PreK-12)
Special Education	(1-8; 6-12)

Specialty Education majors may major in Music Education, Art Education, or Special Education, and they are enrolled in both the Department of Education and the specialized academic department. Students must complete the curriculum that is required by the Department of Education and the curriculum that is required by their respective academic departments.

The Art and Music (Instrumental and Choral) Education programs, located in the Department of Fine Arts, prepare teachers to work with students in all age groups from Pre-Kindergarten through Twelfth (P-12) grade, inclusively. The Special Education program, located in the Department of Education, prepares teachers to work with students with mild and moderate disabilities, including those with learning disabilities, mental retardation, and emotional disturbance, and it prepares teachers to work with students from first through eighth grade (1-8) and sixth through twelfth (6-12) grade, inclusively.

All of these specializations supplement traditional classroom instruction. The Specialty Education Program is dedicated to producing outstanding educators who are fully able to support education in various contexts. In the Specialty Education Program, there is special emphasis on cultural diversification, human relations, inter-program collaboration, and inclusion. **Specialty area programs are approved by the Maryland State Department of Education.**

#### ***SECONDARY (MIDDLE/HIGH SCHOOL) EDUCATION***

The Secondary Education Program offers a variety of content areas and instructional levels in which the student may specialize. College preparatory disciplines as well as career development specialties at the secondary (i.e., middle and/or high school) level are available. These include the following:

##### Secondary (Middle/ High School)

Agriculture	(7-12)
Biology	(7-12)
Business Education	(7-12)
Chemistry	(7-12)
English	(7-12)
Family and Consumer Sciences	(7-12)
Mathematics	(7-12)
Social Studies	(7-12)
Technology Education	(7-12)

Education majors enrolled in the Secondary Education Program must complete the curriculum that is required by the Department of Education and the curriculum that is required by the respective academic departments. **Successful completion of the prescribed course of study in the content area in an approved. Secondary Education Program will prepare candidates to become certified and to teach at the middle and/or high school level.**

#### **POLICIES AND PROCEDURES**

The Department of Education publishes a Teacher Education Handbook that contains all departmental standards, rules,

policies, procedures, and regulations. All students are bound by the conditions set forth in the Teacher Education Handbook.

#### **SPECIAL PROGRAMS**

##### ***COLLABORATIVE PROGRAMS***

The University of Maryland Eastern Shore (UMES) and Salisbury University (SU) work collaboratively to implement their pre-service teacher preparation programs. When appropriate students may take required courses at either university by consulting the appropriate schedule of courses and securing the consent of their advisors before enrolling in the courses. **No additional fees are required. Shuttle bus transportation** is provided from each campus to the other. The intercampus enrollment form must be completed with appropriate signatures and submitted to the registrar on either the UMES or SU home campus before enrollments are officially completed.

##### ***TEACHER EDUCATION REFORM***

The State of Maryland, under the shared leadership of the Maryland State Department of Education (MSDE), the University System of Maryland (USM), and the Maryland Higher Education Commission (MHEC), developed a plan that informs and directs the reform of teacher preparation programs. The Maryland Redesign of Teacher Education extends school improvement from the primary grades through the colleges and universities (PreK-16) that prepare professional personnel.

##### ***PROFESSIONAL DEVELOPMENT SCHOOLS***

Based on the Maryland State Professional Development School Standards, UMES has created several state-of-the-art Professional Development Schools (PDSs) in partnership with local school systems. UMES has PDSs at the elementary, middle, and high school levels. As required by the Redesign, all UMES teacher candidates have extensive internships in PDSs under the supervision of certified, tenured teachers. The PDS environment has created a unique opportunity for P-16 faculty, teacher candidates, and students to collaborate to improve instruction.

##### ***PSYCHOLOGY***

The Department of Education offers a number of psychology courses as support courses to various majors on campus. These psychology courses ensure that all students have the opportunity to study the basic theories and applications of psychology. There is no psychology major.

#### **CURRICULUM**

The course of study prescribed for all Education majors (SPECIALTY AND SECONDARY) is composed of four major phases. These four (4) phases of study constitute the standardized curriculum that all Education majors should complete. The teacher education program includes the following designated phases of study. Each program has an

approved scope and sequence of courses listed in the most current edition of the Teacher Education Handbook.



**PHASE ONE****GENERAL EDUCATION REQUIREMENTS**

The student completes the general education requirements established by the university. These courses are usually taken during the first two years of enrollment. All students at UMES are expected to complete a common body of academic course work. Teacher education majors should consult their academic advisors and the [Teacher Education Handbook](#) for the specific courses in their majors.

**Curriculum Area I:**

(Arts and Humanities) 9 Semester Hours

**Curriculum Area II:**

(Social Sciences) 6 Semester Hours

**Curriculum Area III:**

(Biological and Physical Sciences) 7-8 Semester Hours

**Curriculum Area IV:**

(Mathematics) 3-8 Semester Hours

**Curriculum Area V:**

(English Composition) 9 Semester Hours

**Curriculum Area VI:**

(Emerging Issues) 1-7 Semester Hours

**TOTAL NUMBER OF SEMESTER HOURS**

**REQUIRED: 40-47 Hours**

**PHASE TWO****PROFESSIONAL EDUCATION FOUNDATION**

A series of core education courses and integrated clinical experiences, are carefully designed to provide all education majors with a critical foundation of knowledge. This knowledge-base is an essential prerequisite to advanced study in the specialization phase. **All education majors are required to complete this standardized core curriculum.** Additional courses may be required by specific programs.

<b>EDCI 200A or B</b>	Intro. to Contemporary Ed.	3 hrs.
<b>*EDCI 306</b>	Integrating Tech. into the Cur.	3 hrs.
<b>EDSP 200 A or B</b>	Intro. to Special Education	3 hrs.
<b>PSYC 305</b>	Human Growth and Develop.	3 hrs.
<b>PSYC 307</b>	Educational Psychology	3 hrs.
	<b>TOTAL</b>	<b>15 hrs.</b>

**\*(or approved substitute course)**

**PHASE THREE**

**MAJOR/SPECIALIZATION FOUNDATION** - Only students who have formally advanced to [Teacher Candidate](#) status are eligible to enroll in the major/specialization phase. Standards have been established for advancement and are published by the Department of Education on the website ([www.umes.edu/education](http://www.umes.edu/education)) and in the [Teacher Education](#)

[Handbook](#). Students are selectively admitted to this phase of the program. **They must have a grade point average of 2.75 and passing PRAXIS I scores for program entry, in addition to meeting other requirements.** Students must complete and submit a **Teacher Education Application** which can be obtained from the website or from the Department of Education.

In this phase of study, each student must complete the specific courses required in their major/specialization area. This third phase of study and preparation includes coursework and integrated field work in the student's major area of specialization or concentration. The courses which comprise the specialization phase organize and structure an in-depth study of a content/specialty area. Prospective teachers are thoroughly trained in both the content area and effective instructional delivery.

The curriculum in this phase of study is established jointly by the Department of Education and the respective academic department. The number of required semester hours in the specialization phase of the teacher education program will vary depending on the specialty area. These requirements are listed in the [Teacher Education Handbook](#).

*COMMON REQUIRED SPECIALIZATION COURSES FOR SPECIALTY (except Special Education) AND SECONDARY MAJORS (Other Specialty courses are required by specific programs.):*

<b>EDCI 311</b>	Comprehensive Assessment	3 hrs.
<b>EDCI 406</b>	Classroom Management	3 hrs.
<b>EDCI 409</b>	Reading in the Content Areas I	3 hrs.
<b>EDCI 410</b>	Reading in the Content Areas II	3 hrs.
<b>EDCI 4XX</b>	Content Methods III	3 hrs.

**TOTAL NUMBER OF SEMESTER HOURS  
REQUIRED: 15 Hrs.**

*COMMON REQUIRED SPECIALIZATION COURSES FOR SPECIAL EDUCATION MAJORS:*

<b>EDSP 401</b>	Processes & Acquisition of Reading and Language for Students with Disabilities	3 hrs.
<b>EDSP 402</b>	Instruction of Reading & Language for Students with Disabilities	3 hrs.
<b>EDSP 403</b>	Materials for Reading & Language for Students with Disabilities	3 hrs.
<b>EDSP 404</b>	Assessment, Diagnosis and Remediation of Reading Problems for Students with Disabilities	3 hrs.
<b>EDSP 414</b>	Psycho-educational Assessment I	3 hrs.
<b>EDSP 416</b>	Program Development and Instructional Delivery for Students with Disabilities	3 hrs.
<b>EDSP 422</b>	Psycho-educational Assessment II	3 hrs.

<b>EDSP 426</b>	Instruction of Mathematics for Students with Disabilities	3 hrs.
<b>EDSP 428</b>	Communication and Collaboration in Special Education	3 hrs.
<b>EDSP 430</b>	Technology in Special Education	3 hrs.
<b>EDSP 431</b>	Instruction of Pre-Vocational/ Vocational and Transitional Programs for Students with Disabilities	3 hrs.
<b>PSYC 406</b>	Applied Behavior Analysis	3 hrs.
<b>TOTAL NUMBER OF SEMESTER HOURS REQUIRED: 36 Hours</b>		

#### ***CLINICAL AND FIELD EXPERIENCES***

The Department of Education requires a variety of clinical and field experiences during which students work in the field, including a full-time teaching internship. Students must be fully prepared to assume the responsibility associated with these experiences. The clinical and field experiences are a critical part of the teacher preparation programs. The Clinical and Field Experiences Handbook outlines all expectations and requirements.

#### **PHASE FOUR**

***TEACHING INTERNSHIP (SUPERVISED CLASSROOM TEACHING)*** - The internship is the culmination of the teacher education program. The Teaching Internship consists of two full-time placements in two (2) different classroom settings, in Professional Development Schools. Each setting exposes students to a different age group or level. Students will be assigned to the Teaching Internship based on program requirements and school system availability. In order to be eligible for admission to the Teaching Internship, students must meet the following requirements:

- 1) Minimum 2.75 overall grade point average. Any courses transferred into UMES will be counted as part of the cumulative grade point average.
- 2) Minimum 2.75 grade point average in major.
- 3) Successful completion of the PRAXIS II-Specialty Area Tests. Students must take and pass the PRAXIS II in their content area before being eligible for their Teaching Internship. Cut-off scores are determined by the Maryland State Department of Education. Registration for the PRAXIS II should be completed as early as possible but no later than the semester before the Teaching Internship. Passing scores must be reported to UMES from ETS before the internship begins.
- 4) All courses, with the exception of the Teaching Internship, and Senior Seminar must be completed (i.e., no incomplete grades).

- 5) Two recommendations from Teacher Education faculty.
- 6) Completion of the Application for Teaching Internship.
- 7) The Department of Education is committed to providing a quality, supervised internship experience and to providing every student with rich and varied internship options. Every student in a degree-seeking program, who is an Education major, is assigned to an internship on a **full-time basis**. **Students must provide their transportation to all internship and field experience sites.**

#### **SPECIALTY EDUCATION**

##### Art/Music (PreK-12)

EDCI 440	Teaching Internship I (E)	6 hrs.
EDCI 450	Teaching Internship II (S)	6 hrs.
EDCI 400	Senior Seminar	3 hrs.

##### Special Education (1-8; 6-12)

EDSP 442	Teaching Internship I (E)	6 hrs.
EDSP 450	Teaching Internship II (S)	6 hrs.
EDSP 400	Senior Seminar	3 hrs.

#### **SECONDARY EDUCATION**

##### Secondary (7-12)

EDCI 460X/480X	Teaching Internship I (Middle)	6 hrs.
EDCI470X/490X	Teaching Internship II (High)	6 hrs.
EDCI 400	Senior Seminar	3 hrs.

#### **ELECTIVE COURSEWORK**

The amount of elective coursework fluctuates depending on the area of specialization. The university offers a wide variety of related coursework. The Professional Education Unit emphasizes a multi-disciplinary approach and believes elective coursework complements the candidate's teacher education program.

#### **RETENTION**

The Department of Education enforces a strict retention policy. All Education majors must remain in good academic standing with the department and in their respective programs. Students must work to demonstrate adequate progress in all coursework and adequate professional growth. Students must show evidence of continuous growth and the ability to meet the rigorous professional, intellectual, and ethical standards of the teaching profession. The Teacher Education Handbook outlines specific requirements.

#### **ADVISING**

The Department of Education is committed to providing every Education major with academic advising of the highest quality. All Education majors are assigned academic advisors who provide the students with information, guidance, and support during their tenure in the department. Academic advising is based upon the mentor model, and all students are encouraged to become fully involved in all the activities of the department.

**SECONDARY AND SPECIALTY CONTENT MAJORS**

Programs for secondary and specialty content majors who plan to teach and content advisors are located in the academic departments. Students who plan to teach must follow the advice of and work out their schedules with the teacher educator in their departments. Course sequences for each secondary and specialty content major may be found under the specific department in which the student is majoring or in **The Teacher Education Handbook**. **The Department of Education has a listing of the Teacher Educators for each program. The Teacher Education Handbook outlines all expectations and requirements for all undergraduate Teacher Education Programs.**

**SPECIAL EDUCATION MAJORS**

The only undergraduate major that is located in the Department of Education is Special Education. Students majoring in Special Education are assigned an advisor who is a faculty member in the Department of Education. Below is a list of the sequence of courses that all Special Education majors must take. Course sequences for all other programs may be found under the departmental information in this catalog, in the **Teacher Education Handbook**, or on the website ([www.umes.edu/education](http://www.umes.edu/education)).



Financial Aid Staff at UMES

**SPECIAL EDUCATION**  
**Required and Recommended Course Sequence**

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION – 44 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Course No.	Title	Credits
ARTS 101	Exploration of the Visual Arts	3
ENGL 203	Fundamentals of Contemporary Speech	3
ELECTIVE	Choose one humanities course in consultation with advisor	3

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
HIST 101	Historical of World Civilization I <u>or</u>	
HIST 102	History of World Civilization II	3
PSYC 200	Introduction to Psychology	3

**C. Curriculum Area III - (Biological and Physical Sciences) 7 Credits**

Course No.	Title	Credits
BIOL 101	Theories and Concepts of Biological Sciences	3
BIOL 103	Biological Science Lab	1
ENVS 101	Introduction to Environmental Science	3

**D. Curriculum Area IV - (Mathematics) 6 Credits**

Course No.	Title	Credits
MATH 102	Applications of College Math ( <u>or</u> higher course)	3
MATH 210	Elementary Statistics	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI (Emerging Issues) 7 Credits**

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3
EDCI 306	Integrating Technology into the Curriculum	3

**II. Program Core Requirements 21 Credits**

Course No.	Title	Credits
EDCI 200	Introduction to Contemporary Education	3
EDSP 200A	Introduction to Special Education	3
PSYC 305	Development Psychology	3
PSYC 307	Educational Psychology	3
PSYC 371	Abnormal Psychology	3
SOCI 101	Introduction to Sociological	3
POLI 200	Introduction to American Government <u>or</u>	
HIST 201	History of American Civilization I <u>or</u>	
HIST 202	History of American Civilization II	3

<b>III.</b>	<b>Special Education Major/Specialization</b>	<b>36 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	<b>Credits</b>	
	EDSP 401	Processes & Acquisition of Reading & Language for Students with Disabilities
		3
	EDSP 402	Instruction of Reading and Language for Students with Learning Disabilities
		3
	EDSP 403	Materials for Reading and Language for Students with Learning Disabilities
		3
	EDSP 404	Assessment, Diagnosis, and Remediation of Reading
		3
	EDSP 414	Psycho-educational Assessment I
		3
	EDSP 416	Program Development & Instructional Delivery for Students with Disabilities
		3
	EDSP 422	Psycho-educational Assessment II
		3
	EDSP 426	Instruction of Mathematics for Students with Disabilities
		3
	EDSP 428	Communication & Collaboration Skills in Special Education
		3
	EDSP 430	Technology in Special Education
		3
	EDSP 431	Instruction of Prevocational/Vocational & Transitional Programs for Students with Disabilities
		3
	PSYC 406	Applied Behavior Analysis
		3
<b>IV.</b>	<b>Teaching Internship</b>	<b>15 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	<b>Credits</b>	
	EDSP 442	Teaching Internship in Special Education (Elementary)
		6
	EDSP 450	Teaching Internship in Special Education (Secondary)
		6
	EDSP 400	Senior Seminar in Special Education
		3
<b>V.</b>	<b>Free Electives</b>	<b>6 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	<b>Credits</b>	
		Choose <b>two</b> courses in consultation with advisor.
		6
	<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>122</b>

**\* PROFESSIONAL EDUCATION REQUIREMENTS**

- **All students** who wish to major in teacher education must have an overall and major content grade-point average of 2.75 for admission to and retention in the program. This includes students who transfer to UMES.
- Grades of “C” or above must be attained in each required course of the major, the specialized content area combined with the professional education courses.
- **The PRAXIS I** examination (scheduled and administered by Educational Testing Services) must be taken and passed, and scores must be submitted to the Education Department as a pre-condition for admission to teacher education.
- **The PRAXIS II** examination (scheduled and administered by Educational Testing Services) must be taken and passed, and scores must be submitted to the Education Department as a pre-condition for the teacher internship experience.
- **Teacher Candidates** must show evidence of demonstrating the appropriate knowledge, skills, and dispositions related to the Conceptual Framework (**PRIDE**) and essential to entry into the profession of teaching.

**ALL PERSONS WHO ARE PREPARING TO TEACH IN SPECIALTY AND SECONDARY AREAS MUST ALSO COMPLETE ALL PROFESSIONAL EDUCATION COURSES WITH A GRADE OF C OR BETTER. FOR ALL STUDENTS OTHER THAN SPECIAL EDUCATION MAJORS, THESE COURSES ARE LISTED BELOW. PROFESSIONAL EDUCATION COURSES FOR SPECIAL EDUCATION MAJORS ARE LISTED ON THE PRECEDING PAGE.**

Course No.	Title	Credits
EDCI 200	Introduction to Contemporary Education	3
EDCI 306	Integrating Technology into the Teaching Curriculum <u>or</u> Approved substitute course	3
PSYC 200	Introduction to Psychology	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Reading in the Content Areas I	3
EDCI 410	Reading in the Content Areas II	3
EDSP 200	Introduction to Special Education	3
EDCI 4XX	Curriculum and Instructional Methods for Teaching Content-Specific Areas	3

(**Note:** Consult this catalog for the appropriate letter that designates your specific field.)

EDCI 440 and EDCI 450; or EDCI 460 and EDCI 470; or EDCI 480 and EDCI 490 Teaching Internship 6 + 6  
(**Note:** Consult this catalog for the appropriate letter that designates your school level.)

EDCI 400 Senior Seminar in Education 3  
(Concurrently taken with Teaching Internship) for all Teacher Education majors

**\* Effective August 8, 2003, all students who wish to enter the Teacher Education Program at the University of Maryland Eastern Shore must take and meet Maryland passing scores on the Praxis I test and have a 2.75 overall grade point average, in addition to meeting all other requirements on the application. In order to remain in the Teacher Education Program, students must maintain a 2.75 overall grade point average as well as a 2.75 grade point average in their major. To be admitted to the Teacher Education Student Internship, students must take and meet Maryland passing scores on the required Praxis II test in their major. They must also meet all other requirements as specified in the *Teacher Education Handbook*. These requirements apply to ALL students who desire to be admitted to the Teacher Education Program including, but not limited to, those students who have already been admitted to the University and who have declared a teaching education major.**



**SPECIAL EDUCATION****Preparing Teachers to Work with Students with  
Mild and Moderate Disabilities (grades 1-8; 6-12)****FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	102	Applications of College Math	3
ENVS	101	Intro. to Environmental Sci.	3
HIST	101	History of World Civ. I	3
ARTS	101	Exploration of Visual Arts	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
SOCI	101	Introduction To Sociology	3
BIOL	101	Theories and Aps to Biol. Sci.	3
BIOL	103	Biological Science Lab	1
EDHE	111	Personalized Health Fitness	3
PSYC	200	Introduction to Psychology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fundamentals of Speech	3
EDCI	200	Intro to Contemporary Ed.	3
EDCI	306	Integrating Tech in the Classroom	3
POLI	200	Intro to American Government	3
EDSP	200	Intro to Special Education	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
PSYC	305	Development Psychology	3
PSYC	307	Educational Psychology	3
MATH	210	Elementary Statistics	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDSP	401	Processes and Acquisition	3
EDSP	414	Psych-educational Assess. I	3
EDSP	416	Program Development	3
EDSP	426	Instruction of Math Stu./Disable	3
PSYC	371	Abnormal Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDSP	402	Instru. In Read/Lang.	3
EDSP	403	Materials for Reading	3
EDSP	422	Psych. Assess. II	3
PSYC	406	Applied Behavior Analysis	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDSP	404	Assess./Diagn. & Remed. Read.	3
EDSP	428	Comun & Collab. In Spec. Ed.	3
EDSP	430	Technology in Special Ed.	3
EDSP	431	Prevocational/Vocational Trans.	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDSP	400	Senior Seminar	3
EDSP	442	Internship (Elementary)	6
EDSP	450	Internship (Middle/Secondary)	<u>6</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**                      **122**

## COURSE DESCRIPTIONS

### EDUCATION

#### **EDCI 200 Introduction to Contemporary Education 3 crs.**

This course is a comprehensive overview of the foundations of education in the United States. It incorporates the historical, political, economic, legal, social, philosophical and curricular foundations to provide future educators with an understanding of the teaching profession and the issues and controversies confronting American education today. The topics covered in the course provides novice educators with a broad picture of P-12 education and schooling in the United States. The primary focus is the preparation of reflective teachers who will make informed decisions that will improve and enhance the learning environment for children. Students will have a required field experience in the local public schools, as well as required preparation for the Praxis I tests.

#### **EDCI 306 Integrating Technology into the Curriculum 3 crs.**

This course emphasizes the use of technologies to promote teaching and learning in the P-12 environment. Major software applications (e.g., MAC OS X, Microsoft 2000, WebCT), Internet resources, and related technologies will be fully covered. Each class focuses on applications that include useful educational tools and methods for designing and delivering instruction.

#### **EDCI 311 Comprehensive Assessment in Education 3 crs.**

This course is designed to present an in-depth study of the purposes, principles, practices, and ethics of student assessment in elementary and secondary classrooms. The course emphasizes the basic concepts and terminology of assessment, as well as classroom applications. The course addresses the purposes, goals, and strategies for developing, administering, and interpreting a variety of assessments, including performance, portfolio, and standardized assessments. An understanding of current trends and practices in state and national assessment is emphasized. Prerequisite: Teacher Candidacy Status.

#### **EDCI 400 Senior Seminar in Education 3 crs.**

The senior seminar is designed to supplement and complement the teaching internship phase of the teacher education program. The seminar focuses on the analysis and synthesis of the internship experiences so that teacher interns may successfully integrate their experiences into future practice. Preparation of a professional portfolio, maintenance of a log book and journal, and participation in group synthesis and analysis are required. This course is intended for all secondary and P-12 specialty teacher interns. Students enroll concurrently in the teaching internship and the senior seminar. Prerequisites: Admission to the Teacher Internship. This includes passing the Praxis II Tests for the specific content or specialty major.

#### **EDCI 406 Classroom Management 3 crs.**

This course introduces the basic theories, techniques, and skills necessary to successfully manage small and large groups of diverse student populations at the elementary and secondary school levels. The focus of the course is on the study and application of effective individual and group management techniques based upon behavioral, cognitive, environmental, developmental, and psychoanalytic theories. Special emphasis is placed on developing supportive learning environments that promote self-esteem and motivate success. Students will have a required field experience in the local public schools. Prerequisite: Teacher Candidacy Status.

#### **EDCI 408 Multicultural Education 3 crs.**

This course is designed to introduce the theories and dynamics of multicultural education. Ethnic, racial, and cultural diversity in education is explored. Through a global perspective, the impact of changing demographics on the educational system is discussed. Sensitivity and responsiveness to different economic, social, cultural, racial, ethnic, and religious backgrounds are promoted.

#### **EDCI 409 Teaching Reading in the Content Areas: Part I 3 crs.**

This course addresses the fundamentals of the reading process, theories, and instructional strategies. It emphasizes the development of vocabulary and comprehension skills, the assessment of student reading levels, and textbook readability, with particular emphasis on the reading of content material at the secondary level. This course is intended for all secondary and P-12 specialty area teacher candidates. This course includes a required field experience. Prerequisite: Teacher Candidacy Status.

#### **EDCI 410 Teaching Reading in the Content Areas: Part II 3 crs.**

This course addresses the literacy needs of diverse student populations and includes training in specific strategies to facilitate reading comprehension, incorporate writing to increase reading comprehension, interpret standardized reading test scores, use collaborative learning to promote literacy and content learning, and model processes for assessing literacy growth. It builds on theories and strategies in EDCI 409. A field experience/pre-internship in the area of specialization at a Professional Development School is required. This course is intended for all secondary and P-12 specialty area teacher candidates. Prerequisites: Teacher Candidacy Status and a "C" or better in EDCI 409.

#### **EDCI 42X Curriculum and Instruction in Content-Specific Areas 3 crs.**

This course is an in-depth study of current instructional methods and curricular materials used in teaching content in grades relative to the specific area (i.e., P-12 or 7-12). The focus of the course is on effective program development and instructional delivery. It includes lesson and unit planning, collecting reference and illustrative materials, observing and



evaluating teaching, and applying effective strategies and techniques. Additional curricular topics include performance objectives, student outcomes, scheduling, community resources, and specialized equipment and technology. The philosophy, history, and important issues and trends related to the content specific area of education are included. A field experience/pre-internship in the content specific area at a Professional Development School is required. Refer to individual areas for specific course descriptions. Prerequisite: Teacher Candidacy Status.

**EDCI 430 Methods and Materials for Teaching Art P-12 3 crs.**

This course is an in-depth study of current instructional methods and curricular materials used in teaching art in grades P-12. The focus of the course is on effective program development and instructional delivery and includes lesson and unit planning, collecting reference and illustrative materials, observing and evaluating teaching, and applying effective strategies and techniques. Additional curricular topics include performance objectives, student outcomes, scheduling, community resources, and specialized equipment and technology. The philosophy, history, and important issues and trends related to art education are included. A field experience/pre-internship in art at a Professional Development School is required. Prerequisite: Teacher Candidacy Status.

**EDCI 440 Teaching Internship: Specialty Programs (P-12): Elementary 6 crs.**

The student is assigned to a seven (7) or eight (8) week teaching internship at an elementary level Professional Development School. During this directed teaching experience, the student assumes the role and responsibilities of an educator on a full-time basis in the area of specialization. The internship provides the student with the opportunity to study the application of methods and techniques in a clinical setting through extended supervised practice. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDCI 400 and EDCI 450. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for the specific specialty major.

**EDCI 450 Teaching Internship: Specialty Programs (P-12): Secondary 6 crs.**

The student is assigned to a seven (7) or eight (8) week teaching internship at a secondary level Professional Development School. During this directed teaching experience, the student assumes the role and responsibilities of an educator on a full-time basis in the area of specialization. The internship provides the student with the opportunity to study the application of methods and techniques in a clinical setting through extended supervised practice. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDCI 400 and EDCI 440. Prerequisites: Admission

to Teacher Internship. This includes passing the Praxis II Tests for the specific specialty major.

**EDCI 460 and EDCI 480 6 crs.**

**Teaching Internship: Secondary Program (7-12): Middle School**

The student is assigned to a seven (7) or eight (8) week teaching internship at a Professional Development School at the middle school level. During this directed teaching experience, the student assumes the role and responsibilities of an educator on a full-time basis in the area of specialization. The internship provides the student with the opportunity to study the application of methods and techniques in a clinical setting through extended supervised practice. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDCI 400 and EDCI 470 or 490. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for the specific content major.

**EDCI 470 and EDCI 490 6 crs.**

**Teaching Internship: Secondary Programs (7-12) (High School)**

The student is assigned to a seven (7) or eight (8) week teaching internship at a Professional Development School at the high school level. During this directed teaching experience, the student assumes the role and responsibilities of an educator on a full-time basis in the area of specialization. The internship provides the student with the opportunity to study the application of methods and techniques in a clinical setting through extended supervised practice. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDCI 400 and EDCI 460 or 480. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for the specific content major.

**EDCI 498 Special Topics in Education 3 crs.**

This course provides an in-depth exploration of selected topics in education based on the needs and interests of the student. Current issues, trends, and research problems structure the focus and content of the course. A comprehensive, field based, independent research or clinical project is required. Prerequisites: Teacher Candidacy Status and permission of the instructor.

**EDCI 499 Independent Study in Education 1-6 crs.**

This course is designed to refine the skills and expand the knowledge base in critical areas within the field of education. This self-directed course of study is individualized to meet the student's academic and professional needs. Working closely with a faculty mentor, the student develops an independent, fully detailed plan of study including goals and objectives. Successful completion of the course requires that the student complete a significant research or clinical project. Prerequisites: Teacher Candidacy Status and permission of the instructor.

## SPECIAL EDUCATION

### **EDSP 200 Introduction to Special Education 3 crs.**

This course focuses on the intellectual, physical, sensory, social and emotional characteristics and needs of exceptional individuals, including those with disabilities and gifts/talents, from birth through adulthood. Emphasis is placed on a survey of the various exceptionalities as well as on an overview of historical and legislative perspectives and on current and future directions in the field of special education. Educational and supportive services appropriate for exceptional individuals are also presented, as are the roles of general and special educators in the delivery of these services. This course is designed for Teacher Education majors. Students will have a required field experience in the local public schools.

### **EDSP 400 Senior Seminar in Special Education 3 crs.**

The senior seminar is designed to supplement and complement the teaching internship phase of the teacher education program. The seminar focuses on the analysis and synthesis of the internship experiences so that teacher interns may successfully integrate their experiences into future practice. Preparation of a professional portfolio, maintenance of a log book and journal, and participation in group synthesis and analysis are required. This course is intended for all special education (1-12) teacher interns. Students enroll concurrently in the teaching internship (EDSP 442 and EDSP 450) and the senior seminar. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for special education.

### **EDSP 401 Processes and Acquisition of Reading and Language for Students with Disabilities 3 crs.**

This course will introduce students to the processes of language development and the relationship and role of language acquisition in reading development for students with disabilities at the elementary and secondary levels. It will analyze the relationship between oral language development, reading acquisition, and written language. In addition, the interactive nature of the reading process, including the impact of phonemic awareness will be addressed. This course is designed for students majoring in special education and includes a required clinical field experience. This course is taken concurrently with EDSP 414, EDSP 416, and EDSP 426. Prerequisite: Teacher Candidacy Status.

### **EDSP 402 Instruction of Reading and Language for Students with Disabilities 3 cr.**

This course introduces instruction of reading skills for students with and without disabilities at the elementary and secondary levels. Content includes the development of word attack and comprehension skills and the teaching of expository reading in the content areas. Emphasis is placed on the selection, organization, and evaluation of instructional content, strategies, and activities. This course is designed for students majoring in special education and

is taught as part of a core of courses related to assessment and instructional programming. The course includes a required field experience and is course is taken concurrently with EDSP 403, EDSP 422, and PSYC 406. Prerequisites: Teacher Candidacy Status and a "C" or better in EDSP 401.

### **EDSP 403 Materials for Teaching Reading and Language for Students with Disabilities 3 crs.**

This course introduces various materials that can be used to provide a variety of reading and language experiences to students with disabilities at the elementary and secondary levels. Both teacher-made and commercial materials are discussed. The use of children's literature, community resources, and parental support will also be explored. Students will have a required field experience in the local public schools. This course is taken concurrently with EDSP 402, EDSP 422, and PSYC 406. Prerequisites: Teacher Candidacy Status and a "C" or better in EDSP 401.

### **EDSP 404 Assessment, Diagnosis, and Remediation of Reading Problems for Students with Disabilities 3 crs.**

This course presents an in-depth analysis of assessment, diagnosis, and remediation of reading problems for students with disabilities at the elementary and secondary levels. A thorough understanding of the diagnostic process is explored, as well as remediation techniques for comprehension, vocabulary development, and word attack skills. Attention is given to effective reporting of these results to parents and other professionals. Students will have a required clinical experience. The course is taken concurrently with EDSP 428, EDSP 430, and EDSP 431. Prerequisites: Teacher Candidacy Status and a "C" or better in EDSP 401, EDSP 402, and EDSP 403.

### **EDSP 414 Psycho-educational Assessment I 3 crs.**

This course is the first of two three-credit courses in assessment. It provides in-depth instruction relative to the comprehensive psycho-educational process as it is used to identify the educational strengths and deficits of students with disabilities at the elementary and secondary levels. The development, administration, interpretation, and application of psycho-educational testing batteries, using both informal and formal assessment instruments, are emphasized. Norm-referenced, criterion-referenced, and curriculum-based assessment measures are examined. Skills related to the professional reporting and presentation of results are developed. The course has an emphasis on assessment in the areas of social/emotional development, achievement/school performance, general interests, attitudes, and study skills. Students develop a comprehensive case study as part of this course, which also includes a required clinical experience. This course is taken concurrently with EDSP 401, EDSP 416, and EDSP 426. Prerequisite: Teacher Candidacy status.

**EDSP416 Program Development and Instructional Delivery for Students with Disabilities 3 crs.**

This course is designed to examine the specific programs, instructional strategies, and resources that are appropriate for students with disabilities at the elementary and secondary levels. It addresses the organization and management of special education programs and prepares students to adapt and modify curriculum. Preparing students to work collaboratively as teacher consultants, academic coaches, on interdisciplinary teams, in inclusion classrooms, and in team teaching is also a course focus, as is the development and management of student records (e.g., IEP, IFSP). A required field experience in the local public schools is part of this course. The course is taken concurrently with EDSP 401, EDSP 414, and EDSP 426. Prerequisite: Teacher Candidacy Status.

**EDSP 422 Psycho-educational Assessment II 3 crs.**

This course is the second of two three-credit courses in assessment. It provides in-depth instruction relative to the comprehensive psycho-educational process as it is used to identify the educational strengths and deficits of students with disabilities at the elementary and secondary levels. The development, administration, interpretation, and application of psycho-educational testing batteries, using both informal and formal assessment instruments, are emphasized. Norm-referenced, criterion-referenced, and curriculum-based assessment measures are examined, with an emphasis on statewide assessment procedures. Use of the results to plan instruction is also presented. This course has an emphasis on assessment in the areas of oral language, reading, written language, and mathematics. Skills related to the professional reporting and presentation of results are developed. Students develop a comprehensive case study and an individualized education plan as part of this course, which also includes a required clinical experience. This course is taken concurrently with EDSP 402, EDSP 403, and PSYC 406. Prerequisites: Teacher Candidacy Status and a "C" or better in EDSP 414.

**EDSP 426 Instruction of Mathematics for Students with Disabilities 3 crs.**

This course addresses mathematics for students with disabilities at the elementary and secondary levels. Relevant mathematics content (i.e., early number concepts, arithmetic, consumer mathematics, algebra, and geometry) is presented. The use of technology (e.g., calculators, computers) is also included as is an emphasis on problem solving and making mathematical connections with other content areas. The curriculum standards of the National Council of Teachers of Mathematics are used as the focus of content and pedagogy. Appropriate prescriptive strategies, resources, curricular adaptations, and instructional programming for students with disabilities are emphasized. Students will have a required field experience in the local public schools. This course is taken concurrently with EDSP 401, EDSP 414, and EDSP 416. Prerequisite: Teacher Candidacy status.

**EDSP 428 Communication and Collaboration In Special Education 3 crs.**

This course focuses on the nature of oral and written communication - theories, models, and definitions; the role of the individual and groups in the communication process; and content and settings for communication; various formats and techniques of communication; and the differences in communication styles based on diverse groups. In addition, the course presents effective and ineffective strategies for communication with the opportunity to systematically analyze one's individual communication style as well as that of others. The educational setting serves as the context for developing these effective communication and collaboration skills. The focus of this course is primarily on communication and collaboration between general and special educators, parents, administrators, paraprofessionals and students. This course has a required clinical experience. This course is taken concurrently with EDSP 404, EDSP 430, and EDSP 431. Prerequisites: The student must have Teacher Candidacy status.

**EDSP 430 Technology In Special Education 3 crs.**

This course explores a wide range of assistive and instructional technology applications for students with physical, cognitive, communicative, sensory, and/or multiple disabilities. Students examine the use of technology in combination with effective instructional strategies to enhance learning and promote independence in the areas of academics, mobility, communication, socialization, and participation in home, school and community activities. Students also explore electronic and print resources for assistive and instructional technology information and review research about current practices for implementation of technology-based solutions. Students in this course have a required field experience/pre-internship at a Professional Development School. This course is taken concurrently with EDSP 404, EDSP 428, and EDSP 431. Prerequisites: Teacher Candidacy status and a "C" or better in EDCI 306.

**EDSP 431 Instruction of Prevocational/ Vocational and Transition Programs for Students with Disabilities 3 crs.**

This course introduces the basic theories and practices of planning, implementing, and evaluation prevocational and vocational programs for students with disabilities at the elementary and secondary levels. Emphasis is placed on social skill development, prevocational/vocational assessment and instructional strategies, counseling techniques, and other generic skills required for transition programs. Students will have a required field experience/pre-internship at a Professional Development School. This course is taken concurrently with EDSP 404, EDSP 428, and EDSP 430. Prerequisite: Teacher Candidacy Status.

**EDSP 442 Teaching Internship in Special Education (Elementary) 6 crs.**

This seven (7) or eight (8) week clinical internship involves teaching students with disabilities in an elementary setting at a Professional Development School. Students are expected to gradually assume the duties and responsibilities of a special education teacher, which include the following: planning, instruction, assessment, curriculum adaptation, classroom management, communication, and evaluation. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDSP 400 and EDSP 450. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for special education.

**EDSP 450 Teaching Internship (Secondary) 6 crs.**

This seven (7) or eight (8) week clinical internship involves teaching students with disabilities in a secondary setting at a Professional Development School. Students are expected to gradually assume the duties and responsibilities of a special education teacher, which include the following: planning, instruction, assessment, curriculum adaptation, classroom management, communication, and evaluation. The student has the opportunity, under the direction and guidance of a university supervisor and a professional mentor, to refine skills and to develop professional expertise. This course is taken concurrently with EDSP 400 and EDSP 442. Prerequisites: Admission to Teacher Internship. This includes passing the Praxis II Tests for special education.

**EDSP 497 Special Topics in Special Education 3 crs.**

This course provides an in-depth exploration of selective topics in special education based on the needs and interests of the students. Current issues, trends and research problems structure the focus and content of the course. Prerequisites: Special Education major, Teacher Candidacy Status, and permission of the instructor.

**EDSP 499 Independent Study in Special Education 1-6 crs.**

This course is designed to refine and expand the student's skills and knowledge base in a critical area of study in special education. This self-directed course is individualized to meet the student's professional and academic needs. The student develops an independent and detailed plan of study, including goals and objectives, under a faculty mentor's mentorship. Successful completion of a significant research or clinical project is required. Prerequisites: Special Education major, Teacher Candidacy Status, and permission of the instructor.

**GENERAL STUDIES****DISCLAIMER**

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland Eastern Shore. At the time of the publication, every reasonable effort was made to attain factual accuracy in the material presented. The catalog is not intended to be a complete statement of all procedures,

processes and regulations governing graduate or professional degree programs which may be covered in separate program and office manuals and handbooks. The University of Maryland Eastern Shore reserves the right to make changes in fees, course offerings and general regulations and academic requirements without prior notice

For the most up-to-date information on course offerings, program requirements, and deadlines, please write, call, or e-mail the program or department to which you are applying.

**GNST 100 First Year Experience 1 cr.**

This basic seminar introduces the topics of mental health and effectiveness in a changing world. The focus of the course is on developing interpersonal skills and conflict management strategies that will promote academic, personal, social and emotional adjustment. This course is an applied course designed to guide the student through a personal self-assessment process and to assist the student in developing a personal plan for self-improvement. This course is required for all freshmen.

**PSYCHOLOGY****PSYC 200 Introduction to Psychology 3 crs.**

This course provides a survey of general principles underlying human behavior. It includes study of the nervous system, perception, learning, memory, thinking, emotions, and individual differences in intelligence, aptitude, and personality.

**PSYC 301 Child Development 3 crs.**

This course provides a study of child development from pre-natal development through late childhood, with special emphasis on children of primary/middle school age. The focus of the course is on cognitive, emotional, intellectual, physical, psychological, and social growth and development. Prerequisite: PSYC 200 with a grade of "C" or better.

**PSYC 303 Adolescent Psychology 3 crs.**

This course provides an overview of the special role that adolescence plays in overall development. Emphasis is on the psychological development of the adolescent in school. Prerequisite: PSYC 200 with a grade of "C" or better.

**PSYC 305 Developmental Psychology 3 crs.**

This course presents a lifespan survey of human growth and development, beginning at conception and ending with death with emphasis on intellectual, linguistic, emotional, perceptual, social and personality development. Prerequisite: PSYC 200 with a grade of "C" or better.

**PSYC 307 Educational Psychology 3 crs.**

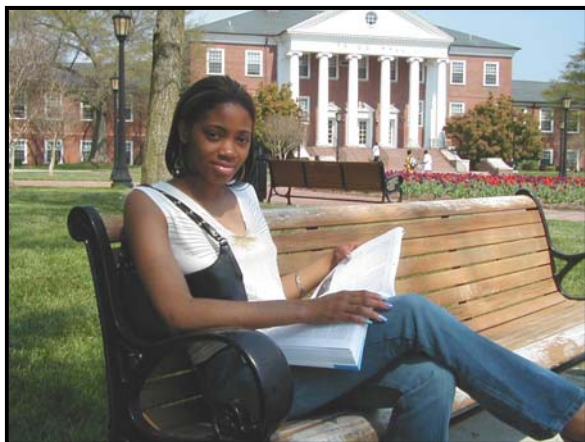
This course examines scientific research and psychological principles as they apply to teaching and learning. Topics include theories of learning, intelligence, memory, creativity, human diversity, and other factors influencing effective instruction and learning. Clinical/classroom experiences provide opportunity to apply learning theory within an educational framework. Prerequisites: PSYC 200 with a grade of "C" or better.

**PSYC 371 Abnormal Psychology 3 crs.**  
This course examines the concepts of normality, abnormality, and psychopathology; symptoms syndromes; and theory and research in psychopathology and psychotherapy. The nature, identification, etiology and treatment of psychological disorders are emphasized. Prerequisite: PSYC 200 with a grade of “C” or better.

**PSYC 401 Introduction to Personality Theory 3 crs.**  
This course presents the study of personality from various points of view: biological, experimental, social, and humanistic. It provides an overview of theory and empirical research in the study of personality. Prerequisite: PSYC 200 with a grade of “C” or better.

**PSYC 406 Applied Behavioral Analysis 3 crs.**  
The purpose of this course is to present an array of behavior management techniques that will enable prospective educators to manage the instructional, psychological, and behavioral needs of students. The course explores a variety of theoretical models. Students will have a required field experience in the local public schools. This course is taken concurrently with EDSP 402, EDSP 403, and EDSP 422. Prerequisites: SPED majors with Teacher Candidacy Status

**PSYC 497 Special Topics in Psychology 3 cr.**  
This course provides an in-depth exploration of selective topics in Psychology based on the needs and interests of the students. Prerequisites: A “C” or better in PSYC 200 and two additional Psychology courses, Senior Standing, and the permission of the instructor.



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**DEPARTMENT OF ENGLISH AND  
MODERN LANGUAGES**

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**Research Assistant in Telecommunications:**

Bernard Mattei, B.S.

**Visual Information Specialist:**

Marilyn Buerkle, M.A.

**Instructional Design Engineer:**

Kaye Pinhey, M.A.

**MISSION**

The Mission of the Department of English and Modern Languages is to provide service courses for the various departments; to prepare teachers of English for middle and secondary schools; to prepare individuals for graduate schools, professional schools, and career opportunities; and to provide outreach services for surrounding schools and communities.

**GOAL**

The goal of the Department is to offer a varied program of study in written and oral communications, literature, and foreign languages in order to prepare well-rounded individuals capable of continued intellectual and moral development.

**OBJECTIVES**

The programs in the Department are designed to meet the following objectives:

- To provide opportunities for students to develop facility in communicative skills: reading, writing, speaking and listening;
- To provide opportunities for students to speak and write a foreign language effectively;
- To provide opportunities for students to understand, interpret, and analyze literary material;
- To prepare students for graduate study and professional careers;
- To prepare students for teaching middle and secondary school English.

**DESCRIPTION OF PROGRAMS**

The Department offers programs leading to the Bachelor of Arts degree in either English (non-teaching) or English-Education. It also offers concentrations in Telecommunications and in Theater Arts.

The non-teaching program and concentrations in Telecommunications and Theater Arts are designed to give majors knowledge of techniques which will enable them to enter professional schools or to pursue graduate studies effectively. These programs also provide basic training for individuals wishing to prepare for a variety of career opportunities.

The Teaching program is designed to prepare individuals to become teachers of English in the middle and secondary schools. Complete details are given in this catalog under the topic "Teacher Education."

#### **MINOR PROGRAMS**

The Department also offers a minor program in English, telecommunications, theater arts, and foreign languages. These programs are designed to provide the student with a basic structure for further study in the area and preparation for career opportunities.

#### **PROGRAM REQUIREMENTS**

While the courses designated on the next page are basic, the Department provides additional counseling to aid students in reaching their goals.

The UMES Procurement Staff at UMES





**ENGLISH AND MODERN LANGUAGES**  
**Required and Recommended Courses**

All students are expected to complete a common body of academic coursework. The General Education Requirements are designed to promote the development of a comprehensive education base which will effectively support a student's choice of a major concentration. A particular major may require specific courses from this list. Therefore, students should consult with their departmental advisor for course selections.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III – (Biological and Physical Sciences) 7- 8 Credits**

Students must select two science courses which must include laboratories:

ANSC 114, BIOL 101, BIOL 103 (Lab), BIOL 111, BIOL 112, CHEM 101, CHEM 102,  
 CHEM 103 (Lab), CHEM 104 (Lab), CHEM 111, ENVS 101, PHYS 101, PHYS 101,  
 PHYS 103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

**D. Curriculum Area IV – (Mathematics) 3- 4 Credits**

One course at or above the level of College Algebra or another suitable course.

Students must select one course as required by their major department and/or results of their Mathematics Placement Exam: MATH 102, MATH 109, MATH 110, MATH 111H, MATH 112

**E. Curriculum Area V – (English Composition) 9 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENGL 101	Basic Composition I <u>or</u>	
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <u>or</u>	
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305	Technical Writing <u>or</u>	
ENGL 305H	Technical Writing (Honors) <u>or</u>	
ENGL 310	Advanced Composition	
ENGL 310H	Advanced Composition (Honors)	3

**F. Curriculum Area VI – (Emerging Issues) 7 Credits**

Courses identified as being essential to a full program of general education for UMES students

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health and Fitness	3

**One course from the following:**

Course No.	Title	Credits
ENGL 317	Shakespeare	3
ENGL 412/H	Commonwealth Literature	3
ENGL 413/H	The Novel - East and West	3
POLI 311	Comparative Political Systems	3
ENGL 324	Literature and Film	3
ENGL 325	Literary Criticism	3
ENGL 345	Special Topics in Literature	3

**ENGLISH (TEACHING)****II. Program Core Requirements 30 credits**

Course No.	Title	Credits
ENGL 204-215	Students may choose any two courses	6
ENGL 218	Approaches to Grammar	3
ENGL 301	American Literature I, <u>or</u>	
ENGL 302	American Literature II	3
ENGL 321	English Literature I, <u>or</u>	
ENGL 322/H	English Literature I/Honors English Literature I	3
ENGL 328	World Literature I, <u>or</u>	
ENGL 329	World Literature II	3
ENGL 330	Advanced Public Speaking	3
ENGL 380	Introduction to Language Science, <u>or</u>	
ENGL 346	History of the English Language	3
ENGL 400-413/H, 499	Students may choose any two courses	6

**III. English Electives 6 credits**

Course No.	Title	Credits
	200, 300 <u>or</u> 400 level course offered by the department.	3
*ENGL 347	Adolescent & Young Adult Literature (Required Elective)	3

**IV. Supportive Courses Required**

Course No.	Title	6 Credits
	Choose any two semester sequence in Spanish, French.	

**V. Professional Education Requirements**

Course No.	Title	42 Credits
EDCI 200	Introduction to Contemporary Education	3
EDSP 200	Introduction to Special Education	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment	3
EDCI 400	Senior Seminar	3
EDCI 406	Classroom Management	3

Course No.	Title	42 Credits
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 410	Teaching Reading in the Content Areas: Part II	3
EDCI 425B	Curriculum & Instruction Methods in English	3
EDCI 480/490	Teaching Internship: English	12

(\*EDCI 306 Integrating Technology into Curriculum (3 credits) - Required course in GER CURR. AREA VI Emerging Issues)

**TOTAL PROGRAM REQUIREMENTS 125 credits**

### ENGLISH (NON-TEACHING)

#### II. Program Core Requirements 33 credits

Course No.	Title	Credits
ENGL 204-215	Choose any <b>two</b> courses	6
ENGL 218	Approaches to Grammar	3
ENGL 330	Advanced public Speaking	3
ENGL 321	English Literature I, <b>or</b>	
ENGL 322/H	English Literature II <b>or</b> Honors English Literature II Honors	3
ENGL 301	American Literature I, <b>or</b>	
ENGL 302	American Literature II,	3
ENGL 328	World Literature I, <b>or</b>	
ENGL 329	World Literature II	3
ENGL 327/H	African America Literature <b>or</b> Honors African American Literature	3
ENGL 380	Introduction to Language Science, <b>or</b>	
ENGL 346	History of the English Language	3
ENGL 401	Modern Drama	3
ENGL 412	Commonwealth Literature <b>or</b>	
ENGL 413	Novel East and West	3

#### III. English Electives 12 credits

Course No.	Title
	Choose any 200, 300 <b>or</b> 400 level course offered by the department

#### IV. Supportive Courses Required 12 credits

Course No.	Title
<b>Foreign Language</b>	Choose any four-semester sequence in Spanish or French

#### V. Free Elective requirements 22 credits

**TOTAL PROGRAM REQUIREMENTS 120**

### MINOR PROGRAMS

Minors in telecommunications, theater arts, and foreign languages are offered for majors in departments other than English. However, English majors can receive a minor in a foreign language, but can only concentrate in telecommunications or theater arts.

**TELECOMMUNICATIONS**  
**Minor/Concentration In Telecommunications**

The Telecommunications Program is designed to satisfy the varied interests of students having liberal arts backgrounds, as well as those who have technical and professional interests in the field of telecommunications.

Production courses are offered to aid in the basic understanding of the functions centered around electronic and print media by providing hands-on experience in the areas of COMPUTER GRAPHICS, BROADCASTING, and JOURNALISM.

Participants view, discuss, and analyze a variety of newspaper, magazine, television, and radio programs for the purpose of achieving a critical understanding of the industry's context. Students are required to produce photographs, audiotapes, and videotapes for both broadcast and print dissemination. The program combines the best of both the practical and theoretical worlds of communication.

**DEGREE REQUIREMENTS**

General University Requirements	41 credits
Core Requirements	33 credits
Foreign Language Requirements	12 credits
English Electives	12credits
Open Electives	22 credits

**TOTAL PROGRAM REQUIREMENT** **120**

**TELECOMMUNICATIONS COMPUTER GRAPHICS**

The Computer Graphics Concentration is designed for those who desire to work in the commercial design and illustration field. It is a program with special appeal for those who plan to continue advanced work in the field, as well as for those who seek entry level positions in telecommunications.

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ARTS 202	Design I	3
ARTS 206	Photography I	3
ENGL 333	Principles of Photojournalism	3
ENGL 336	Computer Graphics I	3
ENGL 337	Computer Graphics II	3
ENGL 351	Communication Design Survey	3
ENGL 352	Publication Design I	3
ENGL 353	Publication Design II	3



### RADIO AND TELEVISION BROADCASTING

The Radio and Television concentration is designed to prepare students for careers in on-air and off-air positions. Upon completion of the program, graduates will have attained the knowledge and skills necessary for entry-level careers to be functional participants in such media related disciplines as radio, television and cable programming and production, electronic news gathering and reporting. WESM, the university's radio station, and WMES, the university's cable channel, are used as laboratories for interns in the Telecommunications Program.

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENGL 104	Introduction to Telecommunications	3
ENGL 237	Radio Production & Programming	3
ENGL 238	TV Production and Programming	3
ENGL 239	Introduction to Broadcast Performance	3
ENGL 241	Basic News Writing & Reporting	3
ENGL 303	Broadcast Management	3
ENGL 450	Broadcast Law	3
ENGL 470	Practicum in Telecommunications	3
ENGL 472	Internship	1-12
ENGL 480	Cross-Cultural Communication	3
ENGL 481	Dramatic Writing for Film and TV	3

### JOURNALISM

Students in the journalism sequence of the Telecommunications program will be prepared to begin careers as reporters for daily and weekly newspapers, copywriters, proofreaders, public relations specialists, and technical writers.

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENGL 104	Introduction to Telecommunications	3
ENGL 236	Interviewing	3
ENGL 241	Basic News Writing and Reporting	3
ENGL 313	Feature Writing	3
ENGL 314	Copy Editing	3
ENGL 333	Principles of Photojournalism	3
ENGL 355	Ethics in Communication	3
ENGL 356	Photojournalism	3
ENGL 472	Internship	1-12

### THEATER ARTS

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
THAR 101	Introduction to Theater Arts	3
THAR 102	Stagecraft	3
THAR 201	History of Theater and Drama I	3
THAR 202	History of Theater and Drama II	3
THAR 203	Acting I	3
THAR 204	Acting II	3
ENGL 205	Introduction to Drama	3
ENGL 319	Theater Practicum	1
ENGL 401	Modern Drama	3
ENGL 404	Studies in Drama	3

**FOREIGN LANGUAGES**

**French**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
FREN 201	Intermediate French I	3
FREN 202	Intermediate French II	3
FREN 301	French Conversation and Composition	3
FREN 302	Translation	3
FREN 401	French for the Business World	3
FREN 402	Writers of French-Speaking Africa and the Caribbean	3

**Spanish**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
SPAN 201	Intermediate Spanish I	3
SPAN 202	Intermediate Spanish II	3
SPAN 301	Spanish Conversation and Composition	3
SPAN 302	Translation	3
SPAN 401	Spanish for the Business World	3
SPAN 402	Writers of Spanish Expression--Spain/Latin America	3

The Office of the Vice President for Administrative Affairs



**ENGLISH - NON-TEACHING  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
		GER CURR. AREA I	3
		GER CURR. AREA II: Soc. Sci.	3
		GER CURR AREA III	3
GNST	100	First Year Experience	1
MATH	102	Applications of College Math <u>or</u>	
MATH	109	College Algebra	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
ENGL	104	Intro. to Telecommunications	3
		GER CURR. AREA II: Behavioral Science	3
		GER CURR. AREA VI: EDHE 111	3
		GER CURR. AREA III	<u>4</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
ENGL	204 - 215	English Core Elective Area I Elective	3
		FREE Elective	3
FREN	101	Fundamentals of French I <u>or</u>	
SPAN	101	Fundamentals of Spanish I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA VI	3
ENGL	204-215	Core Elective	3
ENGL	218	Approaches to Grammar	3
ENGL	305	Technical Writing <u>or</u>	3
ENGL	310	Advanced Composition	3
FREN	102	Fundamentals of French II <u>or</u>	
SPAN	102	Fundamentals of Spanish II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	301	American Literature I <u>or</u>	
ENGL	302	American Literature II	3
ENGL	321	English Literature I <u>or</u>	
ENGL	322	English Literature II	3
ENGL	330	Adv. Public Speaking	3
ENGL	346-380	History of the English Lang. <u>or</u> Intro. to Language Science	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	327	Shakespeare	3
ENGL	328	World Literature I <u>or</u>	
ENGL	329	World Literature II	3
ENGL	401	Major Electives	3
ENGL	412	Commonwealth Literature <u>or</u>	
ENGL	413	The Novel, East and West	3
FREN	202	Intermediate French II <u>or</u>	
SPAN	202	Intermediate Spanish II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL		English Elective	6
		FREE Electives	<u>9</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL		English Electives	6
		FREE Electives	<u>9</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**                      **120**

**ENGLISH – TEACHING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
FREN	101	Fundamentals of French I <b>or</b>	
FREN	102	Fundamentals of Spanish I	3
		GER CURR. AREA I (Art <b>or</b> Music)	3
		GER CURR. AREA III (Biology, Chemistry, Physics)	3
		GER CURR. AREA IV (Mathematics)	1
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
FREN	102	Fundamentals of French II <b>or</b>	
SPAN	102	Fundamentals of Spanish II	3
		GER. CURR. AREA II (History, Psychology, Sociology)	3
		GER CURR. AREA III (Science Lab)	1
		GER CURR. AREA III (Biology, Chemistry, Physics)	3
		GER CURR. AREA I (History)	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	
		GER CURR. AREA I	3
ENGL	204-215	Introduction to genre course	3
ENGL	310	Advanced Composition	
		GER CURR. AREA V	3
EDCI	200	Intro. to Contemporary Education	3
		GER CURR. AREA II (History, Psychology, Sociology)	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDSP	200	Intro. to Special Education	3
ENGL	204-215	Introduction to genre course	3
ENGL		Elective	3
ENGL	330	Advanced Public Speaking	3
PSYC	305	Developmental Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDHI	111	GER CURR. AREA VI (Personalized Health Fitness)	3
ENGL	301	American Literature I <b>or</b>	
ENGL	302	American Literature II	3
ENGL	307	Educational Psychology	3
ENGL	321	English Literature I <b>or</b>	
ENGL	322/H	English Literature II	3
ENGL	347	Adolescent & Young Adult Lit.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	406	Classroom Management	3
EDCI	409	Teaching Reading in the Content Areas: Part I	3
ENGL	328	World Literature I <b>or</b>	
ENGL	329	World Literature II	3
ENGL	346	History of the English Lang. <b>or</b>	3
ENGL	380	Intro. to Language Science	
ENGL		Elective	3
ENGL		Elective	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDCI	306	Integrating Technology into Curriculum	3
EDCI	410	Teaching Reading in the Content Areas: Part II	3
EDCI	425B	Curric. and Instruct. in English	3
ENGL	218	Approaches to Grammar	3
ENGL	311	Comprehensive Assessment	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	460B	Teaching Internship: Middle/Junior High	6
EDCI	470B	Teaching Internship: Senior High	<u>6</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**      **125**



## COURSE DESCRIPTIONS

### ENGLISH

**ENGL 101 Basic Composition I 3 crs.**  
This course is designed to review the fundamentals of grammar, punctuation, and conventional usage, and to provide skills of organization and development in writing. Adequate opportunity for written analysis and oral discussion of selected examples of prose and creative writing are provided to encourage an interest in literature and the development of a critical attitude toward literature in general.

**ENGL 101H Honors English Composition I 3 crs.**  
The major course goal is to develop proficiency in expository writing, particularly the communication of ideas in clear, precise language that demonstrates advanced knowledge of organization, grammar, and usage. This course satisfies the "Statement of Expectations" for freshman writing.

**ENGL 102 Basic Composition II 3 crs.**  
This course continues the study of basic elements of written composition, especially organization and development. Central to the course is the examination of selections from prose, poetry and drama. A research paper will be required. Prerequisite: ENGL 101.

**ENGL 102 Honors English Composition II 3 crs.**  
A continuation of ENGL 101H. The course will review modes of expository writing with emphasis on the research paper. The major goal is to develop proficiency in critical writing.

**ENGL 104 Introduction to Telecommunications 3 crs.**  
This course concentrates on the history of telecommunications, regulation, and current policies and procedures. It is a prerequisite for all telecommunications courses.

**ENGL 203 Fundamentals of Contemporary Speech 3 crs.**  
This course requires the preparation and delivery of short original speeches, outside readings and reports. It is recommended that this course be taken during the sophomore year. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 204 Introduction to Fiction 3 crs.**  
This course is an introduction to the development of fiction with concentration on several major fiction writers. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 205 Introduction to Drama 3 crs.**  
This course is an introduction to drama around the world through reading, analyzing, viewing, and performance. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 206 Introduction to Poetry 3 crs.**  
This course is an introduction to the development of poetry with concentration on several major poets. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 207 Introduction to Creative Writing 3 crs.**  
This course provides an introduction to various techniques used by successful writers of all genres with the object of assisting students in developing and improving their technique. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 215 Introduction to Film 3 crs.**  
This course involves a study of the motion picture as an art form and as an influence on society. Basic concepts of organization, structure, and techniques of editing are examined through the reading of selected material and the viewing of a number of short films and excerpts from feature films. The course moves from the basic psychology of visual perception through the history, theory, and critical standards of film. Prerequisites: ENGL 101 and ENGL 102

**ENGL 218 Approaches to Grammar 3 crs.**  
This course provides a comprehensive review of traditional English grammar and is designed particularly for prospective teachers and writers. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 236 Interviewing 3 crs.**  
This course is a study of methods used to prepare for and conduct interviews for articles in periodicals. Emphasis is placed on ways to structure a set of questions to elicit information and conduct an effective interview. Prerequisite: ENGL 104.

**ENGL 237 Radio Production and Programming 3 crs.**  
This course involves recording and control of sound in studios and on location, including introduction to radio production equipment and creative mixing and editing of multiple sound tracks. This course examines station organization, staff job descriptions, and responsibilities, along with station operation techniques. Prerequisite: ENGL 104

**ENGL 238 TV Production and Programming 3 crs.**  
This is a laboratory course designed to expose the student to each production position in a TV studio, including director, camera operator, and video editor. Prerequisite: ENGL 104

**ENGL 239 Introduction to Broadcast Performance 3 crs.**  
This course is a study of communications theory and its application to the preparation, presentation, and criticism of radio and television performance. The course includes basic formats of broadcasting news, interviews, music, commercials, public affairs, and entertainment features. Prerequisites: ENGL 104

**ENGL 241 Basic News writing and Reporting 3 crs.**  
This course is an introduction to the structure and organization in writing news for on-air presentation. The course includes news gathering techniques and ethical issues. Prerequisites: ENGL 104

**ENGL 301 American Literature I 3 crs.**  
This course is a survey of the major American authors and their works from the beginning of American civilization to Whitman. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 302 American Literature II 3 crs.**  
This course is a survey of the major American authors and their works from Whitman to the present. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 303 Broadcasting Management 3 crs.**  
This course explores theories of management. It involves study and analysis of special problems and situations confronting the manager of a broadcast or cable facility in the administration of personnel and various station departments. Prerequisite: ENGL 104

**ENGL 305/H Technical Writing/Honors 3 crs.**  
This course concentrates on the techniques of expository writing in the preparation of technical material. Among the areas of concentration are writing to support graphic illustrations, writing to clarify statistical information, and writing to explain process. Students are introduced to the selective use of the library and basic research facilities, particularly the use of periodical indexes and selective bibliographies. The course is open to all degree-seeking and special students who have successfully completed the Freshman and Sophomore year and who have satisfactorily completed ENGL 101, ENGL 102, and ENGL 203.

**ENGL 305W Technical Writing (WEB) 3 crs.**  
This course concentrates on the techniques of expository writing in the preparation of technical material. Among the areas of concentration are writing to support graphic illustrations, writing to clarify statistical information and writing to explain process. Students are introduced to the selective use of the library and basic research facilities, particularly the use of periodical indexes and selective bibliographies. The course is open to all degree-seeking and special students who have successfully completed the Freshman and Sophomore year, and who have satisfactorily completed ENGL 101, ENGL 102 and ENG 203. This is an online course, requiring computer access and advanced knowledge of selected software. All students must speak with the instructor before enrolling in the course.

**ENGL 310/H Advanced Composition/Honors 3 crs.**  
This course involves a study of prose techniques such as definition, classification, analysis, and process analysis. It includes the reading of model documents (essays, news stories, etc.) and a substantial amount of practice of expository writing. The course is open to all students who have successfully completed ENGL 101 and ENGL 102.

**ENGL 311 Argumentation and Persuasion 3 crs.**  
This course is designed to reflect and refine current theory and practice in argumentation and debate. Students develop conceptual apparatus to apply general principles as required by circumstances. The course blends theoretical explanation and practical advice. Students must master the basic terms and theories common to all argumentation which are necessary as a prelude to the more specific study in academic debate. Subsequently, the ultimate purpose of the course is to help students learn to become effective advocates. Prerequisite: ENGL 203

**ENGL 312 Group Discussion 3 crs.**  
Group discussion provides students with the knowledge and practical experience necessary to enable them to work with discussion groups as active and productive participants. The students will be knowledgeable of the theoretical grounding and participate in a variety of roles as a discussion-group participant. Because the course is designed with student-oriented activities as an integral part of the structure, active class participation is mandatory. Prerequisite: ENGL 203

**ENGL 313 Feature Writing 3 crs.**  
This course is designed to help students develop skills needed to write human interest stories that could appear in newspapers or magazines. Emphasis will be placed on tone, imagery, and rhetorical elements, as well as the tailoring of an article to a specific readership. Prerequisites: ENGL 104 and ENGL 241.

**ENGL 314 Copy Editing 3 crs.**  
This course covers the writing of headlines, captions, outlines, and editorial summaries, along with the techniques of reshaping text while working against time and space restrictions. Class assignments include drills on editing and rewriting under deadlines. Prerequisites: ENGL 104 and ENGL 241.

**ENGL 317 Shakespeare 3 crs.**  
This course examines characteristics and qualities of selected works of Shakespeare. Emphasis is generally placed on the more significant tragedies, comedies and histories within the context of the Elizabethan world view. [offered every Fall & Spring] Prerequisites: ENGL 101 and ENGL 102.

**ENGL 319 Theater Practicum 3 crs.**  
This course is an opportunity for acting and technical experience through Participation Theater performed in front of a live audience. Prerequisite: Permission of the Instructor.

**ENGL 321 English Literature I 3 crs.**  
This course involves a survey of selected authors and works in English Literature from the beginning through the 18th Century. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 322 English Literature II** 3 crs.  
This course is a continuation of ENGL 321 dealing with English Literature since the Restoration. This course may be substituted for ENGL 321 by English majors. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 324 Literature and Film** 3 crs.  
This course examines the relationship between literature and film, with particular emphasis on the problems and procedures inherent in the transition of novels and short narratives into screenplays. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 325 Literary Criticism** 3 crs.  
This course entails the study of various critical approaches to literature, such as textual, archetypal, psychological, and sociological. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 327 African American Literature** 3 crs.  
This course provides a survey of Black American Literature encompassing both oral tradition and written literature. Attention is given to the genres of poetry, drama, slave narrative, novel, and essay. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 328 World Literature I** 3 crs.  
This course is an introductory study of major movements and genres in Eastern, Western, and African Literatures from ancient times through the Western Renaissance, with the objective of helping students to gain knowledge of the culture of people other than Americans. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 329 World Literature II** 3 crs.  
This course is a continuation of English 328. It deals with World Literature since the Western Renaissance. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 330 Advanced Public Speaking** 3 crs.  
This course involves a study of rhetorical principles and models of speech composition in conjunction with the preparation and presentation of specific forms of public address. Prerequisites: ENGL 101, ENGL 102, and ENGL 203.

**ENGL 332 The African Writer** 3 crs.  
This course focuses on contemporary African literature, with special emphasis on the role of the writer. The course includes many of the major African literary works (fiction, poetry, and drama) of the last sixty years. The course also focuses on the African writer's unique role as creator of functional art. Prerequisite: ENGL 327H.

**ENGL 333 Principles of Photojournalism** 3 crs.  
In this course students gain an understanding as well as a working vocabulary of the historic, formal, and psychological aspects of photojournalism using still photography, video and film. Basic concepts of organization, framing, techniques of editing, etc. are examined through the reading and viewing of selected materials (photo stills, film & video) as well as the practical

experience of supervised projects. Prerequisites: ENGL 104, ENGL 241, and ARTS 206.

**ENGL 336 Computer Graphics I** 3 crs.  
This is an introductory level course in computer generated graphic design and desktop publication. Through a "hands-on" approach, the student develops a basic knowledge of the various application programs of desktop publication and illustration using Macintosh computers. The student also develops the ability to create computer generated original art and learn the manipulation of scanned images, original digital camera images, basic design principles, and techniques such as layout, typography and graphic production used in various commercial arts fields. Prerequisite: ARTS 201

**ENGL 337 Computer Graphics II** 3 crs.  
Computer Graphics II is a continuation of Computer Graphics I (English 336) and the course work builds on the skills learned in the first semester. Further skills are gained and then applied to applications such as: PageMaker & Quark Express (used for layout design); Photoshop and Illustrator (illustration applications); After Effects & Gif Builder (introduction to video and multimedia & computer animation); and BB Edit (web page design). The course also builds on the student's knowledge of basic design principles and techniques in design and graphic production generally started during the first semester. Prerequisite: ENGL 336

**ENGL 345 Special Topics in Literature** 3 crs.  
Structured around rotating topics, this course involves an intensive study of the literary works of various authors. Prerequisites: ENGL 101, ENGL 102 and permission of the instructor.

**ENGL 346 History of the English Language** 3 crs.  
This course covers major developments in the history of English to the modern period with consideration of important changes and principles of development in phonology, syntax, and semantics. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 347 Adolescent and Adult Literature** 3 crs.  
An eclectic survey of fiction and other forms of literature written primarily for adolescents (ages 10 through 14) and young adults (ages 15-18), the course explores and examines themes and ideas in literature relevant to the period prior to adulthood, utilizing the principles of contemporary literary criticism. The course is intended for English Education majors but is open to all students who meet the prerequisites. Prerequisites: successful completion of ENGL 101 and ENGL 102.

**ENGL 351 Communications Design Survey** 3 crs.  
This course is an introduction to the study of visual communications. It involves conceptualization, graphic imagery, aesthetics, and symbolism for the communication of information through graphic design, with specific emphasis on the relationship of graphic design to advertising. Problem-solving projects related to the design

profession are required. Prerequisites: ENGL 336 and ENGL 337.

**ENGL 352 Publication Design I 3 crs.**

This course is an introduction to the study of visual communications within the field of Publication. The course involves conceptualization, graphic imagery, aesthetics, and symbolism for the communication of information through graphic design, with special emphasis on the relationship of graphic production to Mass Media. Class work involves research projects as well as problem-solving projects related to the design profession in general. Prerequisite: ENGL 336 and ENGL 337.

**ENGL 353 Publication Design II 3 crs.**

Building on the skills and understanding of Publication Design 1, this course further examines specific areas in publication design. Students are required to design a publication from beginning to completion. Prerequisite: ENGL 352.

**ENGL 354 Media Survey 3 crs.**

Students survey various components of print and broadcast media. The course is basically a comparative analysis of print and electronic media. Class instruction includes individual and group presentation aimed at showing how media influences people. Prerequisites: ENGL 104 and ENGL 303.

**ENGL 355 Ethics in Communications 3 crs.**

This course introduces students to the challenges of exercising good taste and accuracy when gathering and reporting news. Students examine case studies. Prerequisites: ENGL 104 and ENGL 241.

**ENGL 356 Photojournalism 3 crs.**

Students gain experience in preparing photo essays which incorporate both paragraph and caption copy. Problems of staging, selecting, editing, and sequencing photo essays are experienced and solved. Requirements: ARTS 221 and ARTS 309 and a still camera.

**ENGL 380 Introduction to Language Science 3 crs.**

This course provides an introductory survey of contemporary linguistics with special focus on present-day American English. Prerequisites: ENGL 101 and ENGL 102.

**ENGL 401 Modern Drama 3 crs.**

This course is designed to give an overview and understanding of Modern Drama from Ibsen to the present. Prerequisites: ENGL 101 AND ENGL 102.

**ENGL 404 Studies in Drama 3 crs.**

This course allows opportunities for a variety of topics pertinent to drama. An analysis of drama from around the world through reading, viewing, performance, and various forms of artistic expression will be explored. The course also concentrates on specific social and political that foster the various types of drama produced during a particular period.

**ENGL 405 Studies in Film 3 crs.**

This course provides an in-depth examination of some particular aspect of film. In any given semester the course may concentrate on, but by no means be limited to, such diverse topics as American film genre, the work of a particular film director, or literature-to-film transition. Prerequisites: ENGL 101, ENGL 102 and ENGL 215.

**ENGL 408 Studies in Poetry 3 crs.**

This course traces the development of poetry with concentration on several major poets. Prerequisites: ENGL 101 and ENGL 102, or permission of instructor.

**ENGL 412 Commonwealth Literature 3 crs.**

This course involves intensive study of the works of writers from commonwealth countries. Attention is paid to the evolution of the author's canon, the effects on the literary context, the relationship between the literary works and the historical and cultural context of the writer. [Offered every Fall] Prerequisites: ENGL 101 and ENGL 102.

**ENGL 413 The Novel - East and West 3 crs.**

This is a multicultural course that examines novels as a global form that speaks for the aspirations of the modern middle class individual and criticizes social abuses. Comparison of novels from America, Africa, Europe, and Asia are made. [Offered every Spring] Prerequisites: ENGL 101 and ENGL 102.

**ENGL 424 Advanced Reporting 3 crs.**

This course provides an internship with a communication-related agency. Prerequisites: Senior standing or permission from the department, ENGL 104 and ENGL 241.

**ENGL 450 Broadcast Law 3 crs.**

This course is a study of various laws affecting broadcasting and cable communications. It examines the actions of the courts in interpreting the laws and the actions of the federal regulatory agencies related to the telecommunications industry. Prerequisite: ENGL 104.

**ENGL 470 Practicum in Telecommunications 3 crs.**

This course provides field or work/study in a particular area of telecommunications. Prerequisites: ENGL 104 and permission of instructor.

**ENGL 472 Internship 1-12 crs.**

This course is an internship in various telecommunications study areas arranged by and with permission of the instructor. Prerequisites: ENGL 104, ENGL 203 & permission of the instructor.

**ENGL 480 Cross Cultural Communication 3 crs.**

This course is a study of philosophy and theories of the human communication process with emphasis on understanding differences between varying ethnic and cultural groups. Psychological and social barriers to communication are also considered. Prerequisites: ENGL 104 and ENGL 450.

**ENGL 481 Dramatic writing for Film and TV 3 crs.**  
This course is designed for students who want to learn to take ideas and develop them into treatments, screen-plays, and other verbal and visual forms. The class is conducted as a workshop; students' work is discussed in an informal atmosphere, and selected films are screened. Through the workshop format, students are encouraged to find their creative direction. Prerequisite: Successful Completion of ENGL 101 & ENGL 102 and consent of the Instructor. Enrollment is limited to seventeen students.

**ENGL 499 Independent Research in English 1-3 crs.**  
This course provides a vehicle to enable the student to range academically as far as interests and preparation carry him on a topic agreed upon by the instructor and student. The student is required to meet and confer with the instructor on specified conference dates. Limited enrollment. Prerequisite: permission of instructor.

### FRENCH

**FREN 101 Fundamentals of French I 3 crs.**  
This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar, and translation. Laboratory work is required. It is recommended that students who have two or more years of high school French take an exam for credit.

**FREN 102 Fundamentals of French II 3 crs.**  
This course is a continuation of French 101. This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar and translation. Laboratory work is required. It is recommended that students who have two or more years of high school French take an exam for credit.

**FREN 201 Intermediate French I 3 crs.**  
This course involves a review of grammar and pronunciation and involves graded readings of modern prose. Prerequisite: FREN 101 and FREN 102 or the equivalent.

**FREN 202 Intermediate French II 3 crs.**  
This course provides a review of idiomatic expressions, applications of language skills to reading, composition, and class discussion. Prerequisite: FREN 201 or equivalent.

**FREN 301 Conversation and Composition 3 crs.**  
Development of conversational proficiency in French. Development of writing skills through written reports on current events and on literary topics. Prerequisites: FREN 202 or permission of the Instructor.

**FREN 302 Translation 3 crs.**  
This course is designed to develop advanced skills through training in translation and interpretation. Students translate French texts from different fields with emphasis on grammar and literary quality. They also practice translation from English into French. Prerequisites: FREN 301.

**FREN 401 French for the Business World 3 crs.**  
This course is an introduction to the study of terminology used in business, and styles used in commercial, private and official formats for correspondence and various common business documents. Prerequisites: FREN 302 or permission of the Instructor

**FREN 402 Writers of French-Speaking Africa and the Caribbean 3 crs.**  
Study of selected novels expressing the culture and the aspirations of the French speaking people of Africa and the Caribbean. Prerequisites: FREN 301 and FREN 302 or permission of the Instructor.

### SPANISH

**SPAN 101 Fundamental of Spanish I 3 crs.**  
This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar, and translation of elementary prose. Lab work is required. To receive credit for this course, the student must also complete SPAN 102. It is recommended that students who have two or more years of high school Spanish take an exam for credit.

**SPAN 102 Fundamentals of Spanish II 3 crs.**  
This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar and translation. Lab work is required. To receive credit for this course, the student must also complete SPAN 101. It is recommended that students who have two or more years of high school Spanish take an exam for credit.

**SPAN 201 Intermediate Spanish I 3 crs.**  
This course provides a review of grammar and pronunciation. The course involves graded readings of modern prose. Prerequisites: SPAN 101 and SPAN 102 or equivalent.

**SPAN 202 Intermediate Spanish II 3 crs.**  
This course is a review of idiomatic expressions, and applications of language skills to reading, composition, and class discussion. Prerequisites: SPAN 101, SPAN 102 and SPAN 201.

**SPAN 301 Spanish Conversation and Composition 3 crs.**  
This course is designed for the development of conversational proficiency in Spanish. It further focuses on the development of writing skills through reports on current events and on literary topics. Prerequisites: SPAN 202 or permission of the Instructor.

**SPAN 302 Translation 3 crs.**  
This course is designed to develop advanced skills through training in translation and interpretation. Students translate Spanish texts from different fields with emphasis on grammar and literary quality. They also practice translation from English into Spanish. Prerequisites: SPAN 302 or permission of the Instructor.

**SPAN 401 Spanish for the Business World 3 crs.**

This course is an introduction to the study of terminology used in business, and styles used in commercial, private and official formats for correspondence and various common business documents. Prerequisites: SPAN 302 or permission of the Instructor.

**SPAN 402 Writers of Spanish Expression- Spain/Latin America 3 crs.**

This course is a study of selected novels expressing the culture and aspirations of the Spanish-speaking people of Spain and Latin America. Prerequisites: SPAN 302 or permission of the Instructor.

**THEATER ARTS****THAR 101 Introduction to Theater 3 crs.**

The course presents a survey of theater through the exploration of the components of a production acting, set, costumes, lighting, sound, script, and the audience. Prerequisite: Permission of instructor.

**THAR 102 Stagecraft 3 crs.**

This course involves an investigation and application of the visual effects of stage scenery in dramatic productions with exercises in set designing. Practical experiences within current productions are offered. Prerequisite: Permission of instructor.

**THAR 201 History of Theater and Drama 3 crs.**

This course provides a study of the cultural forms of theater from the Greek period to the end of the Renaissance, with analysis of selected plays. Selected plays from all major periods are read and critically analyzed. Prerequisite: Permission of instructor.

**THAR 202 History of Theater and Drama II 3 crs.**

The course offers a study of the cultural forms of theater from the end of Renaissance to the present, with analysis of selected plays. Selected plays from all major periods are read and critically analyzed. Prerequisite: Permission of instructor.

**THAR 203 Acting I 3 crs.**

This course provides a survey of acting practices along with basic training in the elements of acting, with preliminary studies in movement, pantomime, interpretation, and the use of the voice. Students participate in scenes or plays. Prerequisite: Permission of instructor.

**THAR 204 Acting II 3 crs.**

This course is a continuation of Acting I with more advanced instruction in movement, interpretation, and voice usage. Acting technique is stressed. Students participate in selected plays. Prerequisite: Permission of instructor.

## Faculty

### **Anderson, Mignon Holland**

Associate Professor  
B.A., Fisk University  
M.F.A., Columbia University

### **Buerkle, Marilyn**

Lecturer, Visual Information Specialist  
B.A., Edinboro University of Pennsylvania  
M.A. American University

### **Burns, Robert S.**

Lecturer  
B.A., Wilmington College  
M.A., M.F.A., Bowling Green State University

### **Champagne, Carole A.**

Assistant Professor  
B.S., Wake Forest University  
M.A., M.Ed., Ph.D., University of Massachusetts, Amherst

### **Christian, Sandra**

Instructor  
B.A., Salisbury State University  
M.A., Ohio University  
M.F.A., Vermont College of Norwich University

### **Cooledge, Dean R.**

Lecturer  
B.A., Trinity University  
M.A., Ph.D., University of Arizona

### **Cooledge, Susan**

Lecturer  
B.S., Elizabethtown College  
M.S., Ph.D., University of Arizona

### **Dameron-Johnson, Della**

Assistant Professor  
B.S., Lincoln University, Missouri  
M.A., Northern Illinois University  
Ph.D., University of Maryland College Park

### **Davis, Joseph**

Lecturer  
B.A., Henderson State University  
M.A., Memphis State University

### **Gyimah, Miriam C.**

Assistant Professor  
B.A. University of Maryland Eastern Shore  
M.A., Southern Illinois University at Carbondale  
Ph.D., Binghamton University (SUNY)

### **Green, Melissa**

Lecturer  
M.A., Salisbury University  
B.A., St. Mary's College, MD

### **Hammond, Page S.**

Lecturer  
B.F.A., University of Georgia  
M.A., Salisbury University

### **Hedgepeth, Chester M.**

Associate Professor  
B.A., Blackburn College  
M.A., Wesleyan University  
Ed.D. Harvard University

### **Johnston, Sandra S.**

Lecturer  
B.A., M.Ed., Shippensburg University

### **Keenan, Richard C.**

Professor and Chair  
B.S., Temple University  
M.A., St. Joseph's College  
Ph.D., Temple University

### **Miller, Bonni**

Lecturer  
B.A., M.A., Salisbury State University

### **Okafor, Clement**

Associate Professor  
Ph.D., Harvard University

### **Rose, Wilton**

Lecturer  
B.A., New York University  
M.A.  
B.F.A., New York University

### **Seabrook, Barbara J.**

Assistant Professor  
Coordinator, English Teacher Education  
B.S., M.Ed., Shippensburg University  
Shippensburg University  
M.Ed., Ed.D., Wilmington College

### **Shoge, Simeon**

Lecturer  
B.A., University of Ibadan, Nigeria  
M.A., Washington College, MD.  
M.F.A., Columbia University, NYC

### **Thomas, Jackie**

Professor  
B.A., Alabama A & M University  
M.Ed., Virginia State University  
Ph.D., Indiana University of Pennsylvania

### **Webster III, Ronald S.**

Lecturer  
Ed.D., Wilmington College  
M.A., University of Delaware  
B.A., West Chester University

**Winter, Kathleen R..**

Lecturer

B.A., Upsala College

M.A., Montclair State University



**DEPARTMENT OF FINE ARTS:  
ART EDUCATION**

**Dean:**

Brenda Anderson, Ed.D.

**Chair and Associate Professor**

Ernest R. Satchell, M.F.A.

**Assistant Professors**

Michel Demanche, M.F.A.

Christopher J. Harrington, M.F.A.

Sais T. Kamalidiin, Ph.D.

**Instructors**

John R. Lamkin, II, Ph.D.

Sheila McDonald-Harleston, M.Mus.

Bradley Hudson, MFA

Veronica Knier, M. Mus.

The Department of Fine Arts offers programs leading to the Bachelor's Degree in Music, Art, and Applied Design. The Music program leads to the Bachelor of Arts Degree in Music Education with specific preparation for teaching general/choral or instrumental music in elementary and secondary schools. The Art program leads to the Bachelor of Arts Degree in Art Education. These programs are designed to prepare competent teachers for elementary and secondary school teaching. The Applied Design Program is a four-year non-teaching program with Graphic Illustration and Commercial Photography. The Applied Design Program leads to the Bachelor of Arts Degree.

**MISSION**

The mission of the Fine Arts Department is to provide high quality Art and Music teachers for elementary and secondary schools; to prepare students for professional non-teaching careers in Commercial Ceramics, Graphic Illustration, and Commercial Photography; to prepare students for graduate and Professional schools; to provide service courses for other departments; and to provide outreach services for surrounding schools and communities.

**GOALS**

The Fine Arts Department offers a basic curriculum in art that will enable students graduating from the program to think logically and creatively, and to function as practicing artists. Its goals are as follows:

To provide exhibits, cultural events and other programs necessary to promote art and make the university and general community artistically richer.

To prepare students to teach art in grades P-12.

**ART EDUCATION MAJORS**

**OBJECTIVES**

Students having completed the Art Education Program will

- have the facility to understand and appreciate the philosophical nature of art, its meaning, and contribution to the individual and society in contemporary and past cultures;
- create, critically analyze, and evaluate works of art from a wide variety of media;
- develop, organize, evaluate, and administer effectively an art education curriculum in grades P-12;
- demonstrate an understanding of the developmental stages of art through which children and adolescents pass;
- demonstrate a working knowledge of safety precautions and hazards that are unique to studio work; and
- design and deliver developmentally appropriate experiences in art for children in grades P-12.

**ART EDUCATION PROGRAM**

**DESCRIPTION**

This program leads to the Bachelor of Arts degree in Art Education with specific preparation for teaching Art in elementary and secondary schools. Students who complete the program will be eligible for P-12 teaching certification.

**ART EDUCATION PROGRAM**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

- A. Curriculum Area I – (Arts and Humanities) 9 credits**
- Students must select ENGL 203 plus two additional courses  
**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401
- B. Curriculum Area II – (Social and Behavioral Sciences) 6 credits**
- Students must select one course in each of two disciplines  
**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H, GEOG 201 or GEOG 202, HIST 101 or HIST 111H, HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342, SOCI 101 or SOCI 111H  
**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200, SOCI 201, SOWK 200 or SOWK 200H
- C. Curriculum Area III – (Biological and Physical Sciences) 7 credits**
- Students must select two science courses which must include Laboratories:  
 ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102, CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101, PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184C
- D. Curriculum Area IV – (Mathematics) – Total 3 credits**
- One course at or above the level of College Algebra. MATH 102, MATH 109
- E. Curriculum Area V - English Composition 9 credits**
- | Course No. | Title                                | Credits |
|------------|--------------------------------------|---------|
| ENGL 101   | Basic Composition I <u>or</u>        |         |
| ENGL 101H  | Basic Composition I (Honors)         | 3       |
| ENGL 102   | Basic Composition II <u>or</u>       |         |
| ENGL 102H  | Basic Composition II (Honors)        | 3       |
| ENGL 305H  | Technical Writing (Honors) <u>or</u> |         |
| ENGL 310   | Advanced Composition                 | 3       |
- F. Curriculum Area VI - Emerging Issues 7 credits**
- (Courses identified as being essential to a full program of general education for UMES students)
- GNST 100, EDHE 111 Personalized Health Fitness
- In addition, students must select one course from the following:  
 HUEC 230, ENGL 412, ENGL 413, TMGT 306

**Note:** Course Requirements other than those listed above should be selected in consultation with the advisor or Department Chairman. Students are required to receive a grade of C or better in these courses.

**II. Program Core Requirements** **42 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ARTS 102	Drawing I	3
ARTS 103	Drawing II	3
ARTS 121	Ceramics I	3
ARTS 122	Sculpture I	3
ARTS 201	Design I	3
ARTS 202	Design II	3
ARTS 205	Printmaking I	3
ARTS 206	Photography I	3
ARTS 211	Art History I	3
ARTS 212	Art History II	3
ARTS 221	Ceramics II	3
ARTS 322	Sculpture II	3
ARTS 341	Painting I	3
ARTS 342	Painting II	3
<b><u>Select one course:</u></b>		
ARTS 200	Jewelry I	3
ARTS 206	Photography I	3
ENGL 336	Computer Graphics I	3

**III. Professional Core Courses** **42 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200A or B	Intro to Contemporary Education	3
EDSP 200B	Intro to Special Education	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Contemporary Assessments	3
EDCI 400	Senior Seminar in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in Content Area: Part I	3
EDCI 410	Teaching Reading in Content Areas: Part II	3
EDCI 430	Methods and Materials for Teaching Art P-12	3
EDCI 440A	Teaching Internship: Specialty Programs (P-12): Elementary	6
EDCI 450A	Teaching Internship: Specialty Programs (P-12): Secondary	6

**TOTAL PROGRAM REQUIREMENTS** **125**



**MINOR PROGRAM**

A minor in Art is offered for majors in departments other than Art. The minor program is designed to meet the following objectives:

- To provide a basic exploration of the primary areas of Art: Studio, Art History, and Design Theory; and,
- To provide a program for students to acquire a foundation whereby a greater understanding and appreciation of Art can be developed

**ART**

<b>Course No.</b>	<b>Title</b>	<b>18 Credits</b>
ARTS 102	Drawing I	3
ARTS 201	Design I	3
ARTS 121	Ceramics I	3
ARTS 211	Art History I <b><u>or</u></b>	
ARTS 310	African American History	3
ARTS	<u>Select two courses from the following:</u> ARTS 103, ARTS 200, ARTS 205, ARTS 221, ARTS 341, ARTS 206 <b><u>or</u></b> ENGL 336	6
<b>TOTAL PROGRAM REQUIREMENTS</b>		<b>18 Credits</b>



**Plaza Hall Dormitory**

**ARTS EDUCATION  
Required and Recommended Courses**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	102	Survey of College Math	3
ARTS	101	Exploration of the Visual Arts	3
ARTS	102	Drawing I	3
ARTS	201	Design I	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
ARTS	103	Drawing II	3
ARTS	202	Design II	3
EDHE	111	Personalized Health Fitness	3
GER CURR. AREA II: Social Science			3
EDCI	200	Intro to Contemporary Ed	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
ARTS	121	Ceramics I	3
BIOL	101	Theor. & App. of Biologic Sci	3
BIOL	103	Biology Science Lab.	1
PSYC	305	Developmental Psychology	3
EDSP	200	Intro to Special Education	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	310	Advanced Composition	3
ARTS	211	Art History I	3
ARTS	221	Ceramics II	3
ARTS	341	Painting I	3
GER CURR. AREA II: Behavioral Science			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ARTS	205	Printmaking I	3
ARTS	122	Sculpture I	3
ARTS	342	Painting	3
ARTS	212	Art History II	3
GER CURR. AREA I: History			<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ARTS	322	Sculpture II	3
PSYC	307	Educational Psychology	3
EDCI	406	Classroom Management	3
EDCI	409	Reading in Content Area I	3
GER CURR. AREA VI			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ARTS	206	Photography I	3
EDCI	430	Curriculum & Instruction In Art, P-12	3
GER CURR. AREA III			3
EDCI	410	Reading in Content Area II	3
EDCI	311	Comprehensive Assessment	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	440A	Teaching Internship: Elementary	6
EDCI	450A	Teaching Internship: Secondary	6
<b>Semester Total</b>			<b>15</b>
<b>Total Credits Required</b>			<b>125</b>

## APPLIED DESIGN PROGRAM

### MISSION

The Applied Design Program accepts as its mission the role of providing learning experiences for students who wish to pursue careers in the Applied Design fields of Graphic Illustration, Commercial Photography, and Commercial Ceramics.

### GOAL

The goal of this program is to offer an intensified curriculum in Applied Design that will enable students graduating from the program to think logically and creatively, and to function as practicing artists/crafts persons.

### PROGRAM OBJECTIVES

Students having completed the Applied Design program will demonstrate the ability to do the following:

- Design, produce, and market high-quality functional ceramic ware for both the wholesale and retail markets
- Operate and manage a small business
- Work as Photo. journalists or as commercial Photographers
- Work at management level positions in the applied design field
- Integrate conventional illustrations with high tech digital illustrations
- Demonstrate mastery of computer software, such as Adobe, Photo. Shop, Illustrator, PageMaker, and QUARK
- Manipulate, retouch, and alter Photographic images for commercial applications
- Prepare camera-ready layouts for newsletters, brochures, magazines, and newspapers
- Mass-produce ceramic ware using state-of-the-art forming, glazing, and firing techniques

### APPLIED DESIGN

#### Required and Recommended Course Sequence

#### I. General Education Requirements

##### TOTAL REQUIRED FOR GENERAL EDUCATION - 41 Credits

Students should consult with their freshman or departmental advisor when making course selections.

#### II. Foundation Requirements

42-45 Credits

Course No.	Title	Credits
ARTS 102	Drawing I	3
ARTS 103	Drawing II	3
ARTS 121+	Ceramics I	3
ARTS 122	Sculpture I	3
ARTS 221+	Ceramics II	3
ARTS 201	Design I	3
ARTS 202	Design II	3
ARTS 205	Printmaking I	3
ARTS 206#	Photography I	3
ARTS 211	Art History I	3
ARTS 212	Art History II	3
ARTS 213	History of American Crafts	3
ARTS 304*	Drawing III	3
ARTS 309#	Photography II	3
ARTS 322*	Illustration I	3
ARTS 341	Painting I	3
BUAD 132	Introduction to Business	3
ECON 201	Principles of Economics I	3

+Commercial Ceramics Students Only

#Commercial Photography Students Only

\*Illustration Students Only

**CONCENTRATIONS:**

<b>A.</b>	<b>GRAPHIC ILLUSTRATION</b>	<b>35 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	ARTS 319	Representational Painting
	ARTS 320	Advanced Representational Painting
	ARTS 321	Water Based Media
	ARTS 322	Illustration I
	ARTS 323	Illustration II
	ARTS 313	Foundations of Visual Computing
	ARTS 314	Advanced Visual Computing
	ARTS 420	Illustration III
	ARTS 450J	Illustration, Senior Project
	ARTS 498J	Internship, Illustration
	ARTS 499J	Independent Study in Applied Design: Illustration
	ARTS 499J	Independent Study in Applied Design: Illustration
<b>B.</b>	<b>COMMERCIAL PHOTOGRAPHY</b>	<b>38 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	ARTS 309	Photography II
	ARTS 311	Photography III
	ARTS 312	Photography IV
	ENGL 333	Principles of Photojournalism
	ARTS 313	Foundations of Visual Computing
	ARTS 314	Advanced Visual Computing
	ARTS 410	Studio Photography
	ARTS 411	Digital Photography
	ARTS 450K	Photography, Senior Project
	ARTS 498K	Internship: Photography
	ARTS 499K	Independent Study in Applied Design: Photography
	ARTS 499K	Independent Study in Applied Design: Photography
	ARTS 499K	Independent Study in Applied Design: Photography
<b>C.</b>	<b>COMMERCIAL CERAMICS</b>	<b>35 Credits</b>
	<b>Course No.</b>	<b>Title</b>
	ARTS 302	Ceramics III: Wheel Throwing
	ARTS 303	Ceramics IV: Advanced Wheel Throwing
	ARTS 305	Ceramics V: Hand Construction
	ARTS 306	Ceramics VI: Advanced Hand Construction
	ARTS 400	Ceramics VII: Glaze Calculation
	ARTS 401	Ceramics VIII: Functional Ceramics
	ARTS 402	Ceramics IX: Firing and Kiln Design
	ARTS 450M	Ceramics IX: Senior Project
	ARTS 498M	Internship: Ceramics
	ARTS 499M	Independent Study in Applied Design: Ceramics
	ARTS 499M	Independent Study in Applied Design: Ceramics
	ARTS 499M	Independent Study in Applied Design: Ceramics
	<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>121</b>

**RECOMMENDED COURSE SEQUENCE  
APPLIED DESIGN FOUNDATION PROGRAM**

**FRESHMAN YEAR**

			<b>HOURS</b>
<b>FALL SEMESTER</b>			
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
GNST	100	First Year Experience	1
ARTS	102	Drawing I	3
ARTS	101	Exp. Of the Visual Arts	3
ARTS	201	Design I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

			<b>HOURS</b>
<b>SPRING SEMESTER</b>			
ENGL	102	Basic Composition II	3
ARTS	103	Drawing II	3
ARTS	202	Design II	3
ECON	201 *+	Principles of Economics I	3
ARTS	206#	Photography I	3
ARTS	211	Art History I	3
ARTS	121+	Ceramics I	<u>3</u>
<b>Semester Total</b>			<b>15/18</b>

**SOPHOMORE YEAR**

			<b>HOURS</b>
<b>FALL SEMESTER</b>			
ARTS	213	History American Crafts	3
ARTS	212	Art History II	3
BUAD	132	Introduction to Business	3
ARTS	122	Sculpture I	3
ARTS*	304	Drawing III <u>or</u>	
ARTS+	221	Ceramics II <u>or</u>	
ARTS#	309	Photography II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

			<b>HOURS</b>
<b>SPRING SEMESTER</b>			
ARTS	341	Painting I	3
ENGL	203	Fund. of Cont. Speech	3
ARTS*	322	Illustration I <u>or</u>	
ECON#	201	Principles of Economics I	3
GER CURR. AREA II:			
Social Science			3
ARTS	205	Printmaking I	3
GER. CURR. AREA I			<u>3</u>
<b>Semester Total</b>			<b>15-18</b>

**Total Credits Required 125**

+Commercial Ceramics Students Only  
#Commercial Photography Students Only  
\*Illustration Students Only

**RECOMMENDED COURSE SEQUENCE  
GRAPHIC ILLUSTRATION CONCENTRATION**

**JUNIOR YEAR**

			<b>HOURS</b>
<b>FALL SEMESTER</b>			
BIOL	101	Theories & Application	3
BIOL	103	Biological Science Lab.	1
ARTS	321	Water Based Media	3
ARTS	342	Painting II	3
EDHE	111	Personalized Health Fitness	3
ARTS	499J	Ind. Study: Illustration	<u>3</u>
<b>Semester Total</b>			<b>16</b>

			<b>HOURS</b>
<b>SPRING SEMESTER</b>			
GER CURR AREA II:			
Behavioral Science			3
GER CURR AREA III			3
ARTS	323	Illustration II	3
ARTS	319	Representational Painting	3
ARTS	499J	Ind. Study: Illustration	<u>3</u>
<b>Semester Total</b>			<b>16</b>

			<b>HOURS</b>
<b>SUMMER SEMESTER</b>			
ARTS	498J	Internship: Illustration	<u>2</u>
<b>Semester Total</b>			<b>2</b>

**SENIOR YEAR**

			<b>HOURS</b>
<b>FALL SEMESTER</b>			
ENGL	336	Computer Graphics I	3
ARTS	323	Illustration II	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
ARTS	320	Adv. Rep. Painting	3
ARTS	499J	Independent Study: Illustration	<u>3</u>
<b>Semester Total</b>			<b>15</b>

			<b>HOURS</b>
<b>SPRING SEMESTER</b>			
ARTS	314	Advanced Visual Computing	3
ARTS	450J	Senior Project	3
GER. CURR. AREA VI			3
ARTS	420	Illustration III	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**Total Credits Required 125**

+Commercial Ceramics Students Only  
#Commercial Photography Students Only  
\*Illustration Students Only



**RECOMMENDED COURSE SEQUENCE  
COMMERCIAL PHOTOGRAPHY**

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BOIL	101	Theories & Aps. of Biology	3
BIOL	103	Biological Science Lab	1
ARTS#	121	Ceramics I	3
ARTS	313	Foundations of Visual Computing	3
EDHE	111	Personalized Health Fitness	3
ARTS	499K	Ind. Study: Photography	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
GER CURR AREA II: Behavioral Science			3
GER CURR. AREA III			3
ARTS	314	Advanced Visual Computing	3
ARTS	311	Photography III	3
ARTS	499K	Ind. Study: Photography	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SUMMER SEMESTER</b>			<b>HOURS</b>
ARTS	498K	Internship: Ceramics	<u>2</u>
<b>Semester Total</b>			<b>2</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ARTS	410	Studio Photography	3
ARTS	312	Photography IV	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
ARTS	499K	Ind. Study: Photography	<u>3</u>
<b>Semester Total</b>			<b>12</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ARTS	411	Digital Photography	3
ARTS	450K	Photography, Senior Project	3
GER CURR. AREA VI			3
ENGL	333	Prin. of Photojournalism	3
GER CURR AREA II: Social Science			<u>3</u>
<b>Semester Total</b>			<b>12</b>

+Commercial Ceramics Students Only  
#Commercial Photography Students Only  
\*Illustration Students Only

**RECOMMENDED COURSE SEQUENCE  
COMMERCIAL CERAMICS CONCENTRATION**

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	101	Theories & Aps. of Biology	3
BIOL	103	Biological Science Lab	1
ARTS	305	Ceramics V: Hand Construct	3
GER CURR AREA II: Behavioral Science			3
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
GER CURR AREA II: Behavioral Science			3
GER CURR AREA III			3
ARTS	302	Ceramics III: Wheel Throwing	3
ARTS	400	Ceramics VII: Glaze Calc.	3
ARTS	499M	Ind. Study: Ceramics	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SUMMER SEMESTER</b>			<b>HOURS</b>
ARTS	498M	Internship in Photography	<u>2</u>
<b>Semester Total</b>			<b>2</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ARTS	303	Ceramics IV: Adv. Ceramics	3
ARTS	401	Ceramics VII: Func. Ceramics	3
ARTS	499M	Ind. Study: Ceramics	3
GER CURR AREA IV			3
ARTS	306	Ceramics VI: Adv. Hand Const.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ARTS	499M	Ind. Study: Ceramics	3
ARTS	402	Ceramics IX: Firing & Kiln Design	3
ARTS	450M	Ceramics IX: Senior Projects	3
GER CURR AREA VI			<u>3</u>
<b>Semester Total</b>			<b>12</b>

+Commercial Ceramics Students Only  
#Commercial Photography Students Only  
\*Illustration Students Only

## COURSE DESCRIPTIONS

### ARTS

**ARTS 100 Fundamentals of Drawing** 3 crs.  
This is an introductory course in drawing designed to strengthen fundamental drawing skills and prepare students for entry into Arts 102. This course may not be applied toward the Art Core Requirements. OPEN TO ART MAJORS ONLY.

**ARTS 101 Exploration of the Visual Arts** 3 crs.  
**GE Area I – Discipline A**  
This is a philosophical course in the nature of Art designed to acquaint the student with the complex phenomena that makes up the art of our time, ranging from prehistory to the present. Emphasis is placed primarily upon the visual arts of painting, drawing, sculpture, pottery, and the graphic arts. The course features specifically, the nature of visual form, the art object, the material and process by which it was formed, and the creative process. Field trips are a requirement. OPEN TO ALL STUDENTS.

**ARTS 102 Drawing I** 3 crs.  
The purpose of this course is to allow students to record their observable environment, to express an emotional relationship to a subject, and to organize compositions into satisfying arrangements. The course is designed to enable students to develop a “Seeing Eye” by regularly sketching from direct observation. Gesture, contour, and the elements of line, value, texture, and space are explored. ARTS 102 is a beginning course in drawing. Laboratory four hours.

**ARTS 103 Drawing II** 3 crs.  
This is a continuation of ARTS 102; regular drawing from nature will be explored with emphasis placed on an understanding of the representation of the figure and on subjective thematic drawing. Laboratory four hours. Prerequisite: ARTS 102.

**ARTS 121 Ceramics I** 3 crs.  
Ceramics I is designed to acquaint beginning students with the fundamental pottery processes which include forming, design, decoration, glazing, firing, and clay processing. OPEN TO ALL STUDENTS. Laboratory four hours.

**ARTS 122 Sculpture I** 3 crs.  
This is a course designed to acquaint students with the fundamental manipulation and analysis of three-dimensional media through sculptural techniques. Studies are done in wood, metal, plaster, clay, and plastics. Emphasis is placed on creativity. Laboratory four hours. Prerequisite: ARTS 202.

**ARTS 200 Jewelry I** 3 crs.  
This an analytical and functional study of metals, precious stones, enamels, jeweler’s tools, equipment, and their possibilities. The course includes metal embossing, casting, forging, forming techniques, and stone setting.

Emphasis is focused on creativity. OPEN TO ALL STUDENTS. Laboratory four hours.

**ARTS 201 Design I** 3 crs.  
This is a foundation course in two-dimensional design, which places emphasis on the development of skills for the conscious application of the elements and Principles of design in composition. This course allows students immediate involvement in the essential problems in the translation of ideas into 2-dimensional visual expressions. Students will explore a variety of materials and techniques in many media. Laboratory four hours.

**ARTS 202 Design II** 3 crs.  
This is a foundation course in 3-dimensional design, which emphasizes the understanding and use of the art elements and Principles to solve problems involving 3-dimensional space. A full understanding of the 3-dimensional qualities of objects in space will be investigated with a variety of techniques in many media. Laboratory four hours.

**ARTS 205 Printmaking I** 3 crs.  
This course is designed to acquaint students with the fundamentals of the Printing process. Techniques in relief, serigraphy, and intaglio Printing are introduced. OPEN TO ALL STUDENTS. Laboratory four hours.

**ARTS 206 Photography I** 3 crs.  
This course is designed to acquaint students with the fundamentals of photography, the history of photography, the principles of light, simple optics, the basic camera, lens characteristics, photographic emulsions, exposure, shutters and diaphragms, cameras and their operation, elementary composition, taking pictures, development, contact printing, enlarging, darkroom and studio layout, selection and care of equipment. OPEN TO ALL STUDENTS. Laboratory four hours.

**ARTS 211 Art History I** 3 crs.  
This is a philosophical course in the nature of art designed to acquaint students with painting, sculpture, and architecture of the ancient worlds from prehistoric times through the end of the Middle Ages. OPEN TO ALL STUDENTS. Lecture three hours.

**ARTS 212 Art History II** 3 crs.  
This is a philosophical course in the nature of art designed to acquaint students with painting, sculpture, and architecture from the Renaissance through the present day. Co-requisite: ARTS 211. Lecture three hours.

**ARTS 213 History of American Crafts** 3 crs.  
This is an introductory course in the history of crafts in America and the European influence on the development of these arts. Emphasis will be on how and why crafts were made and how the processes have evolved over the years. Lecture three hours.

**ARTS 221 Ceramics II** 3 crs.  
Ceramics II is an advanced course in pottery design, construction, and studio processes. Emphasis will be

focused on throwing techniques, design, glaze testing, and firing techniques. Laboratory four hours.

**ARTS 288 Sequential Art I 3 crs.**

This course explores the fundamentals of sequential storytelling. All levels of the comic book industry are examined; contemporary and traditional techniques are demonstrated and mastered. Laboratory four hours. Prerequisite: ARTS 103

**ARTS 302 Ceramics III Advanced Wheel Throwing 3 crs.**

This course provides the advanced ceramic student an opportunity to explore throwing techniques, such as inverted stacking, throwing coils and throwing off the hump. Emphasis is on the production of large forms and mass production throwing techniques. Laboratory four hours. Prerequisite: ARTS 221.

**ARTS 303 Ceramics IV: Advanced Ceramics 3 crs.**

This is a continuation of ART 302. Emphasis is focused on the development of one's own style. This course provides the advanced ceramic student opportunities to explore throwing techniques, such as inverted stacking, throwing coils, and throwing off the hump. Emphasis is on the production of large forms and mass production throwing techniques. Laboratory four hours. Prerequisite: ARTS 302.

**ARTS 304 Drawing III 3 crs.**

This is an advanced course in drawing that is a continuation of ARTS 103 Drawing II. Emphasis is on creative pursuits and finding one's own expressive style. Laboratory four hours. Prerequisites: ARTS 102 and consent of the instructor.

**ARTS 305 Ceramics V Hand Construct 3 crs.**

This advanced course in hand building techniques explores Lab. construction, coil construction, hump mold construction, press mold construction, and paddling techniques. Emphasis in space will be investigated with a variety of techniques in many media. Laboratory four hours.

**ARTS 306 Ceramics VI: Advanced Hand Construction 3 crs.**

This is a continuation of ARTS 305; emphasis is focused on the development of one's own style. Laboratory four hours. Prerequisite: ARTS 305.

**ARTS 309 Photography II 3 crs.**

This is an intermediate level course which builds on the technical and conceptual framework established in Photography I. Topics include manipulated and altered imagery, basic introduction to color Photography, and introduction of Macintosh computer manipulation. Laboratory four hours. Prerequisite: ARTS 206 (formerly PHOT 221).

**ARTS 310 African American Art History 3 crs.**  
**GE Area I-Discipline B**

This course is a study of African American art in the United States, from its African roots to the present. Emphasis is placed on painting, sculpture, pottery, and crafts. OPEN TO ALL STUDENTS. Lecture three hours.

**ARTS 311 Photography III 3 crs.**

This course introduces students to medium and large format Photography and its use as a documentation tool. Course projects explore such topics as personal imagery, issues of political and social significance, and narrative forms. Technical information and exercises include advanced black and white film processing and Printing, and 4"x5" studio and field camera techniques. Laboratory four hours. Prerequisite: ARTS 309.

**ARTS 312 Photography IV 3 crs.**

This course is a continuation of Photography III. Students explore color Photography and digital output, along with selected non-silver alternative Photographic practices. Laboratory four hours. Prerequisite: ARTS 311.

**ARTS 313 Foundations of Visual Computing 3 crs.**

This course introduces students to the tools, terms, and techniques of visual computing. Students learn basic computer skills and creative methods. Students continue to strengthen their design skills by manipulating and collaging digital images. Laboratory four hours. Prerequisites: ARTS 102 and ARTS 201. OPEN TO ART MAJORS ONLY.

**ARTS 314 Advanced Visual Computing 3 crs.**

In this intensive studio class, students continue to explore the computer medium of expression. Using powerful programs like Photoshop, and Illustrator, students will create original digital images that express an understanding of both form and content. Laboratory four hours. Prerequisite: ARTS 313. OPEN TO ART MAJORS ONLY.

**ARTS 319 Representational Painting 3 crs.**

In this course instruction strongly emphasizes the figure as a component of representational and/or observation-based painting and drawing. The choice of painting/drawing media is entirely up to the student and can change frequently. There is an emphasis on individualized instruction. Components of this course include observation from the model, two weeks of anatomy for artists, and invented compositions using the human figure; instruction emphasizes placing figure(s) in space and studying of the drawings and paintings of old and modern masters in relation to these concerns. Laboratory four hours. Prerequisite: ARTS 342.

**ARTS 320 Advanced Representational Painting 3 crs.**

This is a continuation of ARTS 319. Prerequisites: ARTS 319 and consent of the instructor.

**ARTS 321 Water Based Media 3 crs.**

This course is designed to introduce students to the rewarding and challenging water based media. Students explore the wide range of applications of watercolor as they paint both from life and from their imagination. Laboratory four hours. Prerequisite: ARTS 342.

**ARTS 322 Illustration I 3 crs.**

Illustration I is an introductory course incorporating concept, individual expression, and development of skills. Demonstrations and discussions on creative process and media are given. Students are exposed to all areas of illustration: advertising, editorial, and corporate. Various black and white and color media are introduced. Laboratory four hours. Prerequisite: ARTS 103.

**ARTS 323 Illustration II 3 crs.**

This is an advanced course in illustration which explores painting techniques as they relate to illustration problem solving. Students work in ink, acrylic, and watercolor. Students not only concentrate on developing a personal approach to painting, but also grapple with issues of concept and design in communicating ideas visually. Class assignments are wide-ranging; investigating the applicability of techniques to editorial and book illustration, product design, and packaging. Students will work by direct observation as well as learn how to make and use Photographic reference effectively in their working processes. Laboratory four hours. Prerequisite: ARTS 322.

**ARTS 341 Painting I 3 crs.**

The body of knowledge covered in ARTS 341 is represented by traditional areas of concentration. The aim of the educational experience, however, is to have the student create freely and develop a visual vocabulary of his/her own. Emphasis will be placed on structured assignments employing the traditional devices of still life figure, collage, and color phenomena exercises. Laboratory four hours. Prerequisites: ARTS 102 and ARTS 103.

**ARTS 342 Painting II 3 crs.**

The purpose of this course is to explore the ways in which painting can be used to give visual form to ideas through an experimental process. The course aims to give a more in-depth experience in painting. Students deal with problems which give a more comprehensive insight into painting in the contemporary area and more freedom of choice in the direction in which to work and explore ideas. Projects in the field of mixed media are explored. Laboratory four hours. Prerequisite: ARTS 341.

**ARTS 400 Ceramics VII: Glaze Calculation 3 crs.**

This course is designed to provide the student with an in-depth working knowledge of compounding and testing ceramic glazes. The imperial method is used as the Principle method of calculation. Testing clays and firing techniques are a major focus, along with safety precautions that must be adhered to when using ceramic chemicals. Laboratory four hours. Prerequisite: ARTS 303.

**ARTS 401 Ceramics VIII: Functional Ceramics 3 crs.**

This course is designed to provide students an opportunity to develop a line of functional ware that is uniquely their own. Laboratory four hours. Prerequisites: ARTS 300, ARTS 301, ARTS 302, ARTS 303, and ARTS 400.

**ARTS 402 Ceramics IX: Firing and Kiln Design 3 crs.**

This course is designed to provide hands-on experience in the design of ceramic kilns and in firing techniques. A major emphasis is focused on high fire reduction kilns, both gas and wood burning models. Laboratory four hours. Prerequisite: ARTS 400.

**ARTS 410 Studio Photography 3 crs.**

This course is designed to acquaint the student with fundamentals of working in the Photographic studio environment. Projects covering various techniques of studio lighting, portraiture, and product Photography are investigated. In addition, students work in experimental set design for the studio. Projects incorporate both traditional silver and color Photographic processes. Laboratory four hours. Prerequisites: ARTS 206, ARTS 309, and ARTS 311.

**ARTS 411 Digital Photography 3 crs.**

This course examines the impact of computer technology in Photography. Topics include methods to bring images into the computer, such as digital cameras, scanning, Photo. CD, video capture, internet image access. Photographic image alteration is carried out primarily with digital technology. Laboratory four hours. Prerequisites: ARTS 222, ARTS 311, and ENGL 336.

**ARTS 420 Illustration III 3 crs.**

This course explores the ways in which painting can be used to give visual form to ideas through experimental processes. The course aims to give more in-depth experience in painting. Students deal with problems which give a more comprehensive insight into painting in the contemporary area and more freedom of choice in the direction in which to work and explore ideas. Projects in the field of mixed media are explored. Laboratory four hours. Prerequisite: ARTS 323.

**ARTS 450J Illustration: Senior Project 3 crs.**

This course is an extensive independent study that focuses on the uses of illustration. A formal proposal is approved by the instructor. The project may be a research topic with the results presented in a scholarly paper or a particular challenging body of work. Exhibition is required. Laboratory four hours. Prerequisite: Consent of instructor.

**ARTS 450K Photography: Senior Project 3 crs.**

This course is an extensive independent study that focuses on the uses of Photographic techniques. A formal proposal will be approved by the instructor. The project may be a research topic with the results presented in a scholarly paper or a particularly challenging body of work. Exhibition is required. Laboratory four hours. Prerequisite: Consent of instructor.

**ARTS 450M Ceramics IX: Senior Projects 3 crs.**

In this course senior students are required to develop a project with consent of instructor. The project may be a research topic that results in the presentation of a scholarly paper, or it may be a particularly challenging body of work that includes documented research on the process or technique(s) used. Laboratory four hours. Prerequisites: Senior Standing and consent of the instructor.

**ARTS 498J Internship: Illustration 3 crs.**

This course provides students a work experience under the direct supervision of selected professionals in their field of study. Students must register for the course during the summer semester following their junior year. The internship requires 240 hours of direct work experience. Prerequisites: Junior standing and consent of the instructor.

**ARTS 498K Internship: Photography 3 crs.**

This course provides students a work experience under the direct supervision of selected professionals in their field of study. Students must register for the course during the summer semester following their junior year. The internship requires 240 hours of direct work experience. Prerequisites: Junior standing and consent of the instructor.

**ARTS 498M Internship: Ceramics 3 Crs.**

This course provides students a work experience under the direct supervision of selected professionals in their field of study. Students must register for the course during the summer semester following their junior year. The internship requires 240 hours of direct work experience. Prerequisites: Junior standing and consent of the instructor.

**ARTS 499A Independent Study: Painting 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in painting. Students are required to meet and confer with the instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499B Independent Study: Printmaking 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in Printmaking. Students are required to meet and confer with instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499C Independent Study: Ceramics 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in ceramics. Students are required to meet and confer with instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499D Independent Study: Drawing 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in drawing. Students are required to meet and confer with the instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499E Independent Study: Jewelry 3 crs.**

This course provides students with the opportunity to elect specialized area of study in jewelry. Students are required to meet and confer with instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499F Independent Study: Photography 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in Photography. Students are required to meet and confer with instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499G Independent Study: Sculpture 3 crs.**

This course provides students with the opportunity to elect specialized areas of study in sculpture. Students are required to meet and confer with the instructor on specified conference dates. Prerequisite: Consent of instructor.

**ARTS 499J Independent Study in 3 crs.****Applied Design: Illustration**

This course is designed to provide Applied Design majors with opportunities to elect specialized areas of study in studio illustration. Students are required to receive written permission from the instructor. Laboratory four hours. Prerequisite: Upper Division standing and permission from the instructor.

**ARTS 499K Independent Study in 3 crs****Applied Design: Photography**

This course is designed to provide Applied Design majors with opportunities to elect specialized areas of study in studio Photography. Students are required to receive written permission from the instructor. Laboratory four hours. Prerequisite: Upper Division standing and permission from the instructor.

**ARTS 499M Independent Study in 3 crs.****Applied Design: Ceramics**

This course is designed to provide Applied Design majors with opportunities to elect specialized areas of study in studio ceramics. Students are required to receive written permission from the instructor. Laboratory four hours. Prerequisite: Upper Division standing and permission from the instructor.

**ARTS 499Q Independent Study: Sequential Art 3 crs.**

This course is designed to provide opportunities for art majors to explore specialized areas of sequential art. Students are required to receive written permission from the instructor. Laboratory four hours. Prerequisite: ARTS 288.

## **MUSIC EDUCATION**

### **MISSION**

The Music Program accepts as its mission the role of providing learning experiences for students who wish to pursue careers in elementary and secondary music education, providing performance opportunities through applied music study, providing performance opportunities through ensemble participation, providing foundational development for graduate study, and providing instruction for students who do not desire music as a career but wish to develop skills and knowledge of music as an avocation.

The program also provides opportunities for students and members of the non-University community to experience a better quality of life through music exposure and study. Concerts, lectures, seminars, and workshops are presented to meet this aspect of our mission.

Study in the Music Program permits students to broaden their artistic perspective. Course offerings may be elected by non-majors who have met prerequisites. To accomplish its mission, the Music Program advocates the following goals.

### **GOALS**

The program strives to meet the evolving music needs of students who reside in the State of Maryland and other locations. The program offers a sufficient instructional core of music courses to prepare graduates to think logically, perform proficiently, express themselves clearly about music, and other topics, and make value judgments about the arts. The program encourages research, publication, and the preparation of original and arranged musical works. The department also serves as a forum for community musical enrichment.

### **OBJECTIVES**

The following objectives evolve from the mission and goals. Students who complete the programs will

- Demonstrate analytical skills in music,
- Demonstrate the ability to verbalize knowledgeably about music, and perform proficiently on primary and secondary Instruments,
- Demonstrate basic skills in music composition through structured format or improvisation,
- Demonstrate behavior which reflects their perception of the value of music as an art,
- Demonstrate basic keyboard and vocal skills,
- Demonstrate common practice techniques,

- Perform musically in solo and ensemble experiences, and
- Respond extemporaneously to a musical experience in a scholarly manner.

### **DESCRIPTION OF PROGRAM**

The Music Program offers a curriculum that leads to the Bachelor of Arts Degree in Music Education with specific preparation for teaching general/choral or instrumental music in elementary, middle, and secondary schools. Students who complete the program will be eligible for P-12 teaching certification.

### **PROGRAM OBJECTIVES**

Upon successful completion of prescribed courses and music experiences provided in the music education program, the prospective music educator will be able to

- Demonstrate suitable skills and knowledge in music pedagogy, applied music, and related subject areas;
- Demonstrate appropriate skills necessary for the teaching of Music (general/choral or instrumental) in elementary, middle and secondary schools for pupils with varying learning abilities; Develop evaluation instruments and assess musical performances;
- Develop and implement classroom management procedures that contribute to a desirable learning environment; and
- Demonstrate skill in oral and written communication in music, as well as in other academic areas.

### **MUSIC ACHIEVEMENT TESTS AND CHANGE IN MAJOR PROGRAM**

Piano Proficiency and Musical Achievement Tests may be administered to freshmen and new students who elect the Music Education program. These tests are administered at designated periods prior to registration for each semester. Test results are used to counsel students in music course selection and aid them in pursuing a curriculum suitable to their abilities, talents and potential for success.

The program administrator reserves the right to request a change of major when sufficient evidence of a lack of achievement is noted. Appropriate change of program forms must be completed and approved.

### **APPLIED MUSIC, ENSEMBLE, AND CORE GRADE REQUIREMENTS**

Students who are accepted as majors in Music Education must select a major applied instrument, with the approval of the appropriate applied music instructor and coordinator of the Music Program. Students who elect an orchestral instrument must fulfill the six-semester requirement in Music Ensemble: Instrumental. Students who elect piano or voice for their major applied concentration must fulfill the six semester requirement in Music Ensemble: Choral (instrumental if their performance in the ensemble will be on piano).

Music Education Majors and Minors in Music must earn a letter grade of C or better in required music core courses.



The Ella Fitzgerald Center for the Performing Arts

## MINOR PROGRAM

A minor in music is offered. Unlike the major program, there is no emphasis upon music education. The minor program in Music is designed to meet the following objectives:

- To provide basic exploration in three primary areas in music: Music Theory, Music History and Literature, and Applied Music, and
- To provide a program for students to acquire a foundation from which a greater understanding and appreciation of music may be developed.

The program consists of eighteen hours of courses offered in the distribution shown. Major Applied Music courses must be studied during four consecutive semesters. The sequence in which other courses are taken must be approved by the instructor and the Program Coordinator. A grade of "C" or better must be earned in each.

## MUSIC

			<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>	
MUSI 102	Music Theory and Application I	4	
MUSI 103	Music Theory and Application II	4	
MUSI 313	Music History and Literature,	2	
MUSI 111-112	Major Applied Music: A-O	2	
MUSI 211-212	Major Applied Music: A-O	2	
MUSI 113	Music Ensemble: Instrumental <b>or</b>	4	
MUSI 116	Music Ensemble: Choral	4	

## RECITAL REQUIREMENT

Participation in recitals by music education majors and minors is required once each semester. Participants on Honors Recitals are selected by a faculty poll. Non-music education majors are not required to appear before faculty and perform in recitals. Attendance at a minimum of five concerts per semester is required of Music Education Majors.

Students must register for applied music courses by indicating the correct level number and instrument alphabet, for example, MUSI 111A Major Applied Music: Piano. Course numbers are designed to provide for eight successive semesters of study. Prerequisite: Consent of Instructor.

A - Piano  
B - Trumpet  
C - Trombone  
D - Tuba  
E - Percussion

F - Voice  
G - Flute  
H - Oboe  
I Clarinet  
J - Bassoon

K - Saxophone  
L - Violin  
M - Viola  
N - Cello  
O - Double Bass



**MUSIC EDUCATION**  
**Required and Recommend Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**II. Program Core Requirements**

**43 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MUSI 102	Music Theory and Application I	4
MUSI 103	Music Theory and Application II	4
MUSI 104	Woodwind Class	1
MUSI 105E	Percussion Class	1
MUSI 106	String Class	1
MUSI 107O	Brass Class	1
MUSI 108F	Voice Class	1
MUSI 201	Harmony	3
MUSI 203	Form and Analysis	2
MUSI 205A	Piano Class I	1
MUSI 206A	Piano Class II	1
MUSI 306	Instrumentation and Arranging	3
MUSI 308	Conducting	2
MUSI 309A	Piano Class III	1
MUSI 310A	Piano Class IV	1
MUSI 313	Music History and Literature I	2
MUSI 314	Music History and Literature II	2
MUSI 111	Major Applied Music A-O	1
MUSI 112	Major Applied Music A-O	1
MUSI 211	Major Applied Music A-O	1
MUSI 212	Major Applied Music A-O	1
MUSI 311	Major Applied Music A-O	1
MUSI 312	Major Applied Music A-O	1
MUSI 113	Music Ensemble: Instrumental <b>or</b>	
MUSI 116A	Music Ensemble: Choral	6

**III. Professional Core Courses**

**45 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200	Introduction to Contemporary Education	3
PSYC 305	Development Psychology	3
PSYC 307	Educational Psychology	3
EDCI 409	Teaching Reading in Content Areas: Part I	3
EDCI 410	Teaching Reading in Content Areas: Part II	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 406	Classroom Management	3
EDSP 200	Introduction to Special Education	3
EDCI 421C	Curriculum and Instructional Methods in Music Ed.- Elementary	3
EDCI 423C	Curriculum and Instructional Methods in Music Ed.- Middle/Secondary-Choral/General <b>or</b>	
EDCI 423D	Curriculum and Instructional Methods in Music Ed.- Middle/Secondary-Instrumental	3
EDCI 400	Senior Seminar in Education (Concurrently taken with Teaching Internship)	3
EDCI 440C	Teaching Internship in Music in the Elementary/Middle School	6
EDCI 450D	Teaching Internship in Music in the Secondary School	6

**INSTRUMENTAL MUSIC**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL 101	Basic Composition I		3
MATH 102	App. of College Math <u>or</u>		
MATH 109	College Algebra		3
MUSI 102	Music Theory & App. I		4
GNST 100	First Year Experience		1
BIOL 101	Theories and Application		3
BIOL 103	Biological Science Lab		1
MUSI 111A-O	Major Applied		<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL 102	Basic Composition II		3
	GER CURR AREA III		3
MUSI 113	Music Ensemble		1
MUSI 112 A-O	Major Applied Music		1
EDHE 111	Personalized Health Fitness		3
MUSI 103	Music Theory & App. II		4
ENGL 203	Fund. of Contemporary Speech		<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL 305	Technical Writing <u>or</u>		
ENGL 310	Advanced Composition		3
EDCI 200	Intro. to Contemporary Ed.		3
MUSI 201	Harmony		3
MUSI 105E	Percussion Class		1
MUSI 205A	Piano Class		1
MUSI 211A-O	Major Applied Music		1
MUSI 113	Music Ensemble		1
PSYC 307	Educational Psychology		<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
	GER CURR AREA II		3
EDSP 200 I	Intro. to Special Ed.		3
PSYC 305	Developmental Psych.		3
MUSI 108A	Voice Class		1
MUSI 203	Form & Analysis		2
MUSI 206A	Piano Class II		1
MUSI 212A-O	Major Applied Music		1
MUSI 113	Music Ensemble		<u>1</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
	GER CURR AREA VI		3
MUSI 113	Music Ensemble		1
MUSI 104	Woodwind Class		1
MUSI 106	String Class		1
MUSI 306	Instrumentation & Arranging		3
MUSI 313	Music History & Literature I		2
MUSI 309A	Piano Class III		1
MUSI 311A-O	Major Applied Music		1
	GER CURR AREA I: Art		<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI 409	Teaching Reading in Content Area: Part I		3
EDCI 406	Classroom Management		3
EDCI 421C	Curr. & Inst. Methods in Music/Choral-Gen. Elem.		3
MUSI 107	Brass Class		1
MUSI 314	Music History & Lit. II		2
MUSI 310A	Piano Class IV		1
MUSI 312A-O	Major Applied Music		1
MUSI 113	Music Ensemble		1
	GER CURR Area: Behavioral Science		<u>3</u>
<b>Semester Total</b>			<b>18</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
	GER CURR AREA II		3
EDCI 410	Teaching Reading Content Areas: Part II		3
EDCI 423D	Curr. & Inst. Meth. in Music/Choral-Gen.		3
MUSI 308	Conducting		2
MUSI 113	Music Ensemble		1
EDCI 311	Comprehensive Assess.		<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI 400	Senior Seminar		3
EDCI 440C	Teaching Internship Elementary Music		6
EDCI 450D	Teaching Internship Secondary Music		<u>6</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      129**

**GENERAL/CHORAL**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
ENGL 101 Basic Composition I	3
MATH 102 App. of College Math <b>or</b>	
MATH 109 College Algebra	3
MUSI 102 Music Theory & App. I	4
GNST 100 First Year Experience	1
MUSI 111A-O Major Applied	1
BIOL 101 Theories and Application	3
BIOL 103 Biology Lab.	<u>1</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
ENGL 102 Basic Composition	3
GER CURR AREA III	3
MUSI 116A Music Ensemble	1
MUSI 112A-O Major Applied Music	1
EDHE 111 Personalized Health Fitness	3
MUSI 103 Music Theory & App. II	4
ENGL 203 Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>	<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
ENGL 310 Advanced Composition	3
EDUC 200 Intro. To Cont. Education	3
MUS 201 Harmony	3
MUSI 105E Percussion Class	1
MUSI 205A Piano Class I	1
MUSI 211A-O Major Applied Music	1
MUSI 116A Music Ensemble	1
PSYC 307 Educational Psychology	<u>3</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
GER CURR. AREA II	3
EDSP 200 Intro. to Special Educ.	3
PSYC 305 Developmental Psych.	3
MUSI 108A Voice Class	1
MUSI 203 Form & Analysis	2
MUSI 206A Piano Class II	1
MUSI 212A-O Major Applied Music	1
MUSI 116A Music Ensemble	<u>1</u>
<b>Semester Total</b>	<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
GER CURR Area VI	3
MUSI 116A Music Ensemble	1
MUSI 104 Woodwind Class	1
MUSI 106 String Class	1
MUSI 306 Instrumentation & Arranging	3
MUSI 313 Music History & Lit. I	2
MUSI 309A Piano Class III	1
MUSI 311A-O Major Applied Music	1
GER CURR AREA I: Arts	<u>3</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
EDCI 409 Teaching Reading in Content Areas: Part I	3
EDCI 406 Classroom Management	3
EDCI 421C Curr. & Inst. Methods in Music/Choral-Gen. Elem	3
MUSI 107 Brass Class	1
MUSI 314 Music History & Lit. II	2
MUSI 310A Piano Class IV	1
MUSI 312A-O Major Applied Music	1
MUSI 116A Music Ensemble	1
GER CURR AREA I: History	<u>3</u>
<b>Semester Total</b>	<b>18</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
GER CURR AREA I	3
EDCI 410 Teaching Reading in Content Areas: Part II	3
EDCI 423D Curr. & Inst. Meth. in Music/Choral-Gen.	3
MUSI 308 Conducting	2
MUSI 116A Music Ensemble	1
EDCI 311 Comprehensive Assessment	<u>3</u>
<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
EDCI 400 Senior Seminar	3
EDCI 440C Teaching Internship Elementary Music	6
EDCI 450D Teaching Internship Secondary Music	<u>6</u>
<b>Semester Total</b>	<b>15</b>

**Total Credits Requirements 129**

## COURSE DESCRIPTIONS

### MUSIC

**MUSI 100 Rudiments of Music 3 crs.**  
**GE Area I-Discipline A**

This course is a study of the basic fundamentals of music with emphasis on note-reading, musical notations, keys and key signatures, musical terms, and major and minor scale formations. An introduction to sight-singing, melodic dictation, and ear training is included. This course may not be applied toward the music education core requirement. OPEN TO ALL STUDENTS. Three hours lecture per week.

**MUSI 101 Introduction to Music 3 crs.**  
**GE Area I - Discipline A**

An introductory course in which the acquisition of designated skills and knowledge serves as a means of musical enjoyment. Basic music repertoire is included. OPEN TO ALL STUDENTS; however, music education majors can receive credit towards general education requirements only. Three hours lecture per week.

**MUSI 101H Introduction to Music 3 crs.**  
**GE Area I - Discipline A**

An introductory course in which the acquisition of designated skills and knowledge serves as a means of musical enjoyment. Basic music repertoire is included. OPEN TO HONORS STUDENTS ONLY. Three hours lecture per week.

**MUSI 102 Music Theory and Application I 4 crs.**

This course is a study of the materials and basic stylistic elements of music. Skills in ear-training, sight-singing, melodic dictation, and intervallic and triadic recognition are developed. Through original composition and analysis of music literature, students are introduced to basic techniques of melody-writing, counterpoint, harmony, form, and orchestration. Courses must be taken in numerical sequence. Three hours lecture and two hours Laboratory per week.

**MUSI 103 Music Theory and Application II 4 crs.**

This course is a study of the materials and basic stylistic elements of music. Skills in ear-training, sight-singing, melodic dictation, and intervallic and triadic recognition are developed. Through original composition and analysis of music literature, students are introduced to basic techniques of melody-writing, counterpoint, harmony, form, and orchestrations. Three hours lecture and two hours Laboratory per week. Prerequisite: MUSI 102.

**MUSI 104 Woodwind Class 1 cr.**

This course explores exploration of the fundamentals of performance on selected woodwind instruments. Fundamentals of breath control, characteristic tone, attack and the development of a good embouchure are applied. The student develops sufficient ability to perform on two instruments and gain pedagogical Principles of the others.

Instruction in the class includes performance methods and materials, care and maintenance of instruments, and the role of the woodwinds in school band and orchestras. Two Laboratory hours per week.

**MUSI 105E Percussion Class 1 cr.**

This course explores the fundamentals of performance on selected instruments of the percussion family. The student develops the ability to perform on two percussion instruments and gain pedagogical Principles of the others. Instruction in the class also includes performance methods and materials, care and maintenance of instruments, and the role of the percussion section in a school band or orchestra. Two Laboratory hours per week.

**MUSI 106 String Class 1 cr.**

This course is an exploration of the fundamentals of performance on instruments of the string family. The student develops basic ability to perform on two string instruments and gain pedagogical Principles on the others. Instruction in the class also includes performance methods and materials, care and maintenance of instruments, and the role of the string section in an orchestra. Two Laboratory hours per week.

**MUSI 107 Brass Class 1 cr.**

This course is an exploration of the fundamentals of performance on selected instruments of the brass family. Fundamentals of breath control, characteristic tone, attack and the development of good embouchure are studied. The student develops basic ability to perform on two instruments and gain pedagogical Principles of the others. Performance methods and materials, care and maintenance, and the role of the brass instruments in school bands and orchestras are studied. Two Laboratory hours per week.

**MUSI 108A Voice Class 1 cr.**

This is a course in which voice classification, general vocal problems, and solutions to these problems are studied. Correct breathing, tone reproduction, and diction are applied and functional repertoire initiated. A proficiency examination is given at the end of the course. Two Laboratory hours per week.

**MUSI 109 Introduction to Jazz History 3 crs.**  
**GE Area I - Discipline A**

This course explores the styles and researches historical events which contributed to the evolution of the types of music called jazz. The philosophical and sociological relationships to the development of jazz from the late 1800's to the present are the primary focus of the course. The basic elements of music and performance practices are studied. Lecture, three hours.

**MUSI 110A Preparatory Piano Class 1 cr.**

This is a study of elementary piano skills designed for students with limited or no previous training. The course may be repeated for credit; however, no credit toward the Music Education degree is granted. Required of music Education Majors who do not qualify for MUSI 205 and MUSI 111A and must be repeated until performance

competencies at these levels are met. A proficiency examination is administered. A grade of "C" or better must be earned before registration for MUSI 110B. OPEN TO MUSIC MAJORS ONLY

**MUSI 110B Preparatory Piano Class 1 cr.**

This is a continuation of MUSI 110A. The course may be repeated for credit; however, no credit toward the Music Education Degree is granted. Required of Music Education Majors who do not qualify for MUSI 205 or MUSI 111A and must be repeated until performance competencies at these levels are met. A proficiency examination is administered. A grade of "C" or better must be earned before registration for MUSI 205 and MUSI 111A. OPEN TO MUSIC MAJORS ONLY

**MUSI 111 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of the Instructor

**MUSI 112 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of the Instructor

**MUSI 113A Concert Band 1 cr.**

In this course, the rehearsal, study, and performance of standard and non-standard concert band literature will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. May be repeated for credit. Prerequisite: Consent of Instructor.

**MUSI 113B Jazz Band 1 cr.**

In this course, the rehearsal, study, and performance of Jazz band literature will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. May be repeated for credit. Prerequisite: Consent of Instructor.

**MUSI 116A Concert Choir 1 cr.**

In this course, the rehearsal and performance of choral literature, employing various combinations of voices, will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. May be repeated for credit. Prerequisite: Consent of Instructor.

**MUSI 116B Gospel Choir 1 cr.**

In this course, the rehearsal and performance of Black American Gospel Choir literature, employing various combinations of voices, will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. May be repeated for credit. Prerequisite: Consent of Instructor.

**MUSI 201 Harmony 3 crs.**

This course is a continuation of harmonic Principles introduced in MUSI 102 and MUSI 103, with emphasis placed upon the study of harmonic progressions, figured bass realization, modulation, and altered chords, as practiced in the eighteenth century. Some composition in small forms is required. Analysis of eighteenth and nineteenth century literature is included, with an introduction to twentieth century harmonic practices. Three hours lecture-Laboratory per week. Prerequisite: MUSI 103 with minimum grade of C or passed examination.

**MUSI 203 Form and Analysis 2 crs.**

This course is a study of motive, phrase, sentence structure, song forms, sonata, rondo, and other primary forms. Harmonic and structural analysis of selected 17th, 18th, 19<sup>th</sup>, and 20th century compositions are explored. Aural and written experiences are undertaken. Two one-hour lectures per week. Prerequisite: MUSI 201 with a minimum grade of "C" or passed examination.

**MUSI 205A Piano Class I 1 cr.**

This course is a study of piano techniques useful for school and community playing. Scales, arpeggios, choral techniques, melody and accompaniment playing, transposition, sight-reading, and improvisation are included. A proficiency examination is administered at the end of the semester with evaluation made by a faculty jury. Two Laboratory hours per week. Prerequisite: MUSI 110B or an audition. OPEN TO MUSIC MAJORS ONLY.

**MUSI 206A Piano Class II 1 cr.**

This course is a study of piano techniques useful for school and community playing. Scales, arpeggios, choral techniques, melody and accompaniment playing, transposition, sight-reading, and improvisation are included. A proficiency examination is administered at the end of the semester with evaluation made by a faculty jury. Two Laboratory hours per week. Prerequisite: MUSI 205A or an audition. OPEN TO MUSIC MAJORS ONLY.

**MUSI 211 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of the Instructor

**MUSI 212 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of the Instructor

**MUSI 306 Instrumentation and Arranging 3 crs.**

This course is a study of instrumental and vocal colors, sounds, and technical capabilities of orchestral instruments and voices; students acquire practice skills in functional arranging of various types of music. Three lecture-Laboratory hours per week. Prerequisite: MUSI 203.

**MUSI 308 Conducting 2 crs.**

This is a Laboratory course in conducting through score-reading. Baton and hand techniques, conducting patterns, rehearsal techniques, and communicative gestures for vocal and instrumental literature of various periods will be included. Two hours lecture-Laboratory per week. Prerequisites: MUSI 203 and MUSI 306

**MUSI 309A Piano Class III 1 cr.**

This course is a continuation of technical skills, introduced in MUSI 205 and 206, with additional emphasis on accompanying vocal and instrumental literature, improvisation in classical and popular styles, choral progressions, modulation, reduction of four-part open score, and weekly ensemble playing. Two Laboratory hours per week. Prerequisites: MUSI 206A or by audition.

**MUSI 310A Piano Class IV 1 cr.**

This course is a continuation of technical skills, introduced in MUSI 205 and MUSI 206, with additional emphasis on accompanying vocal and instrumental literature, improvisation in classical and popular styles, choral progressions, modulation, reduction of four-part open score and ensemble playing. Two Laboratory hours per week. Prerequisites: MUSI 309A or by audition. Prerequisite: Consent of Instructor.

**MUSI 311 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of Instructor.

**MUSI 312 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of Instructor.

**MUSI 313 Music History and Literature I 2 crs.**

This is a survey course designed to explore the evolution of music in Western Civilization. Music forms, styles, social and political influences on music, periods of major importance, and characteristic elements associated with instrumental, vocal, and theoretical contributions are stressed. Selected recordings, scores, and elements of research in music history are included. This course covers the Grecian Era to the seventeenth century. Two lecture

hours per week. Prerequisites: MUSI 201, MUSI 203 or consent of instructor.

**MUSI 314 Music History and Literature II 2 crs.**

This course is a continuation of MUSI 313. This course covers the seventeenth century to the present. Two lecture hours per week.

Prerequisite: MUSI 313 or consent of the instructor

**MUSI 402 Senior Recital 3 crs.**

This course is preparation of a recital, not less than forty-five minutes in length, in the major applied area. At the conclusion of the course, the student will give a public performance of approved prepared materials. Prerequisite: Consent of instructor and the Chairman of the Department.

**MUSI 411 A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of Instructor.

**MUSI 412A-O Major Applied 1 cr.**

In this course, directed sequential instruction is provided, with emphasis on technique development and literature studies. One 50-minute lesson per week; a minimum of six practice hours per week is recommended. A proficiency examination is required of Music Education Majors with a faculty jury at the end of the semester. Prerequisite: Consent of Instructor.

**MUSI 499A Applied Music: Piano 1 cr.**

This is a course designed to meet the special needs of the applied music student. Group and/or individual instruction will be provided. A continuation of MUSI 308 or MUSI 412 Sections A-F. One 50-minute lesson per week for fifteen weeks; a minimum of six practice hours per week is required. Contact: Department of Fine Arts.

**MUSI 499B Applied Music: Brass 1 cr.**

This is a course designed to meet the special needs of the applied music student. Group and/or individual instruction will be provided. A continuation of MUSI 308 or MUSI 412 Sections A-F. One 50-minute lesson per week for fifteen weeks; a minimum of six practice hours per week is required. Contact: Department of Fine Arts.

**MUSI 499C Applied Music: Woodwinds 1 cr.**

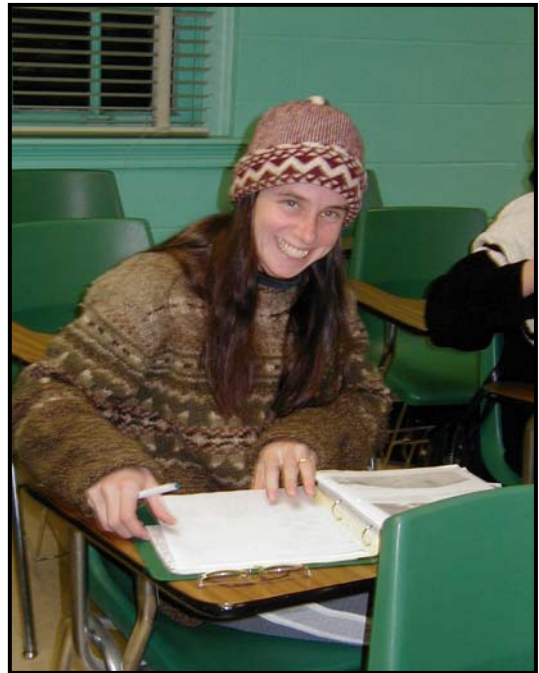
This is a course designed to meet the special needs of the applied music student. Group and/or individual instruction will be provided. A continuation of MUSI 308 or MUSI 412 Sections A-F. One 50-minute lesson per week for fifteen weeks; a minimum of six practice hours per week is required. Contact: Department of Fine Arts.

**MUSI 499D Applied Music: Percussion 1 cr.**

This is a course designed to meet the special needs of the applied music student. Group and/or individual instruction will be provided. A continuation of MUSI 308 or MUSI 412 Sections A-F. One 50-minute lesson per week for fifteen weeks; a minimum of six practice hours per week is required. Contact: Department of Fine Arts.

**MUSI 499F Applied Music: Voice 1 cr.**

This is a course designed to meet the special needs of the applied music student. Group and/or individual instruction will be provided. A continuation of MUSI 308 or MUSI 412 Sections A-F. One 50-minute lesson per week for fifteen weeks; a minimum of six practice hours per week is required. Contact: Department of Fine Arts.



**FACULTY****Demanche, Michel**

Assistant Professor, (Art)

B.F.A., University of Texas at Arlington

M.F.A., North Texas State University

**Harleston, Sheila C.**

Instructor, (Music)

B.S., Norfolk State University

M.M., Norfolk State University

**Harrington, Christopher**

Assistant Professor, (Art)

B.A., Binghamton University

M.A., Teachers College, Columbia University

M.F.A., Maryland Institute, College of Art

**Hudson, Bradley**

Instructor (Art)

B.A., University of Maryland College Park

MFA, University of Maryland College Park

**Kamalidin, Sais**

Assistant Professor (Music)

B.A., Texas Southern University, Houston

M.M., Howard University

Ph.D., University of Maryland College Park

**Knier, Veronica**

Instructor, Music

B.F.A., University of Connecticut

M.M., University of Connecticut

**Lamkin, John**

Instructor, Music

B.S., South Carolina State University

M.M., Morgan State University

Ph.D., University of Maryland, College Park

**Satchell, Ernest R.**

Associate Professor, Art

B.S., University of Maryland Eastern Shore

M.Ed., Towson University

M.F.A., Towson University



## GENERAL STUDIES PROGRAM

### DISCLAIMER

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland Eastern Shore. At the time of the publication, every reasonable effort was made to attain factual accuracy in the material presented. The catalog is not intended to be a complete statement of all procedures, processes and regulations governing graduate or professional degree programs which may be covered in separate program and office manuals and handbooks. The University of Maryland Eastern Shore reserves the right to make changes in fees, course offerings and general regulations and academic requirements without prior notice.

For the most up-to-date information on course offerings, program requirements and deadlines, please write, call or e-mail the program or department to which you are applying.

### Dean:

Brenda Anderson, Ed.D.

### Program Chair:

Diann R. Showell-Cherry, Ph.D.

### MISSION

The mission of the Bachelor of General Studies Degree Program is to provide opportunities for diverse student populations to develop academic programs that will meet their individual needs.

### GOAL

The goal of the General Studies Degree Program is to provide students with a variety of learning experiences that will enable them to function successfully in our global society by acquiring competencies and skills that will enhance their career plans, personal and professional development.

### OBJECTIVES

The objectives of the general Studies Degree Program are to

- build a foundation for students to pursue further study in higher education
- afford greater access to a baccalaureate degree for the community and the nontraditional student
- provide students an avenue for the self-fulfillment that comes with an academic degree
- provide students an opportunity to explore a wide variety of career options and

- prepare students to enter graduate and professional schools.

The program permits the students to experience a broad liberal arts background with a high degree of competency in a selected area of concentrated study. Declared concentrations may be taken in all areas in which there are other traditional majors, except education, business, and physician assistant. The academic program is individualized in that the student and the advisor design the scope and sequence of courses that will reflect the student's ability, interests, background experiences (including work), career goals, time constraints, etc.

General Studies is especially appropriate for the non-traditional adult (older) learner who has had a variety of work-related experiences or who has had "time out" periods in his/her educational background.

General Studies is recommended for the transfer student who has a number of transferable credits in a variety of disciplines or for the students who desire to change from a more restricted traditional major program to one that is more flexible and that will meet the needs of the student more appropriately.

Although students may enter the General Studies Degree Program at any time, they must be officially enrolled as a General Studies major at least two semesters prior to the expected date of graduation. For those transferring into General Studies, the Change of Major process must be executed two semesters before the expected graduation date. Students will not be permitted to transfer into the General Studies Degree Program during the semester of the anticipated date of graduation. Other guidelines are:

1. The student must be in the University's database as an official General Studies major at least two semesters prior to the expected date of graduation.
2. A minimum of 120 total credits must be earned with a cumulative grade point average of at least 2.0.
3. A minimum of 34 credits of lower level courses in the 100-200 range may be applied toward graduation. These courses may be electives or prerequisites for upper level courses.
4. At least 45 credits must be earned at the upper level (courses in the 300-400) range. Of the 45 total credits, 27 must be in one declared area of concentration. A grade point average of 2.0 must be maintained in all courses in the area of concentration.
5. Students (including transfer students) must complete the 41 general education requirements. Students who are exempted from the required physical activity must take three approved credits in an elective.

6. The General Studies Degree Program is designed to enable transfer students to apply up to 70 credit hours earned at other institutions toward meeting the requirements of the planned degree at UMES.

<b>Degree Requirements</b>	<b>Credit (Minimum)</b>
General Education Requirements	40
Lower Level Credits	34
Upper Level Credits	45
Credits in the Concentration	27
Free Electives	18
<b>Total Credits = 120(minimum)</b>	

**GENERAL STUDIES****Required and Recommended Course Sequence  
Concentration: The Social/Behavioral Sciences****FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
ENVS	101	Intro. Environmental Science	3
SOCI	101	Introduction to Sociology	3
MATH	102	Aps. of College Math	3
EDHE	111	Personalized Health Fitness	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
PSYC	200	Introduction To Psychology	3
ARTS	101	Exploration of Visual Arts	3
SOCI	201	Social Problems	3
BIOL	101	Theories & Aps. of Biological Sci	3
BIOL	103	Biological Science Lab	<u>1</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
SOCI	202	Social Deviance and Control	3
SOWK	200	Introduction to Social Work	3
HIST	201	History of American Civ. I	3
PSYC	371	Abnormal Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	310	Advanced Composition	3
POLI	200	Intro. to American Government	3
SOCI	250	Juvenile Delinquency	3
SOCI	309	Research Methods	3
SOWK	300	Human Behavior I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HIST	333	African American History	3
SOCI	303	Social Inequality	3
SOCI	320	Social Mov. & Social Change	3
SOCI	331	American Minority Groups	3
SOWK	305	Social Work Policy	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	201	Principles of Economics I	3
HIST	102	History of World Civ. II	3
PSYC	305	Developmental Psychology	3
SOCI	316	Marriage and Family Life	3
SOCI	326	Social Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		FREE Elective	3
HIST	334	African American History II	3
POLI	311	Comparative Political Systems	3
SOCI	361	Social Gerontology	3
SOCI	421	Theory I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CRJS	312	Criminology	3
		FREE Elective	4
POLI	312	International Relations	3
SOCI	499	Independent Study	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**NOTE: Concentrations may be taken in all major areas except education, business, rehabilitation services, and physician assistant.**

## ACADEMIC SUPPORT SERVICES

The University is cognizant of the need for and the value of support services as a key factor in the academic success and retention of students. In particular, academic support services are designed and implemented as extensions of the overall academic program at the University of Maryland Eastern Shore.

The Testing and Placement Program is designed for all first time/new students (including transfer students who have not earned satisfactory grades in college-level English and math). The Accuplacer computerized tests in reading comprehension, sentence skills, and math assess the students' strengths and weaknesses for placement purposes in college-level English, math, and reading-laden courses. Placement scores are given to the student and the advisor as the basis of course selection and placement during the advising process.

The Student Support Services Program (SSS) is a federally funded program designed to provide educational opportunities for low income, first generation, and disabled students to the extent that they will obtain a postsecondary education. The primary goal is the retention of eligible students through graduation. The services offered include tutoring, counseling and advising (personal, academic, social, graduate school, and career), developmental skills classes, and individualized instructional assistance by the professional staff. Eligible participants follow a closely monitored approved academic program, especially during the first year, and continue as long as the services are needed until the student graduates. The SSS Program strongly supports and encourages graduate and professional school enrollment.

The Tutoring Program is designed to provide instructional assistance to students in all lower level courses. The tutoring is conducted in the Center for Academic Support Services (Basic Skills).

In general, students may receive tutoring one-on-one or in a small group setting. The tutors are trained in instructional methodology, planning, record keeping, etc. They serve as a liaison between the students and the faculty. The tutoring services are free.

Developmental Skills Classes are designed as an outgrowth of the overall academic evaluation of students. Students are required to enroll in these classes as indicated by the Accuplacer test scores. Other students may enroll because of their own desire to improve their skills and/or upon recommendation from their instructors. The classes are taught by trained skills specialists (instructors) in small groups, as well as one-on-one. The instructional activities are designed to bridge the gaps in students' skills levels and to enable them to be successful in their postsecondary classes. Another goal is to enable students to enter majors and career paths that would be impossible without instructional support, especially in math.

Computer Assisted Instruction (CAI) provides a fully-equipped computer lab with a wide variety of instructional software in basic skills and selected academic subjects. The lab is designed to assist students in acquiring new skills and information, as well as reinforcing existing skills via a self-paced individualized mode.

Developmental Skills Tutorials (classes) are extensions of the University's academic program. At some point in their educational careers, students may find themselves in need of planned instructional assistance in reading, study skills, math, and writing skills. These tutorials are taught and directed by professional staff specialists. The emphasis is on assisting students in mastering college-level basic skills as required in their academic programs.

The PACE (Preparation And Adjustment for College Entrance) Summer Program is a six-week residential program designed to provide basic skills enhancement and college orientation for applicants whose high school grade-point averages and/or SAT scores do not meet the criteria for regular (unconditional) admission to the University. For those with conditional admission, participation in the PACE program is mandatory as a preliminary step to admission to the University. PACE enables students to acquire the academic and other behaviors necessary for a successful entrance into postsecondary education.

A selection committee reviews the high school transcript, Accuplacer Test scores, and recommendations of potential PACE students. The Committee selects those whose credentials indicate academic potential and the opportunity to be successful in college.

PACE offers students an opportunity to enhance their proficiency in the following communication skills (reading/study skills, writing, and Speech) and fundamentals of math skills. In addition, students must participate in other activities such as library orientation/research, academic, social and cultural seminars, and career assessments. Limited financial assistance is available for qualified students.

Upon the successful completion of the PACE Program, students are offered admission as regular students to the University. The evaluation of each student's performance is based on the level of academic performance in all classes and the overall level of readiness for college.

**COURSE DESCRIPTIONS**  
**Classes Taught In Academic Support Services**

**FUNDAMENTALS OF READING**

**FRDG 100 Fundamentals of Reading and Study Skills Lab**                      **0 cr.**

This lab is designed to provide developmental and enrichment skills in order for students to be successful in college level reading and study skills. The topics covered includes test-taking skills, note-taking, reading rates and flexibility, reading skills in various disciplines, time management, comprehension, study methods and techniques, vocabulary development, analytical and critical reading skills, memorization techniques, higher level thinking skills, and reading skills in selected literature.

**FUNDAMENTALS OF WRITING**

**FWTG 100 Fundamentals of Writing Skills Lab**                      **0 cr.**

This lab is an extension of the English 101 and 102 classes for under-prepared students who need more extensive development. The lab focuses on the mechanics of grammar, paragraph and essay development, usage, sentence structure, punctuation, capitalization, agreement, library and internet research, use of computer in composition, effective communication skills, and creative writing.

**FUNDAMENTALS OF MATH**

**FMTH100 Fundamentals of Math Skills Lab**                      **0 cr.**

Fundamentals of Math is designed to teach and reinforce basic math skills that lead up to college level math that is required by all majors. The emphasis is on the basic math skills inherent in college algebra. The concepts and skills include fractions, decimals, integers, order of operations, and pre-algebra, including various types of equations.

**FACULTY**

**Blume, Jayme L.**  
Lecturer, Writing Skills  
B.A., Salisbury University

**Douglas, Anita M.**  
Lecturer, Reading Skills  
B.S., Towson University  
M.A., Towson University

**Harmon, Louise L.**  
Lecturer, Math Skills  
B.S., Bowie State University  
M.Ed., Salisbury University

**Student Development Center**



**DEPARTMENT OF PHYSICAL EDUCATION:  
EXERCISE SCIENCE**

**Dean**

Brenda Anderson, Ed.D.

**Acting Chair and Professor**

Leon N. Coursey, PhD.

**Assistant Professor**

Kirkland J. Hall, M.S.

**Lecturer**

Beatrice Nelson, M.S.

Lois M. Smith, M.S.

**MISSION**

The mission of the Department of Physical Education is to prepare students in the field of Exercise Science. The Exercise Science major is designed to satisfy the professional needs of students desiring an in-depth study of the impact of exercise and sport on the mental and physiological development of human beings.

**GOALS**

The goal of the department of Physical Education is to prepare students to pursue specific career paths as exercise scientists in allied health fields, pre-professional schools, educational institutions, and the private sector (as consultants, researchers). The Department also prepares students for positions as coaches, athletic trainers, agency and corporate fitness personnel, as clinical rehabilitation professionals. Graduates of this program will be prepared to pursue graduate studies in areas of biomechanics, exercise physiology, motor learning or Physical Therapy programs.

**OBJECTIVES**

The following are objectives for the program of Exercise Science:

- To provide students with a sound foundation in exercise science and with the skills required to function efficiently in the exercise science profession.
- To prepare students for employment opportunities in the field of exercise science and other areas related to the major.
- To provide professional opportunities for developing leaders among ethnic minorities in the exercise science profession.

- To provide students with opportunities to develop administrative effectiveness, information management, leadership capacity, and research efficacy in the field of exercise science.
- To provide opportunities for students to acquire the necessary skills to utilize developing technology employed in the Exercise Science profession.

**DESCRIPTION OF PROGRAM**

The Physical Education program leads to a Bachelor of Science (BS) degree in Exercise Science. The flexibility of the curriculum provides the students an opportunity to select courses that will meet the prerequisites for the Physical Therapy program. The purpose of this program is to develop competent exercise scientists who will provide effective professional services while developing innovative procedures for dealing with problems emanating from health-related aspects of physical activities and sports performance.



**PHYSICAL EDUCATION - EXERCISE SCIENCE**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 Credits**

Students should consult their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 credits**

Students must select ENGL 203 plus two additional courses

ARTS 101, MUSI 101 or HIST 201 or above

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 credits**

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORIAL SCIENCES:** SOCI 101 or PSYC 200,  
 (All teacher education majors must select PSYC 200)

**C. Curriculum Area III – (Biological and Physical Sciences) 8 credits**

Students must select two science courses which must include Laboratories:

BIOL 111, BIOL 113 (lab); and CHEM 111, CHEM 113 (lab)

**D. Curriculum Area IV – (Mathematics) 3 credits**

MATH 109	College Algebra <u>or</u>	
MATH 110*	Trigonometry and Analytic Geometry	3

**E. Curriculum Area V – (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <u>or</u>	
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <u>or</u>	
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305H	Technical Writing (Honors) <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 7 credits**

(Courses identified as being essential to a full program of general education for UMES students)

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3

In addition, students must select one course from the following:

ENGL 412	Commonwealth Literature <u>or</u>	
ENGL 413	The Novel – East and West <u>or</u>	
TMGT 306	Eco and Cultural Tourism	3

Note: Course requirements other than those listed above should be selected in consultation with the advisor or Department Chairman.

\*Only if student is pursuing the Physical Therapy Sequence.

**II. Program Core Requirements 33 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EXSC 200	Introduction to Exercise Science	3
EXSC 222	Intermediate Swimming	1
EXSC 301	Measurement in Exercise Science	3
EXSC 302	Prevention and Care of Athletic Injury	3
EXSC 311	Kinesiology	3
EXSC 312L	Kinesiology Lab.	1
EXSC 341	First Aid & CPR	1
EXSC 365	Contemporary Issues in Exercise Science and Sport	3
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab.	1
EXSC 431	Leadership and Organization of Exercise Science	3
BIOL 231	Human Anatomy & Physiology I	3
BIOL 233	Human Anatomy and Physiology Lab.	1
BIOL 232	Human Anatomy and Physiology II	3
BIOL 234	Human Anatomy and Physiology II Lab.	1

**III. Professional Core Courses 28 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EXSC 251	Stress Management	3
EXSC 332	Exercise Physiology and Lab.	3
EXSC 333L	Exercise Physiology Lab.	1
EXSC 352	Exercise and Sport Psychology	3
EXSC 355	Exercise Testing and Prescription	3
EXSC 360	Exercise and Sport Nutrition	3
EXSC 361	Practicum in Exercise Science	3
EXSC 363	Motor Learning	3
EXSC 369	Research Methods in Exercise Science	3
EXSC 382	Socio-Cultural Analysis of Sport and Exercise Science	3

**IV. Support Courses 6 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUED 212	Computer Concepts & Applications I	3
BUAD 213	Business Software Applications	3

**V. Professional Internship 12 credits**

<b>Course No.</b>	<b>Title</b>
EXSC 490	Internship in Exercise Science

**Students planning to pursue a degree in Physical Therapy will be required to complete Chemistry 112, Physics 121 and 122.**



**NON -PHYSICAL THERAPY  
EXERCISE SCIENCE  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. & Analytic Geom. or Higher	3
EXSC	200	Intro. to Exercise Science	3
GNST	100	First Year Experience	1
		<b>GER CURR. AREA I</b>	<b>3</b>
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab.	<u>1</u>
		<b>Semester Total</b>	<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
EDHE	111	Personalized Health Fitness	3
PSYC	200	Introduction to Psychology	3
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab.	1
PHYS	101	Theories/Aps. of Phys. Sci. I	3
PHYS	103	Theories/Aps. of Phys. Sci. I Lab.	<u>1</u>
		<b>Semester Total</b>	<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anatomy & Phys. I	3
BIOL	233	Human Anatomy & Phys I. Lab.	1
EXSC	251	Stress Management	3
EXSC	301	Measurement in Exercise Sci.	3
HIST	201	Social Problems	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	232	Human Anatomy & Phys. II	3
BIOL	234	Human Anatomy & Phys. II Lab.	1
BUED	212	Computer Concepts I	3
EXSC	302	Prevent. and Care of Ath. Injury	3
EXSC	360	Exercise and Sport Nutrition	3
SOCI	101	Introduction to Sociology	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	213	Business Software Aps.	3
EXSC	311	Kinesiology and Lab..	4
*EXSC	341	First Aid and CPR	1
EXSC	352	Exercise & Sport Psychology	3
EXSC	363	Motor Learning	<u>3</u>
		<b>Semester Total</b>	<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EXSC	332	Exercise Physiology	3
EXSC	333L	Exercise Physiology Lab.	1
EXSC	355	Exercise Testing and Prescription	3
EXSC	361	Practicum in Exercise Science	3
EXSC	365	Contem. Issues Ex. Sci. & Sport	3
EXSC	369	Research Mthds. in Exercise Sci.	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
**BUAD	304	Small Busi. & Entrepreneur.	3
ENGL	305	Technical Writing	3
EXSC	382	Socio-Cultural Analysis of Sport	3
EXSC	431	Leadership & Org. of Ex. Sci.	<u>3</u>
		<b>Semester Total</b>	<b>12</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
***EXSC	490	Internship in Exercise Science	<u>12</u>
		<b>Semester Total</b>	<b>12</b>

**Total Credits Required      121**

\*EXSC 341 is the prerequisite to EXSC 355.

\*\*ECON 201 and ACCT 201 are prerequisites for BUAD 304.

EXSC 361 is the prerequisite for EXSC 490.

G.

**PHYSICAL THERAPY EMPHASIS  
EXERCISE SCIENCE  
Recommended Course Sequence**

**FRESHMEN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	110	Trig. Analytic & Geom. or Higher	3
EXSC	200	Intro. to Exercise Science	3
GNST	100	First Year Experience	1
		GER CURR. AREA I	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab.	<u>1</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
EDHE	111	Personalized Health Fitness	3
PSYC	200	Introduction to Psychology	3
CHEM	112	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab.	1
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab.	<u>1</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	231	Human Anatomy & Phys. I	3
BIOL	233	Human Anatomy & Phys. I Lab.	1
ENGL	203	Funds. of Contemporary Speech	3
EXSC	251	Stress Management	3
EXSC	301	Measurement in Exercise Sci.	3
HIST	201	Social Problems	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BIOL	232	Human Anatomy & Phys. II	3
BIOL	234	Human Anatomy & Phys. II Lab.	1
BUED	212	Computer Concepts I	3
EXSC	360	Exercise & Sport Nutrition	3
EXSC	302	Prevent. and Care of Ath. Injury	3
SOCI	101	Introduction to Sociology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	213	Business Software Aps.	3
EXSC	311	Kinesiology	3
EXSC	312L	Kinesiology Lab.	1
EXSC	352	Exercise & Sport Psychology	3
EXSC	363	Motor Learning	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EXSC	332	Exercise Physiology	3
EXSC	333L	Exercise Physiology Lab.	1
EXSC	355	Exercise Testing and Prescription	3
EXSC	365	Contemp. Issues Ex. Sc. & Sport	3
EXSC	369	Research Mthds. in Exercise Sci.	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BIOL	301	Microbiology &	3
BIOL	303	Microbiology Lab. <u>or</u>	1
BIOL	326	Cell Biology &	3
BIOL	327	Cell Biology Lab. <u>or</u>	1
BIOL	420	Animal Histology	3
BIOL	421	Animal Histology Lab.	1
BUAD	304	Small Busi. & Entrepreneur.	3
ENGL	305	Technical Writing	3
EXSC	382	Socio-Cultural Analysis of Sport	3
EXSC	431	Leadership & Org. of Ex. Sci.	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EXSC	490	Internship in Exercise Science	<u>12</u>
<b>Semester Total</b>			<b>12</b>

**Total Required Credits      120**

**EXSC 341 is the prerequisite to EXSC 355.**

**\*\*ECON 201 and ACCT 201 are prerequisites for BUAD 304.**

**EXSC 361 is the prerequisite for EXSC 490.**

## COURSE DESCRIPTIONS

### HEALTH

**EDHE 104 Women's Health** 2 crs.  
This course is designed to help students understand the changes that have occurred historically in society's attitudes toward women and to gain a deeper understanding of their anatomy and physiology. The course helps the student to develop an awareness and become more knowledgeable regarding diseases and health problems that affect women specifically, and to learn how to prevent these diseases.

**EDHE 107 Human Sexuality** 2 crs.  
The aim of human sexuality is to provide students with an overview of the many biological, psychological, sociological, and historical dimensions of sexuality in a nonjudgmental tone. The main emphasis is helping students make responsible decisions that promote healthy sexual behaviors and well-being.

**EDHE 111 Personalized Health Fitness** 3 crs.  
This course provides study and practice of principles that affect human health. Emphasis is placed on physical fitness, stress management, nutrition, and weight control, with specific personalized techniques for optimizing health.  
**Course can be taken only once for credit.**

### PHYSICAL EDUCATION

**EDPE 103 Techniques of Self-Defense/Karate.** 1 cr.  
This course gives students a comprehensive exposure to the fundamental techniques and procedures necessary for competently performing martial arts skills; this exposure includes students' demonstration of physical, mental and psychological skills which are inherent components of martial arts.

**EDPE 105 Slimnastics** 1 cr.  
The purpose of this course is to help students develop their bodies physically, with special emphasis on posture, figure alignment, body mechanics, diet, and weight control through exercise.

**EDPE 121 Elementary Swimming** 1 cr.  
This course teaches the basic skills of swimming, including adjustment to the water, buoyancy, floating, propulsion through the water involving coordination of arms and legs in stroking, combined with breathing and safety.

**EDPE 163 Techniques and Principles of Weight Training** 1 cr.  
This course provides students with the understanding and the importance of employing kinesiological principles

### EXERCISE SCIENCE

**EXSC 200 Introduction to Exercise Science** 3 cr.  
This course provides an overview of the field of Exercise Science, its development, professional activities, and sub-disciplines.

**EXSC 222 Intermediate Swimming** 1 cr.  
Techniques of elementary swimming with emphasis on the development of skills in basic or standard swimming strokes.

**EXSC 251 Stress Management** 3 crs.  
This course teaches basic methods of dealing with stress reactions by one of many different methods, ranging from action steps in problem solving to reframing interpretation of events and circumstances.

**EXSC 301 Measurement in Exercise Science** 3 crs.  
This course explores the use and interpretation of basic statistical techniques in the application of Exercise Science. It includes measures of central tendency, variability, graphic representation, large sample, error theory, and simple correlation analysis as applied particularly in evaluation of test materials.

**EXSC 302 Prevention and Care of Athletic Injuries** 3 crs.  
This course provides an integrated interpretation of the principles of anatomy, physiology and kinesiology as related to the prevention and care of athletic injuries. Students receive Laboratory experiences in emergency treatment of athletic injuries, taping, strapping, and other supportive equipment designed to prevent or minimize injuries peculiar to athletes. Prerequisites: BIOL232 and EXSC311.

**EXSC 311 Kinesiology** 3 crs.  
This course covers gross anatomy of skeletal and muscular systems. It includes analysis and study of human movement with special reference to anatomical principles underlying human movement. Three hours lecture and two hours laboratory per week. Prerequisites: BIOL 231 and 232.

**EXSC 312L Kinesiology Lab** 1 cr.  
This course is the laboratory companion to EXSC311. It is designed to deepen the students' understanding of topics discussed in the lecture and increase their skills.

**EXSC 332 Exercise Physiology** 3 crs.  
This course is a comprehensive study of the extent and nature of body variations as a result of physical exertion. The student receives laboratory experience dealing with the oxidation processes of the body in terms of the utilization of proteins, carbohydrates and fats. Three hours lecture and two hours laboratory per week. Prerequisite: BIOL 332.

**EXSC 333L Exercise Physiology Lab 1 cr.**

This course is the laboratory companion to EXSC311. It is designed to deepen the students' understanding of topics discussed in the lecture and increase their skills.

**EXSC 341 First Aid & CPR 1 cr.**

This course examines basic principles of spontaneous and temporary care given to victims of accidents or sudden illness as prescribed by the American Red Cross.

**EXSC 352 Exercise and Sport Psychology 3 crs.**

Students are provided an in-depth study, comparison, and analysis of human behavior, while participating in sports and physical activity.

**EXSC 355 Exercise Testing and Prescription 3 crs.**

This course addresses the necessity of correctly employing principles of long-term and short-term adaptations to anaerobic and aerobic exercise training. Students gain competence in applying rehabilitation treatment for sports related injuries. Prerequisite: EXSC 311.

**EXSC 360 Exercise and Sport Nutrition 3 crs.**

This course provides students with an understanding of interactions between nutrition and exercise concepts, as well as practical applications.

**EXSC 361 Practicum in Exercise Science 3 crs.**

Students receive practical, hands-on experiences at a professional work site, utilizing exercise science principles.

**EXSC 363 Motor Learning 3 crs.**

This course provides an introduction to the principles and concepts of motor learning and motor performance. Methodology, individual differences, control of movement, motivation, and timing are major topics of discussion.

**EXSC 365 Contemporary Issues in Exercise Science and Sport 3 crs.**

Students investigate and learn first-hand information about developing issues in Exercise Science. Some of the issues are youth fitness, geriatric fitness, youth sports, sports for the aged, resistance training for prepubescent athletes, demographics of aging, and physiology of aging.

**EXSC 369 Research Methods in Exercise Science 3 crs.**

The course surveys the scope of literature and sources of knowledge in exercise and sports science. Measurement, evaluation, and research methods are applied to selective problems of professional practice.

**EXSC 382 Socio-Cultural Analysis/ Sport and Exercise Science 3 crs.**

The course provides analyses of sports and exercise in social-cultural contexts. Topics include professional sports, intercollegiate sports, youth sports, violence in sports, gender & sports, ethnicity and sports, and media and sports.

**EXSC 402 Practicum/Observation in Adapted Physical Education 3 crs.**

Students have opportunities to work directly with disabled individuals in providing substantive physical education activities in a community facility.

**EXSC 431 Leadership and Organization of Exercise Science 3 crs.**

This course provides a thorough investigation of administrative theories and procedures of establishing and maintaining exercise science programs; constructing curriculum, developing community relations, staff, and other professional personnel; budget planning, and policy.

**EXSC 490 Internship in Exercise Science 10 cr.**

The course provides a structured off-campus learning experience designed to provide senior students with first-hand, direct, practical and professional experiences in Exercise Science. Prerequisite: Graduating senior.

**EXSC 499 Independent Study in Exercise Science 3 crs.**

This course provides senior students with opportunities to engage in in-depth-study of any professional area or related areas germane to Exercise Science. Prerequisite: Senior academic standing.

**RECREATION****RECR 211 Introduction to Recreation Education 3 crs.**

This course offers a historical and philosophical study of recreation relative to organization and administration of recreational programs and facilities. Students investigate recreational needs of contemporary society as it is influenced by increase in leisure time, special interests, and needs of all individuals.

**RECR 212 Basic Methods in Camping and Outdoor Recreation 3 crs.**

This course provides theoretical frameworks and practical experiences contemporary camping and outdoor recreation. Students must participate in at least two overnight camping experiences.

**RECR 412 Leadership in Community Recreation 3 crs.**

This course provides an analysis of the historical, and philosophical concepts and professional principles involved in the organization and administration of community based recreational activities. Prerequisite: RECR 211.

**RECR 413 Therapeutic Recreation 3 crs.**

This course investigates the physical, psychological, and sociological deficiencies and illnesses as they impact upon various recreational skills, activities, and programs. Methods currently recommended for the implementation of these programs are studied.

**FACULTY**

**Leon N. Coursey, Ph.D.**  
Acting Chair and Professor

**Kirkland J. Hall, M.S.**  
Assistant Professor

**Beatrice Nelson, M.S.**  
Lecturer

**Lois M. Smith, M.S.**  
Lecturer



**DEPARTMENT OF SOCIAL SCIENCES****Dean:**

Brenda Anderson, Ed.D.

**Chair and Associate Professor:**

Stanley DeViney, Ph.D.

**Professor:**

Howard Rebach, Ph.D.

**Associate Professors:**

Lamin A. Mbye, Ph.D.

Lowell J. Bishop, Ph.D.

**Assistant Professors:**

David Alston Jr., Ph.D.

Cynthia L. Lehman, Ph.D.

**OBJECTIVES**

The specific objectives of the major program in Sociology are to develop:

- an understanding of the principles which determine the operation of human societies;
- the ability to think clearly, independently, and critically;
- the ability to do sociological research; and,
- the foundations necessary for graduate study and for careers in the service professions.

**MISSION**

The sociology major is concerned with social structures and processes, social interaction, and the factors that contribute to social change. The full range of sociological topics covers social life from macro and micro perspectives. Many of the courses offered in sociology incorporate in their content issues of gender, race, ethnicity, and inequality. A degree in sociology prepares students for a wide range of careers, from graduate work in sociology to careers in educational institutions, private industry or government.

**GOALS**

The goals of the Department of Social Sciences are as follows:

- to stimulate in students the desire to analyze the operation of their own and other societies;
- to provide them with the scientific and imaginative skills by which such an analysis can be made;
- to establish a forum within which students can learn to evaluate and examine for themselves, the major dilemmas confronting their own and other societies; and,
- to make opportunities available to students which will enable them to realize their career goals.

**SOCIOLOGY**  
**Required and Recommended Courses Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41-43 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

- A. Curriculum Area I - (Arts and Humanities) 9 credits**
- Students must select ENGL 203 plus two additional courses:  
**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, , ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 328, ENGL 329, ENGL 327, ENGL 401
- B. Curriculum Area II – (Social and Behavioral Sciences) 9 credits**
- Students must select one course in each of two disciplines:  
**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H, GEOG 201 or GEOG 202, HIST 101 or HIST 111H, HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342, SOCI 101 or SOCI 111H  
**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 200, SOCI 201 SOWK 200 or SOWK 200H,
- C. Curriculum Area III – (Biological and Physical Sciences) 7 or 8 credits**
- Students must select two science courses which must include laboratories:  
 ANSC 114, BIOL 101, BIOL 103 (lab), BIOL 112, BIOL 114 (lab), CHEM 102, CHEM 103 (lab), CHEM 104 (lab), CHEM 111, CHEM 113 (lab), PHYS 101, PHYS 103 (lab), PHYS 121, PHYS 123 (lab), PHYS 122, PHYS 124 (lab), PHYS 161, PHYS 181H, PHYS 183H (lab), PHYS 182H, PHYS 184H (lab), PHYS 263, PLSC 184  
 CHEM 101, BIOL 111, BIOL113(lab)
- D. Curriculum Area IV – (Mathematics) 3 or 4 credits**
- One course at or above the level of MATH 102. Students must select one course as required by their major department and/or results of their Mathematics Placement Exam.  
 MATH 102, MATH 109, MATH 110, MATH 111H, MATH 112
- E. Curriculum Area V - (English Composition) 9 credits**
- | Course No. | Title                          | Credits |
|------------|--------------------------------|---------|
| ENGL 101   | Basic Composition I <b>or</b>  |         |
| ENGL 101H  | Basic Composition I (Honors)   | 3       |
| ENGL 102   | Basic Composition II <b>or</b> |         |
| ENGL 102H  | Basic Composition II (Honors)  | 3       |
| ENGL 305   | Technical Writing <b>or</b>    |         |
| ENGL 310   | Advanced Composition           | 3       |
- F. Curriculum Area VI – (Emerging Issues) 7 Credits**
- | Course No. | Title                                    | Credits |
|------------|------------------------------------------|---------|
| BUAD 213   | Business Software Applications <b>or</b> |         |
| BUED 212   | Computer Concepts Applications I         | 3       |
| EDHE 111   | Personalized Health Fitness              | 3       |
| GNST 100   | First Year Experience                    | 1       |

<b>II.</b>	<b>Program Core Requirements</b>		<b>36 credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	SOCI 101	Introduction to Sociology	3
	SOCI 303	Social Inequality	3
	SOCI 309	Research Methods in Behavioral Sciences	3
	SOCI 310	Statistical Methods in Behavioral Sciences	3
	SOCI 421	Theory I: Foundations of Social Theory	3
	SOCI 422	Theory II: Contemporary Social Theory	3
		Select <b>six</b> three-credit Sociology Courses	18
<b>III.</b>	<b>Supportive Course Requirements</b>		<b>6 credits</b>
	<b>Course No.</b>	<b>Title</b>	
		Select <b>two</b> three-credit Social Science courses	
<b>IV.</b>	<b>Free Electives</b>		<b>33 credits</b>
		<b>TOTAL PROGRAM REQUIREMENTS</b>	<b>120</b>



**SOCIOLOGY**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Introduction to Sociology	3
MATH		Elective (102 or Above)	3
EDHE	111	Health and Wellness	3
POLI	200	Introduction to Amer. Gov't	3
GNST	100	Freshman Orientation	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
		Curriculum Area II	3
		Curriculum Area III	3
PSYC		Elective	3
SOCI		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Curriculum Area II	3
		Curriculum Area IV	3
BUED	212	Computer Concepts/Appl. <u>or</u>	3
BUED	213	Software Applications	3
SOCI	309	Research Methods	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOCI	310	Statistical Methods	3
ENGL	305	Tech. Writing	3
ENGL	310	Advanced Comp. <u>or</u>	3
SOCI		Elective	3
SOCI	303	Inequality in America	3
		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOCI		Elective	3
SOCI	421	Theory I	3
SOCI		Elective	3
SOCI		Elective	3
SOCI		Elective (Curriculum Area I)	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Free Elective	3
		Curriculum Area I	3
		Free Elective	3
SOCI	422	Theory II	3
SOCI		Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOCI		Elective	3
		Free Elective	3
		Free Elective	3
		Free Elective	3
		Free Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOCI		Elective	3
SOCI		Elective	3
		Free Elective	3
		Free Elective	3
		Free Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      120**

**SOCIAL SCIENCE (TEACHING)**  
**Required and Recommended Course Sequence**

The Social Studies Program leads to the Bachelor of Arts Degree and adheres to the following objectives:

- To prepare future secondary teachers with necessary content materials and research methodology to teach in various fields of Social Sciences.
- To acquaint students with pedagogical techniques appropriate for creative and functional classroom teaching.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 45 credits**

**A. Curriculum Area - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses:

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 328, ENGL 329, ENGL 327, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course in each of two disciplines:

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H,  
 POLI 342, SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 220, HUEC 361,  
 PSYC 200, SOCI 201 SOWK 200 or SOWK 200H

**C. Curriculum Area III - (Biological and Physical Sciences) 7 or 8 Credits**

Students must select two science courses which must include Laboratories:

ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102,  
 CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101,  
 PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184C

**D. Curriculum Area IV - (Mathematics) 3 or 4 Credits**

One course at or above the level of MATH 102. Students must select one course as required by their major department and/or results of their Mathematics Placement Exam.  
 MATH 102, MATH 109, MATH 110, MATH 111H, MATH 112

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <b>or</b>	
ENGL 101H	Basic Composition I Honors	3
ENGL 102	Basic Composition II <b>or</b>	
ENGL 102H	Basic Composition II	3
ENGL 305	Technical Writing <b>or</b>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI (Emerging Issues) 7 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3
BUAD 213	Business Software Applications <b>or</b>	
BUED 212	Computer Concepts/Application	3

**Social Science Teaching Major Core Requirements**

**33 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
SOCI 101	Introduction to Sociology	3
SOCI 201	Social Problems	3
HIST 201	History of American Civilization I	3
HIST 202	History of American Civilization II	3
HIST	Select <b>three</b> additional History courses	9
POLI 200	Introduction to American Government	3
POLI	Select any 300 level course	3
GEOG 201	World Geography I	3
GEOG 202	World Geography II	3

**II. Professional Core Requirements**

**45 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200	Introduction to Contemporary Education	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in Content Areas: Part I	3
EDCI 410	Teaching Reading in Content Areas: Part II	3
EDSP 200	Introduction to Special Education	3
EDCI 306	Integrating Technology in the Curriculum	3
EDCI 400	Senior Seminar in Education	3
EDCI 425E	Curriculum & Inst. Methods in Social Science	3
EDCI 480/490	Teaching Internship: Social Science	12

**III. Supportive Course Requirements**

**6 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
SOCI 309	Research Methods in Behavioral Sciences	3
SOCI 310	Statistical Methods of Behavioral Sciences	3

**IV. Electives**

**5 Credits**

**SOCIAL SCIENCE EDUCATION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
HIST	101	Hist. Appr. To World Civ. I	3 -1
MATH		Elective 102 or Above	3
EDHE	100	Level Course	2
EDPE	100	Level Course	1
		GER CURR Area III	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA III	3
ENGL		102 Basic Composition II	3
HIST	102	Hist of Amer. Civ. I	3
POLI	200	Introduction to American Gov't	3
		GER CURR AREA IV	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. Of Contemporary Speech	3
HIST	201	Hist. of American Civ. I	3
EDCI	200	Intro . to Contemporary Ed.	3
GEOG	201	World Geography	3
ECON	201	Principles of Economics I	3
HIST	333	African American History I	<u>3</u>
		<b>Semester Total</b>	<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202	Principles of Econ II	3
GEOG	202	World Geography II	3
HIST	202	History of American Civ. II	3
HIST	334	African Amer. History II	3
PYCH	305	Developmental Psych	3
EDCI	311	Comp. Assessment	<u>3</u>
		<b>Semester Total</b>	<b>18</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	307	Educational Psychology	3
EDCI	406	Classroom Management	3
HIST	360	African History I	3
SOCI	201	Social Problems	3
BUED	212	Computer Concepts/ Application	3
		Elective	<u>3</u>
		<b>Semester Total</b>	<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDSP	200	Introduction to Special Ed	3
ENGL	305	Technical Writing	3
		FREE Elective	3
POLI	342	Urban Politics	3
HIST		Elective (300 Level)	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDCI	409	Teaching Reading in the Content: Part I	3
		FREE Elective	3
EDCI	425E	Curr. Instr. In Soc. Science	3
SOCI	309	Research Methods in Behavioral Science	3
		300 Level Course	3
GNST	100	First Year Experience	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	480/490	Teaching Internship: Second.	12
SOCI	326	Social Psychology	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**Total Credits Required      128**

**SOCIOLOGY/SOCIAL WORK DUAL DEGREE PROGRAM**  
**Required and Recommended Course Sequence**

Dual Degree Program in Sociology (UMES) and Social Work (SSU)

The Program's objective is to prepare graduates for entry-level professional social work positions, state social work licensure, and graduate education. The program is made possible through the shared resources of the University of Maryland Eastern Shore (UMES) and Salisbury State University (SSU).

The program can be completed in 120 hours. UMES students can earn a Bachelor of Arts in Social Work (BASW)\* from Salisbury State University and a Bachelor of Arts Degree in Sociology from UMES. The program is accredited by the Council on Social Work Education through SSU.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41-43 Credits**

**Students should consult with their freshman or departmental advisor when making course selections.**

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course each of two disciplines

**SOCIAL SCIENCES:** ECON 202 or ECON 202H, GEOG 201 or GEOG 202, HIST 101 or HIST 111H, HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342, SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 230, HUEC 102, HUEDC 220, HUEC 361, SOCI 201, SOWK 200 or SOWK 200H, PSYC 200

**C. Curriculum Area III – (Biological and Physical Sciences) 7 or 8 credits**

Students must select two science courses which must include Laboratories:

ANSC 114, BIOL 101, BIOL 103 (Lab.), BIOL 111, BIOL 112, CHEM 101, CHEM 102, CHEM 103 (Lab.), CHEM 104 (Lab.), CHEM 111C, ENVS 101, PHYS 101, PHYS 101, PHYS 103 (Lab.), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184C

**D. Curriculum Area IV – (Mathematics) 3 or 4 credits**

One course at or above the level of MATH 102. Students must select one course as required by their major department and/or results of their Mathematics Placement Exam. MATH 102, MATH 109, MATH 110, MATH 111H, MATH 112

**E. Curriculum Area V – (English Composition ) 9 credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <b>or</b>	
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <b>or</b>	
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305H	Technical Writing (Honors) <b>or</b>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 7 Credits**

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3
BUAD 213	Business Software Applications <u>or</u>	
BUED 212	Computer Concepts/Application	3

**II. Program Core Requirements 30 Credits**

Course No.	Title	Credits
SOCI 101	Introduction to Sociology	3
SOCI 303	Social Inequality	3
SOCI3 309	Research Methods in Behavioral Sciences	3
SOCI 310	Statistical Methods in Behavioral Sciences	3
SOCI 421	Theory I: Foundations in Social Theory	3
SOCI 422	Theory II: Contemporary Social Theory	3
SOCI	Select <b>four</b> Sociology Courses	12

**III. Supportive Course Requirements 6 Credits**

Course No.	Title	Credits
	Select <b>two</b> Social Science Courses	6

**IV. Required Social Work Major Core Courses 39 Credits**

Course No.	Title	Credits
SOWK 200	Introduction to Social Work and Social Welfare	3
SOWK 220	Basic Interviewing Skills and Techniques	3
SOWK 300	Human Behavior in the Social Environment I	3
SOWK 302	Human Behavior in the Social Environment II	3
SOWK 305	Social Work Policy	3
SOWK 320	Social Work Practice I	3
SOWK 400	Social Work Practice II	3
SOWK 405	Field Instruction in Social Work I	5
SOWK 406	Field Instruction Seminar I	1
SOWK 407	Field Instruction in Social Work II	5
SOWK 408	Field Instruction Seminar II	1
SOWK 410	Social Work Practice III	3
	Select <b>one</b> Social Work Elective	3

**V. Free Electives 4 Credits**

**TOTAL PROGRAM REQUIREMENTS 120**



**SOCIOLOGY/SOCIAL WORK  
DUAL DEGREE PROGRAM  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition	3
SOCI	101	Intro to Sociology	3
MATH		MATH 102 or above	3
BIOL	101	Theories & Appl. of Biological Science	3
BIOL	103	Biological Science Lab	1
		GER CURR AREA I: Arts	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
		GER CURR AREA III	3
PSYC	200	Intro to Psychology	3
EDHE	111	Personalized Health Fitness	3
SOWK	200	Intro. to Social Work	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
SOCI	309	Research Methods in Behavioral Sciences	3
BUED	212	Compter Concepts Aps. I <u>or</u>	
BUAD	213	Business Software Aps.	3
SOWK	300	Human Behavior I	3
SOWK	305	Social Work Policy	3
		GER CURR AREA I	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOWK	310	Statistical Methods in I Behaviorial Science	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
SOCI	303	Social Inequality	3
SOWK	302	Human Behavior II	3
		Elective	3
		GER CURR AREA I	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOCI		Select <b>two</b> Electives	6
		GER CURR AREA VI	3
SOCI	421	Theory I: Foundation	3
SOWK	220	Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOCI	422	Theory II: Contemporary	3
SOWK		Elective	3
SOCI		Elective	3
SOWK	320	Social Work Practice I	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOWK	400	Social Work Practice II	3
SOWK	405	Field Instruction	5
SOWK	406	Field Instruction Seminar	1
SOCI		Elective	<u>3</u>
<b>Semester Total</b>			<b>12</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
SOWK	410	Social Work Practice III	3
SOWK	407	Field Instruction II	3
SOWK	408	Field Instruction Seminar	1
SOCI		Elective	3
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>13</b>
<b>Total Credits Required</b>			<b>121</b>

**AFRICAN AMERICAN STUDIES**  
**Required and Recommended Course Sequence**

**ABOUT THE DEGREE PROGRAM**

The new multidisciplinary degree in African American studies, with a Minor in African Studies, is the first program of its kind in the Delmarva region. The course gives students the opportunity to acquire an objective view of Africa and the African Diaspora in the New World. It exposes students to multiple disciplines and adequately prepares them to compete in the global job market created by the increasing globalization of business and trade.

The program should benefit students from the humanities and social sciences, as well as those headed towards professional studies. It will also prepare students for careers in the diplomatic service, Africa related services, state and local government, and community-based agencies.

**EDUCATIONAL OBJECTIVES OF THE PROGRAM**

The main objective of the degree program is to provide students the chance to acquire an objective view of Africa and the African Diaspora in the United States, and to have them gain an understanding of their historical, economic, social, and political problems, and the ways these important issues are depicted in African/African American literature. The aim is to train and educate undergraduate students and arm them with the knowledge necessary to continue to graduate school or to enter the job market where a basic knowledge and understanding of African/African American problems are required. The program prepares students for graduate work in a number of disciplines: history, sociology, literature, ethnography, social work, political science, and African studies.

**GENERAL REQUIREMENTS OF THE DEGREE**

The program is a four-year multidisciplinary, non-teaching degree course leading to the Bachelor of Arts (BA) in African American Studies, with a minor in African Studies. Students majoring in African American Studies must complete 120 credit hours. The minor in African Studies consists of 18 credits selected from 300 and 400 level courses in African Studies, approved by a designated Advisor.

Students in other disciplines may also, pursue the minor in African American Studies, which consists of 18 credits selected from 300 and 400 level courses, approved by a designated Advisor.

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 42 (Credits)**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 301H  
**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360, ARTS 310  
**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102  
**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 327, ENGL 328, ENGL 329, ENGL 401

**B. Curriculum Area II (Social and Behavioral Sciences) 6 Credits**

Students must select one course each of two disciplines

**SOCIAL SCIENCES:** ECON 202 or ECON 202H, GEOG 201 or GEOG 202,  
 HIST 101 or HIST 111H, HIST 102 or HIST 112H,  
 POLI 200 or POLI 200H, POLI 342, SOCI 101  
 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 230, HUEC 102, HUEDC 220, HUEC 361,  
 SOCI 201, SOWK 200 or SOWK 200H, PSYC 200



**C. Curriculum Area III – (Biological and Physical Sciences) 7 or 8 credits**

Student must select any two (2) courses from the following:

BIOL 101, BIOL 103, BIOL 111, BIOL 113, ENVS 101, BIOL 112, BIOL 114,  
CHEM 101, CHEM 103, CHEM 102, CHEM 104, CHEM 111, CHEM 113,  
PHYS 101, PHYS 103, PHYS 121, PHYS 123, PHYS 122, PHYS 124,  
PHYS 161, PHYS 181, PHYS 182, PHYS 184, PHYS 263,

**D. Curriculum Area IV – (Mathematics) 3 or 4 credits**

Select one course at or above the level of College Algebra MATH 102.

**E. Curriculum Area V – (English Composition) 9 credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <u>or</u>	
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II	
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305H	Technical Writing (Honors) <u>or</u>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI – (Emerging Issues) 7 credits**

**II. Program Core Requirements 45 Credits**

Course No.	Title	Credits
ARTS 310	African American Art History	3
ECON 304	The Economics of Black America	3
ENGL 327	African American Literature	3
ENGL 332	The African Writer	3
ENGL 404	Studies in Drama	3
HIST 333	African American History I	3
HIST 334	African American History II	3
HIST 360	African History I	3
HIST 361	African History II	3
MUSI 109	Introduction to Jazz History	3
POLI 342	Urban Politics	3
SOCI 303	Social Inequality	3
SOCI 309	Research Methods in Behavioral Sciences	3
SOCI 331	American Minority Groups	3
SOCI 430	The African American Family	3

**III. Supportive Course Requirements 18 Credits**

Course No.	Title	Credits
HIST 200 A	Introduction to Modern African History	3
HIST 421	History of the South	3
HIST 221	Historical Research	3
POLI 430	Politics of Developing Nations	3
ECON 402	The Economics of Development	3
HIST 498	Independent Study of African History <u>or</u>	
HIST 499	Independent Study of African American History	3
SOWK 499	Independent Study/Special Topics in Social Work	3

**IV. FREE Electives 15 Credits**

**TOTAL PROGRAM REQUIREMENTS 121**

**AFRICAN AMERICAN STUDIES**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Introduction to Sociology	3
HIST	200A	Intro. to Modern African Hist.	3
MATH		Elective (102 or Above)	3
EDHE	111	Health and Wellness	3
GNST	100	Freshman Orientation	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
		GER CURR. AREA II	3
		GER CURR. AREA	3
MUSI	109	Introduction to Jazz History	3
		GER CURR. AREA IV	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund of Contemp. Speech	3
		GER CURR. AREA II	3
HIST	333	African American History I	3
BUED	212	Computer Concepts/Aps. <u>or</u>	
BUAD	213	Business Softwares Aps.	3
SOCI	309	Res. Methods in Behav. Sci.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	3
SOCI	303	Inequality in America	3
ENGL	327	African American Literature	3
ARTS	310	African American Art History	3
ECON	304	The Economics of Black Am.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOCI	331	American Minority Groups	3
POLI	350	People and Politics of Africa	3
HIST	361	African History II	3
ENGL	332	The African Writer	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
HIST	360	African History I	3
HIST	334	African American History II	3
ENGL	335	African American Drama	3
		GER CURR AREA I	3
		GER CURR. AREA IV	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
POLI	342	Urban Politics	3
SOCI	430	The African American Family	3
SOWK	499	Special Topics in Social Work	3
		GER CURR. AREA III	3
HIST	498	Indepen Study African Hist. <u>or</u>	
HIST	499	Indepen. Study of African	
		American History	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Free Electives	3
		Free Electives	3
		Free Electives	3
		Free Electives	3
		Free Electives	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**                      **121**

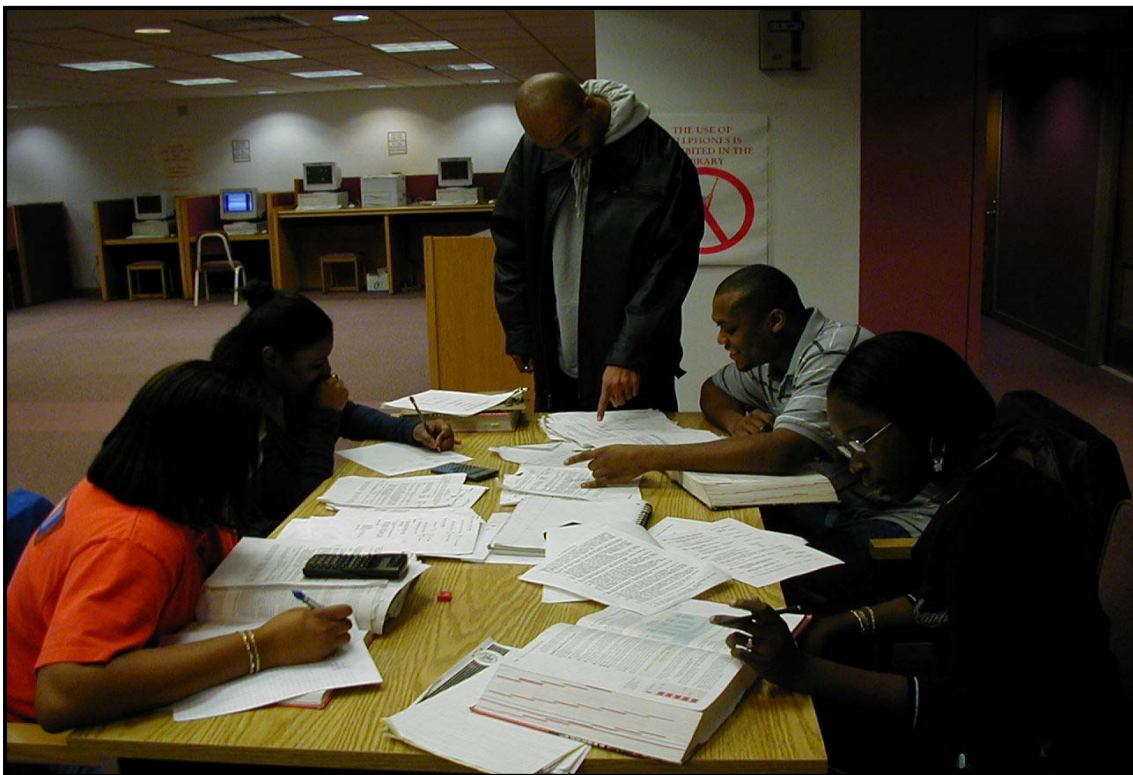
## MINOR PROGRAMS

The minor program in Political Science is presently offered. The program consists of eighteen credit hours in Political Science courses approved by a faculty advisor in Political Science. The minor program is designed to meet the following objectives:

- To provide informed understanding of contemporary public affairs.
- To explore analytical and conceptual tools necessary to understand political events, institutions, behavior, and change processes.
- To augment the other areas of Social Science study.
- To provide preparation for law school, graduate school, and government service.

The minor program in History is structured to meet the following objectives.

- To provide a secondary concentration of professional study for students majoring in other disciplines.
- To provide an historical and analytical framework for students preparing for Law School.
- To augment the student's understanding and appreciation of History.



## COURSE DESCRIPTIONS

### GEOGRAPHY

**GEOG 201 The World Geography I 3 rs.**  
This class focuses on the imprint of cultural traits, such as religion, language and livelihood systems, on the earth's landscape. The transformation of the earth's surface as a result of cultural diversity, settlement patterns, political organization, cultural evolution, and population growth are the major topic.

**GEOG 202 The World Geography II 3 rs.**  
This course is an introduction to the geographic characteristics of the development problems and prospects of developing countries. The focuses are spatial distribution of poverty, employment, migration and urban growth, agricultural productivity, rural development, policies and international trade. Portraits of selected developing countries are presented.

### HISTORY

**HIST 101 History of World Civilization I 3 crs.**  
This course surveys and interprets the gradual evolution of civilization from ancient times to the Reformation. It examines major political and socio-economic achievements, stressing non-western, Greek, Roman, and Medieval contributions to world civilization

**HIST 102 History of World Civilization II 3 crs.**  
The course is a continuation of HIST 111H and a survey of world history from the Reformation to contemporary times. Emphasis is given to the growth of strong nation states, revolutions, liberalism, nationalism and imperialism, and current problems resulting from two global wars and the end of the cold war.

**HIST 111H History of World Civilization I 3 crs.  
Honors**  
This course surveys and interprets the gradual evolution of civilization from ancient times to the Reformation. It examines major political and socio-economic achievements, stressing non-western, Greek, Roman, and Medieval contributions to world civilization.

**HIST 112H History of World Civilization II 3 crs.  
Honors**  
The course is a continuation of HIST 111H and a survey of world history from the Reformation to contemporary times. Emphasis is given to the growth of strong nation states, revolutions, liberalism, nationalism, and imperialism, and current problems resulting from two global wars and the end of the cold war.

**HIST 200A Introduction to Modern African 3 crs.  
History**  
This course is an outline of contemporary African History, beginning with the partition of Africa by the European powers. The course will cover the imposition of Colonial rule, the struggle for independence, and the problems of

economic and social development in post independence Africa.

**HIST 201 History of American Civilization I 3 crs.**  
This course is a survey of American history from the pre-colonial period to the Civil War. The topics covered are the colonialization of America, the institution of slavery, the American Revolution, the foundations of American government, and the roots of the Civil War.

**HIST 202 History of American Civilization II 3 crs.**  
This course is a continuation of HIST 201 and a survey of basic post -Civil War problems, movements, and trends, including Reconstruction, industrialization, the Great Depression, two world wars, the civil rights movement, and the cold war.

**HIST 221 Historical Research 3 crs.**  
Techniques and procedures in historical research are critically reviewed. The course provides an examination of the methods and functions of research in historical scholarship and requires preparation of an undergraduate history research paper.

**HIST 311 Modern Europe I 3 crs.**  
This course presents a specialized treatment of European political, economic, social, and cultural history from the Renaissance to the Vienna Congress. Major topics include the English Civil War and its aftermath, the Scientific Revolution, the Enlightenment, and the French Revolution.

**HIST 312 Modern Europe II 3 crs.**  
This course is a specialized contribution of HIST 311. Emphasis is given to forces of liberalism, nationalism, socialism, imperialism, the cold ward, and the fall of Communism. Twentieth century European domestic and foreign policies are covered in depth.

**HIST 321 Early American History 3 crs.**  
This course presents an analysis of colonial society relative to its socio-economic, political, and cultural evolution, the American Revolution, the Constitution, and political developments until 1824

**HIST 322 The Middle Period of America 3 crs.  
History**  
An examination of significant historical factors from 124 to 1877 is the focus of this course. The course treats important developments leading to the Civil War, and includes a study of the Civil War and the Reconstruction period

**HIST 333 African American History I 3 crs.**  
This course surveys African American History, giving particular attention to the African American contribution to American culture; Social Structures; and the relationships among groups of various categories; social movements and conflicts.

**HIST 334 African-American History II 3 crs.  
From 1865 to Present Times**  
This is a study of African-American History from the end

of the civil war to present times, continuing the examination of the African-American contribution to American Culture and the manner in which concern for race has been transformed into issues of national importance.

**HIST 341 British History** 3 crs.  
This course examines the major political, economic, cultural, and social developments in Britain from 55 B.C. to World War II.

**HIST 351 Latin America** 3 crs.  
This course surveys the development of Latin America from the pre-colonial period to the colonization of Spain to Portugal, and to independence.

**HIST 360 African History I: From Early Times To 1900** 3 crs.  
This is a study of African History in terms of the Ancient Empires and cultures, regional developments, the Trans-Atlantic Slave Trade, the scramble for colonies by European powers leading to the Partition of the continent, and events leading to 1900.

**HIST 361 African History II** 3 crs.  
This is a study of the African History from the establishment of colonial rule by European powers to the struggle for independence and the emergence of nation-states.

**HIST 362 History of Control Institutions** 3 crs.  
This course presents historical and sociological evaluations of prisons and asylums and their impact on American culture.

**HIST 401 European Imperialism** 3 crs.  
This course presents an intensive survey of the justifications, nature, and scope, and general significance of imperialism in Africa, Southern Asia, and the Far East during the nineteenth and twentieth centuries.

**HIST 402 Contemporary America** 3 crs.  
This course presents recent developments in American history with emphasis placed on international problems and domestic issues of importance in the twentieth century.

**HIST 403 Constitutional History of the US** 3 crs.  
The course consists of an account of the development of the American Constitution and of American constitutionalism from its origin in England, Europe, and the colonies to the Civil War.

**HIST 404 Constitutional History of the U.S. Since 1865** 3 crs.  
This course is a continuation of History 403 and consists of an account of the development of the Constitution and of American constitutionalism from the Civil War to the present. Special emphasis will be placed upon Constitutional interpretation and social and political change.

**HIST 421 History of the South** 3 crs.  
This course presents a survey of the social, political and economic developments in the South since the colonial period, emphasis on recent urbanization and racial adjustments.

**HIST 480 Advanced Review of History** 3 crs.  
This course explores selected aspects of the major developments in World History from ancient times to the modern period. The course has an specific focus on political, socio-economic, and cultural achievements of major African, Eastern, and Western civilizations. The material provides an accelerated review of techniques, procedures, structure and function of historical research.

**HIST 498 Independent Study of History** 3 crs.  
This course presents an intensive study of special topics in history for advanced students. Prerequisite: Consent of instructor

**HIST 499 Independent Study of History** 3 crs.  
This course is an intensive study of special topics in history for advanced students. Prerequisite: Consent of instructor.

### POLITICAL SCIENCE

**POLI 200 Introduction to American Government** 3 crs.

This course presents a critical study of the American political system in its contemporary context: policy making processes, sources of conflict processes.

**POLI 220 Introduction to Political Behavior** 3 crs.  
This course presents a survey of political participation, opinion formation, political persuasion, community power relations, and political change processes.

**POLI 311 Comparative Political Systems** 3 crs.  
A comparative study of the political structure, political culture, and operation of selected political systems is the focus of this course.

**POLI 312 International Relations** 3 crs.  
The course is a study of basic components of national power and the foreign policy objectives of major nations. Proposed theories explaining the behavior of nations will also be explored.

**POLI 330 American Constitutional Law** 3 crs.  
This course traces historical development of American Constitutional Law, as interpreted by the Supreme Court. Impact of Supreme Court decisions is also discussed.

**POLI 342 Urban Politics** 3 crs.  
This course explores urban political processes and institutions considered in light of changing social and economic conditions. Political problems of urban minority groups are emphasized.

**POLI 392 Public Administration 3 crs.**

Public Administration is the study of management functions and policy making in government agencies. The course's emphasis is administrative behavior and the interaction of bureaucracies with the political environment.

**POLI 412 History of Political Thought 3 crs.**

This class presents a critical analysis of selected topics in political thought from ancient civilizations to the present.

**POLI 430 Politics of Developing Nations 3 crs.**

The focus of this class is contemporary politics, institutions, and ideologies of developing nations, with particular emphasis on Africa: patterns of change, social forces, and nation building.

**POLI 490 Political Science Seminar 3 crs.**

This class presents an intensive study of a selected problem in political science. Since the subject varies from year-to-year, the course may be repeated for credit. Prerequisite: Consent of instructor.

**POLI 498 Independent Study 1-3 crs.**

The students with the directed guidance of the instructor, undertakes an in-depth study of a specialized area of political science. Prerequisite: Consent of instructor.

**POLI 499 Independent Study 1 cr.**

The study with the directed guidance of the instructor, undertakes an in-depth study of a specialized area of political science. Prerequisite: Consent of instructor.

### SOCIOLOGY

**SOCI 101 Introduction to Sociology 3 crs.**

This class is intended to provide the student with an introduction to current theories and methods of sociology. Particular attention is paid to social structure, culture, socialization, and social inequality.

**SOCI 201 Social Problems 3 crs.**

This course presents an analysis of the major social problems affecting modern society, social legislation relating to these problems, resources for treatment and prevention, and deficiencies in existing programs.

**SOCI 202 Social Deviance and Social Control 3 crs.**

Theories of deviance causation and their relevance to analysis of particular types of deviance, such as suicide, mental illness, addiction, sexual deviance are discussed. Investigation of the relationships between deviant and the social reaction of such behavior is the focus of the class. Prerequisites: SOCI 101 or 201.

**SOCI 250 Juvenile Delinquency 3 crs.**

The course juvenile delinquency is an introduction to theories of Juvenile delinquency and alternative intervention strategies for reducing the prevalence of juvenile delinquency

**SOCI 303 Social Inequality 3 crs.**

This course investigates social differentiation, its influence upon behavior, and studies of social mobility patterns and their effects on this mobility. The course considers inequality that is present in both an American and International context. Prerequisites: SOCI 101.

**SOCI 306 Socialization 3 crs.**

This course covers the development of personality and the acquisition of the roles, norms, attitudes, and actions that enable a person to function as a member of social groupings.

**SOCI 309 Research Methods in Behavioral Science 3 crs.**

This is the first semester of a two-semester sequence. The first semester is devoted to the methods used in collecting data in the social sciences, including various measurement methodologies.

**SOCI 310 Statistical Methods in Behavioral Science 3 crs.**

This course, the second of a two-semester sequence is devoted to the statistical analysis of data, including statistical computations, interpretations, and reporting of findings.

**SOCI 311 Anthropology 3 crs.**

This course is the study and comparison of the learned, shared, and transmitted behavior patterns and ideals by which men and women work out social relationships deal with their environment, and define their place in the world.

**SOCI 313 Criminology and Penology 3 crs.**

This class provides an overview of contributions of the various schools to the development of criminology. Theories of physical, psychological, and environment factors in crime are presented. The role of the home and family, social relationships, and the methods and instrumentalities of criminal justice, and crime prevention are central to the class. Prerequisites: SOCI 101 or SOCI 201.

**SOCI 315 Urban Sociology 3 crs.**

A sociological analysis of the development and effects of modern urbanization of human institutions, population trends, and social relationships is presented. The role of social agencies, and elements making for organization and disorganization, urban planning and redevelopment are reviewed. Prerequisites: SOCI 101, SOCI 201, or SOCI 311.

**SOCI 316 Marriage and Family Life 3 crs.**

The major focus of the course is given to preparation for marriage, selection of a partner, financing the marriage, problems of parenthood and family administration, successful and happy marriage, and family union. Prerequisite: SOCI 101.

**SOCI 320 Social Movement and Social Change 3 crs.**

This class is an examination of collective behavior; it considers strategies and actions of movements, as well as examines of their characteristics, membership, and structure. The relationship of the social system and its changes to the social movements will also be examined. Prerequisite: SOCI 101.

**SOCI 322 Population Study: Demography 3 crs.**

Demography is the study of the basic variables of population: birth, death and migration. The course considers socio-economic and cultural variables affecting population, and growth projection, and possible controls are discussed. Prerequisite: SOCI 101.

**SOCI 323 Demographic Methods 3 crs.**

In this course, the methods used by demographers is presented. It considers the ways in which demographic data are gathered, classified, and treated to produce summary measures of the important aspects of the composition and dynamics of populations, with particular emphasis on the limitations underlying definitions and bases of classification. Prerequisites: SOCI 322, SOCI 222, or Permission of Instructor.

**SOCI 325 Psychology of Communication 3 crs.**

This course provides an introduction to the nature of verbal and non-verbal communication as a psychological phenomenon. Perception, comprehension, organization, symbolism, and psychological impediments to effective communication are reviewed with case material.

**SOCI 326 Social Psychology 3 crs.**

This course considers personality and behavior as influenced by culture and interpersonal behavior. Social influences on motivation, learning, perception, attitudes, language, and leadership are reviewed. Prerequisites: SOCI 101, PSYC 200.

**SOCI 327 Community Psychology 3 crs.**

This course discusses the systematic analysis of the impact of community life on the functioning of individuals and groups. Strategies and tactics of community intervention are critically reviewed. Prerequisites: SOCI 101 or SOCI 201.

**SOCI 329 Sociology of Medicine 3 crs.**

This course examines the cultural, political, economic, and social factors which influence the incidence of health and illness, the interpretations of subjective health status, and the organization and delivery of health care in America and other societies. Prerequisite: SOCI 101.

**SOCI 331 American Minority Groups 3 crs.**

This class is a study of the cultural background distribution, assimilation, and adjustment of minority groups; problems arising from the contacts among people who differ as to race and culture are examined. Prejudice and discrimination will be considered. Prerequisites: SOCI 101 or SOCI 201.

**SOCI 334 Sociology of Mental Health 3 crs.**

This course examines the practices relating to mental health in the US and other advanced industrial societies. Special attention is given to the role of economic, politics, and culture in shaping these practices and in affecting the nature and organization of mental health care. Prerequisites: SOCI 101 and 221.

**SOCI 340 Small Group Analysis 3 crs.**

The course is a study of small group structures and processes and the emergence of various structures. The course also includes techniques for the analysis of small groups. Prerequisites: SOCI 101, SOCI 201, or PSYC 200.

**SOCI 344 Social Organizational I 3 crs.**

This course reviews rational, natural, and open perspectives on formal organization. It focuses on the roots of organizational theory and recent attempts to combine those perspectives. Prerequisite: SOCI 101.

**SOCI 345 Organizational Social Psychology Organizational Dynamics I 3 crs.**

This course provides an understanding of managerial behavior in an organizational setup. It deals with individual attitudes and behavior in interpersonal and intra-group relationships, with a specific goal to improve awareness, perception, and understanding of one's own and other's points of view and behavior. Prerequisite: BUSI 312. Cross listed with BUSI 342.

**SOCI 350 Mass Communication 3 crs.**

This course covers research and theory on the mass media of communication. Course content includes the impact and effects of mass communication on the individual and on society, including the developing nations of the world. The mass media themselves as a social system are also examined. Prerequisite: SOCI 101.

**SOCI 361 Social Gerontology 3 crs.**

The course is a sociological consideration of the aging process and the role of the elderly in modern American society. Attention is paid to the changing role of the elderly in society and to the connection of aging to the social, economic, and political structures of society and their change over time. An intentional comparison of the social status of age groups is examined. Prerequisites: SOCI 101 or SOCI 221.

**SOCI 380 Introduction to Clinical Sociology 3 crs.**

The course focuses on the application of Sociology for the purpose of social change. Attention is given to the development of Clinical Sociology, the various loci of intervention, and the process, goals, and techniques of intervention based on a sociological perspective.

**SOCI 409 Sociology of Education 3 crs.**

This course examines the social, economic, and political factors which shape institutions of education in the US and selected European and third-world societies. Prerequisite: SOCI 101 or SOCI 221.

**SOCI 421 Theory I: Foundation of Social Theory 3 crs.**

This course is a presentation and evaluation of the great currents of sociological thought from the early influence to the emergence of sociology as a major discipline during the Industrial Revolution. Developments up to the early decades of the twentieth century are traced.

**SOCI 422 Theory II: Contemporary Social Theory 3 crs.**

This course is a study and evaluation of the various theoretical orientations influencing contemporary sociology. The focus is the influence of classical theory on late twentieth century and current social theory. Prerequisite: SOCI 101.

**SOCI 430 The African American Family 3 crs.**

This course provides an examination of the origins of the African American family in Africa, its structure and function in relation to the totality of American society. Prerequisite: SOCI 101.

**SOCI 431 Seminar in Sociology 3 crs.**

The course involves preparation of a special project which is reported in writing and defended orally before the members of the seminar. Permission to take this seminar must be obtained from the instructor. Open to Seniors majoring in Sociology

**SOCI 450 Contribution of Afro American Sociology 3 crs.**

This course has a specific focus on eminent sociologists of African descent who have made significant contributions to the discipline, yet whose work suffered from custom and institutional racism, with the cumulative effect of their works having been excluded from "mainstream" sociology.

**SOCI 490 Sociological Internship 3 crs.**

Approved students are assigned to approved agencies or organizations for orientation and experience in a sociological field under the guidance of a trained professional, as well as a member of the University faculty. Prior to going out and after return, students attend a seminar. Students present an extended paper on their internship experience. Prerequisites: Thirty hours of Sociology, Senior Standing, cumulative grade point average of 2.25 or better, and permission of supervising instructor.

**SOCI 498 Independent Study in Sociology 3 crs.**

This class is an intensive study of specialized topics in Sociology for advanced students. Permission to take an independent study must be obtained from the instructor.

**SOCI 499 Independent Study in Sociology 3 crs.**

This class is an intensive study of specialized topics in Sociology for advanced students. Permission to take an independent study must be obtained from the instructor.

**SOCIAL WORK**

**SOWK 200 Introduction to Social Work and Social Welfare/Honors-GE Area II Discipline: B 3 crs.**

This course is the introductory course to the social work profession. It examines the social welfare system as society's response to human need and as a structure for delivery of social services. An overview of the fields of social welfare service and the social work roles in each field are provided. Twenty-five additional hours of volunteer service in a social agency are required.

**SOWK 220 Basic Interviewing Skills and Techniques 3 crs.**

This course develops students' basic interviewing skills for assessing, goal setting, and intervention in social work settings. Its emphasis is on skill application with diverse populations. Students will also explore their personal values and belief systems.

**SOWK 300 Human Behavior in the Social Environment I 3 crs.**

This course focuses on the inter-relationships of biological and psychological factor in human development throughout the life span. It examines the dynamics of human behavior in a social context, with beginning level social assessment. Prerequisites: SOWK 200, BIOL 101, SOCI 101, PSYC 200, or consent of instructor.

**SOWK 302 Human Behavior in the Social Environment II 3 crs.**

This course studies human behavior as it is affected by race, class, gender, and sexual orientation. It highlights the experience of oppression and its impact on families and groups. It includes strategies to bring about social change in organizations and communities. Prerequisites: SOWK 200 and 300.

**SOWK 305 Social Work Policy 3 crs.**

This course provides an historical and analytical overview of social welfare in the United States. It offers selective examinations of contemporary programs and services, analyses of alternative issues and problems, and evaluations of programs and services and their effectiveness. Prerequisites: SOWK 200 or consent of instructor.

**SOWK 320 Social Work Practice I 3 crs.**

This is the first of three practice courses preparing students for a generalist approach to social work practice. Its emphasis is on the knowledge, values, ethics, and skills needed to develop effective helping relationships. It includes basic theories for intervention with a focus on micro level problem solving and basic interviews skills. Prerequisites: SOWK 200 and 300.

**SOWK 350 Social Work with Older People 3 crs.**

This course is a study of older Americans and of the programs and policies designed to support them. It reviews social work practice skills in providing direct service to older people. Prerequisite: SOWK 200 or consent of instructor.



**SOWK 400 Social Work Practice II 3 crs.**

This is the second of three practice courses preparing students for a generalist approach to social work practice. It expands on the basic knowledge, values, ethics, and skills, with an emphasis on mezzo level problem solving. It includes theories and techniques for planning assessment and advocacy for family and small group intervention. Prerequisites: SOWK 315 and 320. Co-requisite: SOWK 406 or 407.

**SOWK 405 Field Instruction in Social Work 3 crs.**

This course is the supervised experience in a social welfare agency with emphasis on methods and techniques in generalist social work practice. It provides an opportunity to apply theory and develop skills in delivery of social services. Co-requisites: SOWK 400 and 406. Prerequisites: SOWK 320, and approval of the department. Students volunteer two days per week in an agency.

**SOWK 406 Field Instruction Seminar I 3 crs.**

This course is the weekly on-campus seminar students enroll in concurrently with Field Instruction I. Its format is small group discussions of field experiences with related written assignments. Co-requisites: SOWK 400, 405 Prerequisite: SOWK 320. One hour per week.

**SOWK 407 Field Instruction in Social Work II 5 crs.**

This course is the continuation of the direct experience in the delivery of social services within an assigned agency. There is an increased emphasis on assessment, intervention, and evaluation skills of generalist social work. Co-requisite: SOWK 410 and 408. Prerequisite: SOWK 405 and approval by the department. Students volunteer two days per week in an agency.

**SOWK 408 Field Instruction Seminar II 1 cr.**

This course is the weekly on campus seminar students enroll in concurrently with Field instruction II. Its format is small group discussion of field experiences with related written assignments. Co-requisites: SOWK 407 and 410. Prerequisites: SOWK 405 and 406 and approval by the department.

**SOWK 410 Social Work Practice III 3 crs.**

This is the third of three practice courses preparing students for a generalist approach to social work. It expands on the basic knowledge, values, ethics, and skills, of the two previous courses with an emphasis on macro level problem solving. It includes theories and techniques needed for practice within an organizational or community context. Prerequisite: SOWK 400. Co-requisites: SOWK 407 and 408.

**SOWK 450 Social Work with Families/Children 3 crs.**

This course is a survey of child welfare services and examination of current policies in social work for children and their families. It considers practice issues in protective services; in-home services to families; and substitute care including adoption and foster care. Prerequisites: SOWK 200 or consent of instructor.

**SOWK 455 Substance Abuse: Issues and Services 3 crs.**

This course is a study of alcohol and drug abuse and services related to them. The topics include theoretical perspectives on abuse, pharmacological characteristics of commonly abused substances, and stages of dependence and addiction. An overview of societal responses to substance abuse, including new enforcement, treatment, rehabilitation, and prevention, is included. Prerequisites: SOWK 300 or consent of instructor.

**SOWK 460 Social Work in Corrections 3 crs.**

This course reviews social work interventions in a variety of correctional settings. It focuses on the professional role in court and correctional procedures within institutional and community based programs. Prerequisites: SOWK 200 or consent of the instructor.

**SOWK 465 Social Work in Health Care 3 crs.**

This course explores the role of social work practice in various health care settings. Its emphasis is on the changing concepts of health and illness. It assesses the nature of health and illness. It evaluates the nature of health care organizations, funding mechanisms, and ethical dilemmas in social work health care. Prerequisite: SOWK 300 or consent of the instructor.

**SOWK 470 Social Work in Mental Health 3 crs.**

This course investigates the role of the social work profession within the mental health delivery system, utilizing a generalist social work approach. It includes social work and mental health concepts, policies, research methods, and program development examined in social service agencies, community mental health facilities, and institutional accommodations. Prerequisite: SOWK 300 or consent of instructor.

**SOWK 475 Social Work With Persons Who Have Disabilities 3 crs.**

This course provides an overview of physical, social, and emotional implications of disabilities within the context of generalist social work practice. The topics include sensitivity to discrimination in society, laws, and available service and personal and family adjustment to disability. Prerequisite: SOWK 200.

**SOWK 484 Social Work and the Law 3 crs.**

This course is a study of social welfare, family, consumer law, and the legal authority of social agencies to make regulations. It reviews guidelines for court testimony and rules of evidence. Prerequisite: SOWK 200 or consent of instructor.

**SOWK 499 Independent Study/Special Topics 3 crs.**

This course provides opportunities for investigating special themes or issues of interest to students and the social work profession. It may be repeated once under a different subtitle. For Independent Study, the student must have the written consent of the instructor prior to enrolling in the course.

**FACULTY****DeViney, Stanley**

Associate Professor  
B.S., Towson State University  
M.A., Ph.D., Rutgers University

**Alston Jr., David**

Assistant Professor  
B.A., North Carolina Central University  
M.R.P., University of North Carolina  
Ph.D., North Carolina State University

**Bishop, Lowell**

Associate Professor  
B.A., Ohio University  
M.S.S.W., University of Louisville  
Ph.D., Case Western Reserve University

**Mbye, Lamin**

Associate Professor  
B.A., University of Wales  
Ph.D., University of Birmingham, England

**Lehman, Cynthia L.**

Assistant Professor  
B.A., Shippensburg University  
M.A., Ph.D., Temple University

**Rebach, Howard**

Professor  
B.A., University of Louisville  
M.A., M.S.W., University of Maryland  
M.A. Salisbury University  
Ph.D., Michigan State University

# SCHOOL OF BUSINESS AND TECHNOLOGY



The School of Business and Technology includes five academic departments: Business, Management and Accounting, Engineering and Aviation Sciences, Hotel and Restaurant Management, Mathematics and Computer Science, and Technology. Academic majors within the School include: business administration, accounting, construction management, computer science, mathematics, technology education, business education, engineering, engineering technology, aviation and hotel and restaurant management. Specific concentrations offered include: professional pilot, aviation management, software engineering, culinary arts, tourism, marketing, electrical engineering technology and mechanical engineering technology. The faculty within the School actively engage in funded research and educational projects, many of which involve undergraduate and graduate students.

**DEPARTMENT OF  
BUSINESS, MANAGEMENT AND  
ACCOUNTING**

**Dean:**

Eddie Boyd, Ph.D.

**Associate Professor and Acting Chair:**

Julius A. Alade, Ph.D.

**Associate Professors:**

Dorothy M. Mattison, Ph.D.

Dinesh Sharma, Ph.D.

**Assistant Professors:**

Sameh Elsayed-Ahmed, Ph.D.

Monisha Das, Ph.D.

Nagy Habib, Ph.D.

Jongdae Jin, Ph.D.

Hakim Kislal, Ph.D.

Diane Li, Ph.D.

Bryant C. Mitchell, Ph.D.

**Lecturers:**

Retta Haley Guy, MPA

William R. Hummer, Jr., MBA, MS

Allen L. Sampson, MBA

**MISSION**

The mission of the Department of Business, Management and Accounting at the University of Maryland Eastern Shore is to deliver high quality management education to students majoring in Accounting, Business Education, and Business Administration, as well as to provide core courses for majors throughout the University. The mission is accomplished primarily through instruction, supported by instructional development, applied research, and service. The focus is on breadth in curricula that facilitates employment and professional career development in the private, public, and not-for-profit sectors of a global economy. In addition, the Department's curricula are designed to enhance students' awareness of the moral and ethical issues confronting organizations. The role of technology in the decision-making process is emphasized by the integration of computer concepts and applications throughout the curricula. The Department's diverse, multicultural student body is assisted in the development of high-level intellectual, interpersonal, technical, and communication skills. The Department is committed to being a regional leader in the preparation of students for viable careers in the 21st Century. In addition, the faculty continue to provide limited technical assistance to small and micro enterprises.

**GOAL**

The overall goal of the Department of Business, Management and Accounting is to provide students with learning experiences that prepare them to function as key

decision-makers in the public, private, and not-for-profit sectors of the global economy.

**OBJECTIVES**

The objectives of the programs offered in the Department of Business, Management and Accounting are

- To stimulate the intellectual curiosity of students and faculty as they discover new knowledge;
- To enhance the students' problem solving and critical thinking skills;
- To sponsor activities that enhance students' professional and social development;
- To promote an understanding of the economic, ethical, and legal environment in which we live and businesses operate;
- To provide practical management learning experiences through internship and/or cooperative programs;
- To foster an awareness of ethical and global issues facing decision makers;
- To prepare students for careers in professional accounting and managerial positions;
- To prepare secondary school teachers in the area of business education;
- To meet the standards of such external bodies as the AACSB, AICPA, The Maryland State Board of Accountancy, and The Maryland Department of Education;
- To prepare students for graduate study;
- To conduct research relevant to the management process;
- To attract and retain high ability students in enrichment programs and meet the needs of provisional admits who may require additional individualized support systems; and
- To collaborate with the public school systems and other organizations in fostering an appreciation of the management process and the free enterprise system.

## DESCRIPTION OF PROGRAMS

The Department of Business, Management and Accounting offers three major programs: a Bachelor's Degree in Accounting, a Bachelor's Degree in Business Administration (general and marketing emphasis), and a Bachelor's Degree in Business Education.

The programs offered in the Department of Business, Management and Accounting are grounded in the liberal arts. More than 50 percent of the curricula is comprised of general education and other liberal arts courses necessary for the development of each student's cognitive skills. The Association to Advance Collegiate Schools of Business - International (AACSB) Standards provide overall guidelines for curricula and course design for the Accounting and Business Administration programs.\* These two programs prepare students for professional careers in accounting and managerial positions. Students are encouraged to meet the 150 credit-hour and residency requirements to sit for the Uniform Certified Public Accountants' Examination in their respective states.\*\*

Business Education is one of twelve Maryland State Department of Education approved certification programs offered by UMES. The program is designed to develop competencies among students to teach office administration, bookkeeping, computer concepts and applications, and other business-related courses in secondary education.

\*The Department holds membership in the AACSB and continues its quest for AACSB Accreditation.

\*\*The Department plans to offer a Masters of Accountancy Degree Program to meet the legislated 150-credit-hour requirement to sit for the Uniform Certified Public Accountants Examination in Maryland.

## ADMISSION STANDARDS

The Department of Business, Management and Accounting focuses on devoting its limited resources to achieving and maintaining high quality management education programs for students who are likely to benefit from pursuing such programs of study. The focus is also on insuring that each student acquires the knowledge, skills, and attitudes necessary to establish viable careers in a broad range of organizations. The Department has, via University approval, specified admission standards, with the expectation that more time, energy, and effort can be devoted to students who are willing and able to participate fully in the learning process.

### Overall Objectives

The overall objectives of the standards are to promote high quality management education while maintaining high retention and graduation rates for students admitted to the Business/Management Programs offered in the Department of Business, Management and Accounting. The objectives are to be attained in the context of providing better service

to a greater number of students who are committed to taking full advantage of all available educational resources at UMES.

### Criteria

- 1) New admits to the University who choose to major in business will be admitted unconditionally to the Department of Business, Management, and Accounting if they have a combined SAT score of 850 or higher.
- 2) Students with SAT scores between 700 and 849 will be admitted provisionally to the Department. Provisional status will be removed at the end of the first school year if:
  - a. student has earned 28 semester credit hours with a GPA of 2.5 or higher;
  - b. the student has earned grades of "C" or higher in MATH 109, ENGL 101, and ENGL 102; and
  - c. the student has passed the English Proficiency Examination.

If all conditions are not met by the end of the first year of study, provisional students will be formally counseled and advised to change their major. This will be done in consultation with other departments on campus.

### Transfer Students

- 1) To major in the Department of Business, Management, and Accounting, students transferring to UMES must have a minimum GPA of 2.5 and be in good standing at their former institution(s). Transfer students with a GPA less than 2.5 will be considered for admission into the Department of Business, Management, and Accounting after earning 28 credits with a 2.5 GPA during the first year of study at UMES. Grades of "C" or better must be earned in MATH 109, ENGL 101, and ENGL 102, if not completed prior to transferring. Also, the English Proficiency Examination must be passed prior to admission to the Department.
- 2) **UMES Students wishing to change their Majors to Business.**

To be considered for a major change to business, students must have:

- a. earned at least 28 credit hours at UMES with a GPA of 2.5 or higher;
- b. earned grades of "C" or higher in MATH 109, ENGL 101, and ENGL 102;
- c. the student has passed the English Proficiency Examination.

Students in their first semester at UMES will be considered for a major change to business when they meet the same criteria outlined in number 1 above. The admission standards were effective Fall Semester 2001.

#### **GENERAL RESTRICTIONS**

1. Junior and senior level course requirements for a degree in Business Administration, Accounting, and Business Education cannot be satisfied through credit by examination, independent study, or other nontraditional methods.
2. At least 50 percent of the business credit hours required for the business administration and accounting degrees must be earned at UMES.
3. There is no business concentration in the General Studies Program.
4. Repeat courses should be taken at UMES.
5. Credit hours in business courses taken by majors outside of the Department of Business, Management, and Accounting cannot exceed 25 percent of the program requirements (such as a 120 hour non-business program can not consist of more than 30 credit hours in business courses).

#### **ACADEMIC PERFORMANCE**

All students must earn a grade of "C" or better in all supporting, core, and major course requirements.

#### **GENERAL INFORMATION**

##### **Professional Development**

Professional development is an integral part of preparing to establish viable management/ accounting careers in business, government, and nonprofit organizations. During their sophomore and junior years, students majoring in the Department must enroll in the 0.5 credit Professional Development courses. In addition, participation in departmentally sponsored activities and student organizations is required. Appropriate business attire is required for various functions. During the first semester of the freshman year, all students must acquire appropriate business attire. Details will be provided within the department.

##### **Student Organizations**

The following are departmentally sponsored Student Organizations: UMES Student Chapter of the National Association of Black Accountants (NABA), Students in Free Enterprise (SIFE), National Student Business League (NSBL), Student Advisory Board (SAB), the Sports Marketing and Entrepreneurship Club (SMEC), the Student Chapter of the American Marketing Association (AMA), and Phi Beta Lambda.

##### **Communication Skills**

Written and oral communication skills are extremely important. Standard English is required for all formal settings and submissions, such as classroom interactions, presentations, written assignments, etc. All students must pass a Business Communications proficiency test as a requirement in BUED 333 (Business Communications). Should students not pass the proficiency test, an Incomplete will be received for the course, provided all other requirements for the course have been met. Students failing the proficiency test will have up to one year to pass the test, thereby removing the Incomplete. If the Incomplete is not removed within one year, the course must be repeated.

##### **Practical Experience**

All students majoring in Business Administration and Accounting are encouraged to acquire meaningful, practical experience in a business, government, or non-profit organization. This requirement can be met in a variety of ways, such as approved work experience, voluntary services, on-campus externship, and/or faculty directed consulting/research projects. No credit is earned for this experience. However, students desiring credit for an approved internship must submit for approval a job description and, subsequently, a performance appraisal letter from their supervisor. Following approval by the Department Chairperson (or his/her designee) and enrollment in BUAD 480, the student will write a reflective paper approximately 25 pages in length. The reflective paper should integrate classroom knowledge with practical experiences acquired during the internship. Keeping a daily log of internship activities/tasks is required.

##### **Pre-Teaching Internship Requirements**

Students requesting permission to transfer accounting and computer application courses into the Business Education program must first demonstrate their proficiency in these two areas prior to receiving transfer credits for the courses. In addition, all Business Education majors must demonstrate their ability to teach designated computer applications and elementary bookkeeping/accounting in the methods course, EDCI 427B (Curriculum and Instruction in Business Education).

##### **Teaching Internship**

The Teaching Internship is the culmination of the Business Education Program. It consists of two (2) full-time placements in two (2) different classroom settings for a total of 15 weeks. The Internship Block includes the Teaching Internship and the Senior Seminar. No additional coursework or outside employment is permitted during this program phase.

##### **Center for Management Assistance and Research (C-MAR)**

Through the Center for Management Assistance and Research (C-MAR), the departmental faculty and students provide technical assistance to small and micro enterprises. Particular attention is given to the needs of minority/disadvantaged small and micro business owners, as well as business development in developing regions of

the world such as Southern Africa. Self-reliance is stressed through the program's encouragement and support of the entrepreneurial spirit. In addition, emphasis is placed on applied management research relative to business, government, and non-profit organizations. The C-MAR also facilitates the Business, Management and Accounting Department's goal of integrating real-world experiences into the curricula via internships, consulting projects, and research projects.

#### **Honor Society**

Sigma Beta Delta, a national scholastic honor society in business/management is open to students majoring in the Department who rank in the upper 5 percent of their junior class with a minimum GPA of 3.3 or in the upper 10 percent of their senior class. Students are eligible for induction the semester after they have earned 75 credits at the University of Maryland Eastern Shore. At least 50 percent of all course work must be taken on a full-time basis. The degree program must be completed within 6 years of the starting date.



**Early Childhood Research Center**

**ACCOUNTING**  
**Required and Recommended Course Sequence**

**I. GENERAL EDUCATION REQUIREMENTS****TOTAL REQUIRED FOR GENERAL EDUCATION – 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 15 Credits**

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech	3
ARTS 101	Exploration of the Visual Arts <b>or</b>	
MUSI 101	Introduction to Music <b>or</b>	
MUSI 109	Introduction to Jazz History	3
HIST 333	African American History <b>or</b>	
HIST 334	African American History II <b>or</b>	
HIST 341	British History <b>or</b>	
HIST 360	African History I <b>or</b>	
HIST 361	African History II	3
	Two Foreign Language <b>or</b> approved International Liberal Arts courses	6

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
SOCI 101	Introduction to Sociology	3
PSYC 200	Introduction to Psychology	3

**C. Curriculum Area III - (Biological and Physical Sciences) 7 Credits**

Course No.	Title	Credits
BIOL 101	Theories and Applications of Biological Science	3
BIOL 103	Biological Science Lab	1
PHYS 101	Theories and Applications of Physical Science	3

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3

**F. Curriculum Area VI - (Emerging Issues) 1 Credit**

Course No.	Title	Credits
BUED 100	First Year Experience/Business	1

**II. DEPARTMENTAL SUPPORTING LIBERAL ARTS REQUIREMENTS 9 Credits**

Course No.	Title	Credits
ECON 201	Principles of Economics I (MACRO)	3
ECON 202	Principles of Economics II (MICRO)	3
PSYC 305	Development Psychology <b>or</b>	
PSYC 307	Educational Psychology	3



**III. FOUNDATION KNOWLEDGE FOR BUSINESS 46 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 412	Business Law	3
BUAD 414	Business Law II	3
BUAD 495	Strategic Management	3
BUED 101/101S	Sophomore Professional Develop. or an approved liberal arts sub.	0.5
BUED 102/102S	Junior Professional Development or Approved Liberal Arts substitute	0.5
BUED 212	Computer Concepts/Applications	3
BUED 333	Business Communications	3
MKTG 308	Principles of Marketing	3
FINA 340	Financial Management	3

**IV. ACCOUNTING MAJOR REQUIREMENTS 24 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ACCT 301	Cost and Budgetary Control	3
ACCT 302	Intermediate Accounting I	3
ACCT 303	Intermediate Accounting II	3
ACCT 400	Intermediate Accounting III	3
ACCT 401	Advanced Financial Accounting	3
ACCT 402	Federal Income Tax Accounting-Individual	3
ACCT 405	Government and Non-Profit Accounting	3
ACCT 407	Auditing	3

**TOTAL PROGRAM REQUIREMENTS 120**



**The UMES Comptroller and Business Office Staff**

**ACCOUNTING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
BUED	212	Computer Concepts/ Applications	3
MATH	109	College Algebra	3
BIOL	101	Theories & Aps. of Biol. Sci.	3
BIOL	103	Biological Science Lab.	1
BUED	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
PHYS	101	Theories and Aps. of Phys. Sci.	3
PSYC	200	Introduction to Psychology	3
SOCI	101	Introduction to Sociology	3
<b>One course in Art, Literature or Music</b>			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201	Principles of Economics I	3
ACCT	201	Introductory Financial Acct.	3
BUAD	252	Calculus with Busi. and Management Applications	3
BUAD	213	Business Software Aps.	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202	Principles of Economics II	3
ENGL	305	Technical Writing	3
ACCT	202	Intro. Corp and Managerial Acct.	3
HIST	333	African American History <b>or</b>	
HIST	334	African American History II <b>or</b>	
HIST	341	British History <b>or</b>	
HIST	360	African History I <b>or</b>	
HIST	361	African History II	3
<b>Foreign Language I <u>or</u> International Liberal Arts</b>			3
BUED	101/101S	Professional Development	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302	Mngt. & Org. Behavior	3
MKTG	308	Principles of Marketing	3
BUED	333	Business Communications	3
ACCT	301	Cost & Budgetary Control	3
ACCT	302	Intermediate Accounting	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MKTG	308	Principles of Marketing	3
FINA	340	Financial Management	3
BUAD	353	Business Statistics I	3
BUAD	300	Business Ethics	3
ACCT	303	Intermediate Accounting II	3
<b>Foreign Language II <u>or</u> International Liberal Arts</b>			3
BUED	102/102S	Professional Development	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	305	Developmental Psychology <b>or</b>	
PSYC	307	Educational Psychology	3
ACCT	400	Intermediate Accounting III.	3
ACCT	401	Advanced Financial Acct. <b>or</b>	
BUAD	354	Business Statistics II	3
<b>Environment of Business</b>			3
BUAD	412	Business Law I	3
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	405	Govt. & Non-Profit Acct.	3
ACCT	407	Auditing	3
BUAD	414	Business Law II	3
BUAD	495	Strategic Management	3
ACCT	402	Federal Income Tax/Individual	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      120**

**HONORS ACCOUNTING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Basic Composition I (Honors)	3
SOCI	101	Intro to Sociology	3
MATH	111H	Elem. Math Analysis (Honors)	4
BIOL	101	Theories & Applications of Biological Science	3
BIOL	103	Biological Science Lab	1
BUED	100	First Yr Experience/Business	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102H	Basic Composition II (Honors)	3
PHYS	101	Theories and Applications of Physical Science	3
PSYC	200	Introduction to Psych.	3
BUED	212	Computer Concepts/Applica. <b>One</b> course in Honors Art, Literature or Music	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201H	Prin. of Economics I (Honors)	3
ACCT	201	Intro Financial Acct.	3
BUAD	252	Calculus w/Business and Mngt. Aps.	3
BUAD	213	Business Software Aps.	3
ENGL	203	Fund of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202H	Prin. of Economics II (Honors)	3
ENGL	305	Technical Writing	3
ACCT	202	Intro Corp and Managerial Accounting	3
HIST	333	African American History <b>or</b>	
HIST	334	African American History II <b>or</b>	
HIST	341	British History <b>or</b>	
HIST	360	African History I Foreign Lang I <b>or</b> International Liberal Arts	3
BUED	101S	Sophomore Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302H	Mgmt & Organizational Behavior (Honor)	3
MKTG	308	Principles of Marketing	3
BUED	333	Business Communications	3
ACCT	301	Cost & Budgetary Ctrl	3
ACCT	302H	Intermediate Acct. I (Honors)	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
FINA	340H	Financial Management (Honors)	3
BUAD	353	Business Stat. I	3
BUAD	300	Business Ethics	3
ACCT	303H	Intermediate Acct. II (Honors)	3
Foreign Lang II or		International Liberal Arts	3
BUED	102S	Junior Professional Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	305	Developmental Psychology <b>or</b>	
PSYC	307	Educational Psychology	3
ACCT	400H	Intermediate Acct. III	3
BUAD	354	Business Statistics II	3
ACCT	401H	Advanced Fin. Acct.	3
BUAD	412	Business Law	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	405H	Govt. & Non-Profit (Honors)	3
ACCT	407H	Auditing (Honors)	3
ACCT		Elective	
BUAD	414	Business Law II	3
BUAD	495	Strategic Manage	3
ACCT	402	Advanced Financial Acct.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**      **121**

**HONORS BUSINESS ADMINISTRATION  
(GENERAL)  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101H	Basic Composition I (Honors)	3
SOCI	101H	Intro to Sociology (Honors)	3
MATH	111H	Elem. Math Analysis (Honors)	4
BIOL	101	Theories and Aps. of Biol Sci.	3
BIOL	103	Biological Science Lab	1
BUED	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102H	Basic Compos. II (Honors)	3
PHYS	101	Theories & Aps of Physical Sci.	3
PSYC	200	Introduction to Psychology	3
BUED	212	Computer Concepts/Applications	3
<b>One</b> in Honors Art, Music, or Literature			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201H	Principles of Econ I	3
ACCT	201	Intro Financial Accounting	3
BUAD	252	Calculus with Business and Management Applications	3
BUAD	213	Business Software Applications	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202H	Prin. of Economics II	3
ACCT	202	Introductory Corporate and Managerial Accounting	3
ENGL	305	Technical Writing	3
HIST	333	African American I <b>or</b>	
HIST	334	African American History II	
HIST	341	British History <b>or</b>	
HIST	360	African History I	3
<b>Foreign Lang. I <b>or</b></b> International Liberal Arts			3
BUED	101S	Sophomore Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302H	Mngt. and Org. Behavior	3
BUED	333	Business Communications	3
BUAD	353	Business Statistics	3
FINA	340H	Financial Management	3
MKTG	308	Principles of Marketing	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BUAD	354	Business Statistics II	3
BUAD	304	Entrepreneurship	3
Liberal Arts Elective			3
<b>Foreign Lang. II <b>or</b></b> International Liberal Arts			3
BUAD	300	Business Ethics	3
BUED	102S	Junior Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
FINA	341H	Investments & Security Analysis (Honors)	3
BUAD	412	Business Law	3
BUAD	410	Production Management	3
BUAD		Elective 300 or above	3
BUAD	420	International Business	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BUAD		Elective 300 or Above	3
Liberal Arts Elective			3
BUAD	495	Strategic Management	3
PSYC	305	Develop Psychology <b>or</b>	
PSYC	307	Educational Psychology	3
BUAD	411H	Ops. Rsch. and Decision Theory	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Required Credits      121**

**BUSINESS ADMINISTRATION (GENERAL) CURRICULUM  
Required and Recommended Course Sequence**

**I. GENERAL EDUCATION REQUIREMENTS**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 15 Credits**

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech	3
ARTS 101	Exploration of the Visual Arts <b>or</b>	
MUSI 101	Introduction to Music <b>or</b>	
MUSI 109	Introduction to Jazz History	3
HIST 333	African American History I <b>or</b>	
HIST 334	African American History II <b>or</b>	
HIST 341	British History <b>or</b>	
HIST 360	African History I <b>or</b>	
HIST 361	African History II	3
	Foreign Language <b>or</b>	
	<b>Two</b> International Liberal Arts courses	6

**B. Curriculum Area II – (Social and Behavioral Sciences) 6 Credits**

Course No.	Title	Credits
SOCI 101	Introduction to Sociology	3
PSYC 200	Introduction to Psychology	3

**C. Curriculum Area III - (Biological and Physical Sciences) 7 Credits**

Course No.	Title	Credits
BIOL 101	Theories and Applications of Biological Science	3
BIOL 103	Biological Science Laboratory	1
PHYS 101	Theories & Applications of Physical Science	3

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3

**F. Curriculum Area VI - (Emerging Issues) 1 Credit**

Course No.	Title	Credits
BUED 100	First Year Experience/Business	1

**II. Liberal Arts Requirements 15 Credits**

Course No.	Title	Credits
ECON 201	Principles of Economics I	3
ECON 202	Principles of Economics II	3
PSYC 305	Developmental Psychology <b>or</b>	
PSYC 307	Educational Psychology	3
Elective	Liberal Arts	6

**III. Foundation Knowledge For Business (Required of ALL Business Administration Majors) 43 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 300	Business Ethics	3
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUED 212	Computer Concepts and Applications	3
BUAD 213	Business Software Applications	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 302	Management and Organizational Behavior	3
MKTG 308	Principles of Marketing	3
BUED 333	Business Communications	3
FINA 340	Financial Management	3
BUAD 412	Business Law	3
BUAD 495	Strategic Management	3
BUED 101/101S	Sophomore Professional Development	0.5
BUED 102/102S	Junior Professional Development	0.5

**IV. General Business Administration Major Requirements 21Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 411	Operations Research and Decision Theory	3
FINA 341	Investments and Security Analysis	3
BUAD 420	International Business	3
BUAD 410	Production Management	3
BUAD 304	Small Business Management and Entrepreneurship	3
	<b>Two</b> courses selected from the following or other approved 300 or 400 level Business Elective	6

**Business Electives:**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ACCT 388	Financial Statement Analysis	3
BUAD 306	Human Resource Management	3
BUAD 307	Industrial Relations	3
MKTG 315	E-Commerce	3
MKTG 401	Advertising Management	3
MKTG 312	Sales Management	3
MKTG 310	Marketing Management	3
MKTG 404	Consumer Behavior & Theory	3
FINA 440	Advanced Financial Management	3
FINA 441	Insurance and Business Risk	3
BUAD 313	Advanced Computer Application Techniques	3

**TOTAL PROGRAM REQUIREMENTS 120**

**BUSINESS ADMINISTRATION (GENERAL)  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Intro to Sociology	3
MATH	109	College Algebra	3
BIOL	101	Theories and Applications of Biological Science	3
BIOL	103	Biological Science Lab	1
BUED	100	First Yr Experience/Business	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
PHYS	101	Theories & Aps. of Physical Sci.	3
PSYC	200	Intro. to Psychology	3
BUED	212	Computer Concepts/Aps. <b>One</b> course in Art, Music, or Literature	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201	Principles of Econ I	3
ACCT	201	Intro Financial Accounting	3
BUAD	252	Calculus w/Busi. and Mngt. Aps.	3
BUAD	213	Business Software Applications	3
ENGL	203	Fund of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202	Principles of Economics II	3
ACCT	202	Intro. Corp. and Manage. Acct.	3
ENGL	305	Technical Writing	3
HIST	333	African American History I <b>or</b>	
HIST	334	African American History II <b>or</b>	
HIST	341	British History <b>or</b>	
HIST	360	African History I <b>or</b>	
HIST	361	African History II	3
		Foreign Language I <b>or</b> International Liberal Arts	3
BUED	101/101S	Sophomore Prof Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302	Mngt. and Org. Behavior	3
BUED	333	Business Communications	3
BUAD	353	Business Statistics I	3
FINA	340	Financial Management	3
MKTG	308	Principles of Marketing	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BUAD	354	Business Statistics II	3
BUAD	304	Small Busi. Mngt. & Entrep.	3
Elective		Liberal Arts	3
		Foreign Language II <b>or</b> International Liberal Arts	3
BUAD	300	Business Ethics	3
BUED	102/102S	Junior Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
FINA	341	Invest. & Security Analysis	3
BUAD	412	Business Law	3
BUAD	410	Production Manage	3
BUAD		Elective 300 or Above	3
BUAD	420	International Business	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
BUAD		Elective 300 or Above	3
Elective		Liberal Arts	3
BUAD	495	Strategic Management	3
PSYC	305	Developmental Psychology <b>or</b>	
PSYC	307	Educational Psychology	3
BUAD	411	Ops., Rsch. & Dec. Theory	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required**      **120**

**BUSINESS ADMINISTRATION (Marketing Emphasis)  
Required and Recommended Course Sequence**

**I. GENERAL EDUCATION REQUIREMENTS**

**TOTAL REQUIRED IN GENERAL EDUCATION – 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

<b>A.</b>	<b>Curriculum Area I - (Arts and Humanities)</b>		<b>15 Credits</b>
<b>H.</b>	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	ENGL 203	Fundamentals of Contemporary Speech	3
	ARTS 101	Exploration of Visual Arts <b>or</b>	
	MUSI 101	Introduction to Music <b>or</b>	
	MUSI 109	Introduction to Jazz History	
	HIST 333	African American History <b>or</b>	
	HIST 334	African American History II <b>or</b>	
	HIST 341	British History <b>or</b>	
	HIST 360	African History I <b>or</b>	
	HIST 361	African History II	3
		Foreign Language <b>or</b>	
		<b>Two</b> International Liberal Arts courses	6
<b>B.</b>	<b>Curriculum Area II - (Social and Behavioral Science)</b>		<b>6 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	SOCI 101	Introduction to Sociology	3
	PSYC 200	Introduction to Psychology	3
<b>C.</b>	<b>Curriculum Area III - (Biological and Physical Sciences)</b>		<b>7 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	BIOL 101	Theories and Applications of Biological Science	3
	BIOL 103	Biological Science Lab	1
	PHYS 101	Theories & Applications of Physical Science	3
<b>D.</b>	<b>Curriculum Area IV - (Mathematics)</b>		<b>3 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	MATH 109	College Algebra	3
<b>E.</b>	<b>Curriculum Area V - (English Composition)</b>		<b>9 Credits</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	ENGL 101	Basic Composition I	3
	ENGL 102	Basic Composition II	3
	ENGL 305	Technical Writing	3
<b>F.</b>	<b>Curriculum Area VI - (Emerging Issues)</b>		<b>1 Credit</b>
	<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
	BUED 100	First Year Experience/Business	1

**II. Liberal Arts Requirements** **12 Credits**

<b>Courses No.</b>	<b>Title</b>	<b>Credits</b>
ECON 201	Principles of Economics I	3
ECON 202	Principles of Economics II	3
PSYC 305	Developmental Psychology <b>or</b>	
PSYC 307	Educational Psychology	3
Elective	Liberal Arts	3
Elective	Liberal Arts	3



**III. Foundation Knowledge For Business (Required of ALL Business Administration Majors) 43 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 300	Business Ethics	3
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUED 212	Computer Concepts/Applications	3
BUAD 213	Business Software Applications	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 302	Management and Organizational Behavior	3
MKTG 308	Principles of Marketing	3
BUED 333	Business Communications	3
FINA 340	Financial Management	3
BUAD 412	Business Law I	3
BUAD 495	Strategic Management	3
BUED 101/101S	Sophomore Professional Development	0.5
BUED 102/102S	Junior Professional Development	<u>0.5</u>

**IV. Major Requirements 24 Credits**

<b>Course No</b>	<b>Title</b>	<b>Credits</b>
BUAD 410	Production Management	3
MKTG 310	Marketing Management	3
MKTG 312	Sales Management <u>or</u>	
MKTG 314	Retail Management	3
MKTG 401	Advertising Management	3
MKTG 404	Consumer Theory and Behavior	3
BUAD 411	Operations Research and Decision Theory	3
BUAD 420	International Business	3
BUAD 304	Small Business Management and Entrepreneurship	3

**TOTAL PROGRAM REQUIREMENTS 120**

**BUSINESS ADMINISTRATION  
(MARKETING EMPHASIS)  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
SOCI	101	Intro to Sociology	3
MATH	109	College Algebra	3
BIOL	101	Theories and Applications of Biological Science	3
BIOL	103	Biological Science Lab	1
BUED	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
PHYS	101	Theories & Aps. of Physical Sci.	3
PSYC	200	Intro. to Psychology	3
BUED	212	Computer Concepts/Applications	3
<b>One course in: Art, Music <u>or</u> Literature</b>			<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	202	Principles of Economics I	3
ACCT	201	Intro to Financial Acct	3
BUAD	252	Calculus w/Busi. and Mgmt.Aps.	3
BUAD	213	Business Software Applications	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ECON	202	Principles of Economics II	3
ACCT	202	Intro. Corp. and Manager. Acct.	3
ENGL	305	Technical Writing	3
HIST	333	African American History <u>or</u>	
HIST	334	African American History II <u>or</u>	
HIST	341	Bristish History <u>or</u>	
HIST	360	African History I <u>or</u>	
HIST	361	African History II	3
<b>Foreign Language I <u>or</u> International Liberal Arts</b>			3
BUED	101/101S	Sophomore Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	302	Mgmt. & Org. Behavior	3
FINA	340	Financial Management	3
BUAD	353	Business Statistics I	3
BUED	333	Business Communications	3
MKTG	308	Principles of Marketing	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MKT	312	Sales Management <u>or</u>	
MKTG	314	Retail Management	3
MKTG	310	Marketing Manage	3
<b>Foreign Lang II <u>or</u> International Liberal Arts</b>			3
BUAD	354	Business Statistics II	3
BUAD	300	Business Ethics	3
BUED	102/102S	Junior Profess. Develop.	<u>0.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	412	Business Law	3
BUAD	420	International Business	3
BUAD	410	Production Management	3
BUAD	304	Entrepreneurship	3
PSYC	305	Education Psychology <u>or</u>	
PSYC	307	Development Psychology	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
Elective		Liberal Arts	3
BUAD	411	Ops. Rsch. & Decision Theory	3
MKTG	401	Advertising Management	3
MKTG	404	Consumer Theory & Behavior	3
BUAD	495	Strategic Management	<u>3</u>
<b>Semester Total</b>			<b>15</b>
<b>Total Credits Required</b>			<b>120</b>

**BUSINESS EDUCATION**  
**Required and Recommended Course Sequence**

**I. GENERAL EDUCATION REQUIREMENTS**

**TOTAL REQUIRED IN GENERAL EDUCATION - 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 Credits**

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech	3
ARTS 101	Exploration of Visual Arts <b>or</b>	
MUSI 101	Introduction to Music <b>or</b>	
MUSI 109	Introduction to Jazz History	
HIST 333	African American History <b>or</b>	
HIST 334	African American History II <b>or</b>	
HIST 341	British History <b>or</b>	
HIST 360	African History I <b>or</b>	
HIST 361	African History II	3
	Foreign Language <b>or</b>	
	<b>Two</b> International Liberal Arts courses	6

**B. Curriculum Area II - (Social and Behavioral Science) 9 Credits**

Course No.	Title	Credits
SOCI 101	Introduction to Sociology	3
PSYC 200	Introduction to Psychology	3
PSYC 305	Developmental Psychology	

**C. Curriculum Area III - (Biological and Physical Sciences) 7 Credits**

Course No.	Title	Credits
BIOL 101	Theories and Applications of Biological Science	3
BIOL 103	Biological Science Lab	1
PHYS 101	Theories & Applications of Physical Science	3

**D. Curriculum Area IV - (Mathematics) 3 Credits**

Course No.	Title	Credits
MATH 109	College Algebra	3

**E. Curriculum Area V - (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3

**F. Curriculum Area VI - (Emerging Issues) 4 Credit**

Course No.	Title	Credits
BUED 100	First Year Experience/Business	1
EDHE 111	Personalized Health Fitness	3

**II. Liberal Arts Requirements 12 Credits**

<b>Courses No.</b>	<b>Title</b>	<b>Credits</b>
ECON 201	Principles of Economics I	3
ECON 202	Principles of Economics II	3
PSYC 305	Developmental Psychology <u>or</u>	
PSYC 307	Educational Psychology	3
Elective	Liberal Arts	3
Elective	Liberal Arts	3

**III. Foundation Knowledge For Business (Required of ALL Business Administration Majors) 24 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 132	Introduction to Business	3
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 302	Management and Organizational Behavior	3
MKTG 308	Principles of Marketing	3
BUED 333	Business Communications	3
FINA 340	Financial Management	3
BUAD 304	Small Business Management and Entrepreneurship	3
BUAD 412	Business Law I	3

**IV. Major Requirements 23 Credits**

<b>Course No</b>	<b>Title</b>	<b>Credits</b>
BUED 111	Data Entry Techniques	2
BUED 112	Business Mathematics	3
BUED 212	Computer Concepts/Applications	3
BUAD 213	Business Software Applications	3
BUED 333	Business Communications	3
BUED 411	Office Technology and Records	3
BUED 412	Office Procedures	3
BUED 414	Office Management	3

**V. Teacher Certification Requirements 39 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200B	Introduction to Contemporary Education	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 410	Teaching Reading in the Content Areas: Part II	3
EDCI 427B	Curriculum and Instruction in Business Education: Secondary	6
EDCI 480B	Teaching Internship: Secondary Program (Middle School)	6
EDCI 490B	Teaching Internship: Secondary Programs (High School)	3
EDCI 400	Senior Seminar	3
EDSP 200	Introduction to Special Education	3

**TOTAL PROGRAM REQUIREMENTS 133**



**MINOR PROGRAMS**

Minors in Business Administration and Accounting provide complements to major programs of study. Greater knowledge and understanding of management processes and the way scarce economic resources are accounted for will enhance the effectiveness of a citizen's interaction in society. The following courses are recommended for students who are pursuing non-business related majors. Prerequisites for the courses must be met.

**BUSINESS ADMINISTRATION****18 Credits****Business Administration**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
FINA 340	Financial Management	3
BUAD 302	Management and Organizational Behavior	3
MKTG 308	Principles of Marketing	3
BUAD 412	Business Law I	3
	Business Electives 300-400	6

**ACCOUNTING****18 Credits****Accounting**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate and Managerial Accounting	3
ACCT 301	Cost and Budgetary Control	3
ACCT 302	Intermediate Accounting I	3
ACCT 303	Intermediate Accounting II	3
ACCT 402	Income Tax Accounting Individual	3

Please note: Each student must satisfy all prerequisites for each course included in the minor program of study. No course will satisfy the requirement for both the minor and the major.

## COURSE DESCRIPTIONS

### ACCOUNTING

**ACCT 201 Introductory Financial Accounting** **3 crs.**

This course is the beginning study of financial accounting principles and concepts. Emphasis is on the conceptual understanding of accounting and its role in society. Practical applications of accounting concepts are demonstrated both manually and electronically. Computer spreadsheet applications are utilized extensively. The focus is on accounting for sole proprietorships. Accounting for corporations and partnerships is introduced. Not open as free or program elective. Prerequisites: Grade of "C" in ENGL 101, ENGL 102, and MATH 109.

**ACCT 202 Introductory Corporate & Managerial Accounting** **3 crs.**

Financial accounting principles and concepts as they relate to partnerships and corporations are covered extensively. Also, managerial and cost accounting topics are explored. Each student is required to complete a computerized practice set as well as solve problems using spreadsheet applications. Prerequisite: ACCT 201.

**ACCT 301 Cost & Budgetary Control** **3 crs.**

Emphasis is on studying basic cost accounting and budgetary techniques. Job order and process cost systems are studied. The three manufacturing cost elements included in the budgetary process are analyzed. Prerequisite: ACCT 202.

**ACCT 302/302H Intermediate Accounting I** **3 crs.**

The course involves an in-depth study of modern financial accounting, concepts, principles, practices, and the conceptual framework on which accounting is developed. The accounting cycle, adjusting entries, corporate transactions and the preparation of financial statements are emphasized. Prerequisites: ACCT 202 and 2.5 GPA average in ACCT 201 and ACCT 202.

**ACCT 303/303H Intermediate Accounting II** **3 crs.**

The course is a continued in-depth study of modern financial accounting as it relates to income determination, asset valuation, and stockholders' equity. International and ethical implications are considered. Prerequisite: ACCT 302.

**ACCT 304 Managerial Accounting** **3 crs.**

The course consists of a study of the usefulness of financial data and financial analysis in the management functions of planning, control, and decision-making. The course surveys the elements of cost, as well as the main aspects of the accounting structure. Prerequisite: ACCT 301.

**ACCT 388 Financial Statement Analysis** **3 crs.**

This course investigates the use of financial statements from the view of main users of these statements. Prospective users include investors, financial analysts, and creditors who have to assess the information content of accounting numbers and the predictive value of accounting data. Balance sheet and Income Statement Information, Cash Flow Statements, profitability analysis, and ratio analysis and interpretation are covered. Prerequisite: ACCT 202, with a grade of "C" or higher.

**ACCT 400/400H Intermediate Accounting III** **3 crs.**

A continued in-depth study of modern financial accounting concepts covering such troublesome topics as pensions, leases, deferred taxes, and foreign currency transactions. Prerequisite: ACCT 303 with "C" grade or above.

**ACCT 401/401H Advanced Financial Accounting** **3 crs.**

A study of specialized problems in partnerships, consignments, installment sales, insurance, consolidation of parent and subsidiary statements, mergers and poolings. Prerequisite: ACCT 303

**ACCT 402/402H Federal Income Tax Accounting Individual** **3 crs.**

An in-depth study of tax provisions and planning for individuals. The basic procedures involved in the determination of income tax liability of individuals, proprietorships, and partnerships are performed. Prerequisite: ACCT 303.

**ACCT 405/405H Government and Non-Profit Accounting** **3 crs.**

Accounting principles and practices for not-for-profit organizations are covered with specific emphasis on state and local government units. The course also focuses on cost and budgetary controls in private not-for-profit organizations, such as hospitals and schools. Prerequisite: ACCT 303.

**ACCT 407/407H Auditing** **3 crs.**

This is a capstone course for accounting majors. Financial auditing principles, concepts and practices including professional ethics, statistical sampling techniques, and audit liability are covered. Work paper preparation and audit reports are an important part of the course. Analyses of computer case studies are required. The course requires a thorough understanding of financial accounting. This capstone course in Accounting is taken during the final semester of study. Prerequisites: Senior Standing, ACCT 400, ACCT 401.

**ACCT 408 Accounting Information Systems 3 crs.**  
The course examines management's need for accounting with the focus on information in organizations on the systems that are developed to supply this information. Emphasis is on accounting information concepts, computer based accounting applications, and systems evaluation and control. Prerequisite: ACCT 303.

**ACCT 410 CPA Problems 3 crs.**  
A study, review, and analysis of the content, form, and scope of the CPA Examination. The purpose of the course is to prepare students to sit for the Certified Public Accountants Examinations.  
Prerequisite: Advanced standing with minimum of 18 credit hours, or permission of instructor.

**ACCT 488 Forensic Accounting 3cr.**  
Forensic accounting deals with the relation and application of the accounting systems used to record and summarize business and financial transaction to a legal problem. This course encompasses both investigative accounting and litigation support, with emphasis on the following topics: protection and recovery of assets; investigating and analyzing financial evidence; developing computerized applications to assist in the analysis and presentation of financial evidence; communicating findings in the form of reports and collections of documents; and assisting in legal proceedings, including testifying in court as an expert witness and preparing visual aids to support trial evidence. Prerequisites: ACCT 388. Financial Statement Analysis.

### **BUSINESS ADMINISTRATION**

**BUAD 132 Introduction to Business 3 crs.**  
A course designed to acquaint students with the way in which business enterprises are owned, organized, managed, and controlled. It provides a broad background in common business practices by surveying the entire field of Business Administration. Not open as Free or Program Elective.

**BUAD 213 Business Software Applications 3 crs.**  
The course is designed to develop advanced computer application competencies. Emphasis is placed on the use of various software packages in accessing and processing large quantities of data for decision making and developing practical methods for using the computer to solve quantitative business/management problems. Coverage will include advanced use of Operating System and Application Software related to spreadsheets, graphics, databases, and statistical analysis (SAS or SPSS), as applied in business and industry. Prerequisite: BUED 212 or an equivalent course.

**BUAD 252 Calculus with Business and Management Applications 3 crs.**  
The course focuses on development and review of mathematical techniques, in Linear Algebra and Calculus for applications in a wide variety of courses in Business and Management. Emphasis is on those techniques which are required for an understanding of Business Statistics,

Operations Research, Decision Theory, and Economic Theory. Prerequisite: MATH 109.

**BUAD 300 Business Ethics 3 crs.**  
The purpose of this course is to assist students in understanding ethical implications in the decision-making process and to assume their role as managers with a sense of a broader purpose and a moral consciousness. Concepts and principles are discussed in light of problem situations with ethical implications, with a focus on the development of critical and analytical thinking. Prerequisite: Sophomore standing.

**BUAD 302/302H Management and Organizational Behavior 3 crs.**

This course is designed to develop a full understanding of the role of business organizations and their effective management. It deals with principles and practices of management and theory and analysis of organizations. Course content includes historical background of management theory and analysis of organizations, principles and processes of management functions, leadership, communication, and morale. Prerequisite(s): Junior standing and ECON 201, ECON 202, ACCT 201 and ACCT 202, PSYC 200, and SOCI 101. Fashion Merchandising majors only: ECON 202 and permission of the respective Department Chairs.

**BUAD 303 Advanced Organizational Behavior 3 crs.**  
This course provides an understanding of managerial behavior in an organizational setting. It explores individual attitudes and behavior in interpersonal and intragroup relationships, with the specific goal of improving awareness, perception, and understanding of one's own and others' points of view and behavior. Prerequisite: BUAD 302.

**BUAD 304 Small Business Management and Entrepreneurship 3 crs.**

Development and Assessment of the viability of small and micro business ventures are the focus of this course. Emphasis is on the business planning process, the management of small enterprises, feasibility studies, formulation of business plans, risk management, and entrepreneurial characteristics. Not open as Free or Program Elective. Prerequisites: BUAD 302 and Junior standing.

**BUAD 306 Human Resource Management 3 crs.**  
This course involves a study of company personnel objectives, programs, policies and procedures relating to manpower planning, recruitment, selection, training and development, compensation, and employee appraisal. Prerequisites: BUAD 302 and Junior standing.

**BUAD 307 Industrial Relations 3 crs.**  
Emphasis is on union-management relations and their effect upon personnel programs and economic and legal analysis of the union/management activities: collective bargaining trade agreements, strikes, boycott and lock-out; arbitration, mediation and conciliation, company unions,



employee representation, and injunctions. Prerequisite: Junior standing.

**BUAD 313 Advanced Business Application Techniques** 3 crs.

The course is designed to develop computer application techniques for skilled users. Emphasis is placed on more advanced commands and techniques of Word Processing, Spreadsheets, Databases, Presentation, and WEB Page design techniques as applied in business and industry. Prerequisite: BUAD 213

**BUAD 353/353H Business Statistics I** 3 crs.

The course deals with descriptive as well as inferential statistics with specific reference to business. Major topic areas covered are measures of central tendency, variation, probability, estimation, and test of hypothesis. Prerequisite: BUAD 252.

**BUAD 354/354H Business Statistics II** 3 crs.

Advanced Inferential statistics are emphasized. The topics covered include time series, regression analysis, chi-square test, and analysis of variance as these relate to solutions to business and economic problems. Prerequisite: BUAD 353.

**BUAD 410/410H Production Management** 3 crs.

Emphasis is placed on production management, planning, and control in service and manufacturing enterprises. Topics include quality management, process selection, demand forecasting, materials planning and control, and capacity planning. Case studies are used to analyze the manufacturing and service environments in terms of operational planning, the use of teams, teamwork, and decision making regarding problems commonly confronting managers and supervisors in national and transnational production organizations. Prerequisites: BUAD 302, BUAD 354, and FINA 340.

**BUAD 411/411H Operations Research and Decision Theory** 3 crs.

The course is designed to acquaint students with the latest Operations Research and Decision Analysis techniques. It includes Linear Programming, Transportation, Queuing, Algorithm simulations and other models. Prerequisite(s): ECON 354 or MATH 112, MATH 210 and MATH 211.

**BUAD 412 Business Law I** 3 crs.

The study of laws governing commercial and business transactions are emphasized. Major areas of consideration are the forces that determine business laws, contracts, commercial paper, and bailments. Prerequisites: BUAD 302 and Junior standing.

**BUAD 414/414H Business Law II** 3 crs.

The course will continue the emphasis on private law partnerships, corporations, risks, and property. It also examines public laws pertaining to government regulations of business competition, markets, and labor relations. Prerequisites: BUAD 412.

**BUAD 420 International Business** 3 crs.

This course is designed to develop an understanding of the various interdisciplinary factors bearing on the operations of businesses in a global economy. Emphasis is on the economic, political and social environment. Prerequisites: BUAD 302 and Senior Standing.

**BUAD 480 Directed Study and Practical Applications in Business and Accounting** 3 crs.

This course is designed to reinforce knowledge in certain specialized areas of study. It is structured to meet the needs of the students taking the course. Enrolled students are assigned to faculty advisors with whom they work out specific plans of study. Students will have the primary responsibility of completing all assignments. Approved internships with written projects are also appropriate. Prerequisite(s): Senior standing and consent of the Head of the Department

**BUAD 488A Business and Economic Indicators** 3 crs.

This course provides a framework to illustrate how important economic indicators interact and how their changes affect business decisions. The identification of major supply side and demand side economic indicators is followed by analysis of their effects at firm, industry sector, and macroeconomic levels. Topics covered include Federal Reserve policy on interest rates, GDP growth rate, unemployment rate, business inventories, consumer confidence, and consumer price index. Prerequisites: ACCT 202, ECON 201 & 202, BUAD 302, MKTG 308.

**BUAD 490 Senior Seminar in Business** 3 crs.

Topics of current interest are announced before registration. The course provides opportunity for individualized, in-depth study with presentation to and criticism by peers. Prerequisite: Senior standing. Will satisfy Business Elective.

**BUAD 491/491H Research Methods in Business** 3 crs.

The planning of research and the collection, analysis, and interpretation of data are important aspects of the course. A completed research project is required. Prerequisite: Senior Standing.

**BUAD 495/495H Strategic Management** 3 crs.

The course is designed to integrate the knowledge and analytical skills acquired in the functional subject areas in Business Administration and related areas. The scope of the subject matter includes responsibilities of top management, together with the organizational processes for formulating and implementing organizational strategy. The course includes the integration of the functional areas of Economics, Accounting, Management, Marketing, Finance, and Law. This course uses case study methods and pedagogical techniques to deal with business problems and to formulate business policies and strategies. Prerequisite(s): Senior standing. To be taken during final semester of study. Capstone course culminating with the completion of a high quality written research project.

## BUSINESS EDUCATION

### **BUED 100 First Year Experience/ Business 1 cr.**

The course is interdisciplinary in nature with emphasis on preparing graduates for productive personal and professional lives. Course content includes the following: orientation to The University; the role and responsibilities of the students; the student as a member of the University team; expectations of the faculty and staff; effective study techniques; time management, conflict management; stress management; test taking skills; and learning style assessment. Determination/perseverance, time on task and help-seeking are emphasized. The faculty facilitator relies heavily on guest lectures for selected topics.

### **BUED 101/101S Sophomore Professional Development/Scholars Sophomore 0.5 crs.**

A continuation of BUED 100 with emphasis on strategic planning for life, including personal and career planning, decision making, values clarification, and occupational testing. Interpersonal skill development, business etiquette, dressing for success, and the need for continued intellectual development are topics that are stressed. Business and professional resource persons present selected topics. Prerequisite: Business major with Sophomore Standing.

### **BUED 102/102S Junior Professional Development/Scholars Junior Professional 0.5 crs.**

A continuation of BUED 101 with emphasis on strategic planning for life including personal career planning, decision making, values clarification, and occupational testing. Interpersonal skill development etiquette, dressing for success and the need for continued intellectual development are stressed. Business and professional resource persons present selected topics. Prerequisite: Business major with Junior Standing.

### **BUED 110 Introduction to the Principles of Business Education 3 crs.**

The course traces historical growth and development of Business Education, its relationship to the total education program, and its fundamental processes, standards, and occupations. Open only to Business Education majors.

### **BUED 111 Data Entry Techniques 3 cr.**

This course is designed to teach the basic keyboarding used for the computer. Simple word processing applications are included, but the primary aim is the ability to manipulate the keyboard using the touch system. Course open only to Business Education majors.

### **BUED 112 Business Mathematics 3 crs.**

The course is designed to provide mathematical concepts and skills needed in business, accounting, and related areas. Value derived therein should be beneficial to consumers as well as to those who are in business. At the start, attention is paid to fundamental principles and operations through the study of problems faced by most individuals in their daily life. The principles and processes learned in the beginning are then applied in subsequent lessons dealing with discount, commission, mark-up, description, interest

computation, payroll, and tax record. Open only to Business Education majors.

### **BUED212 Computer-Concepts/ Applications I 3 crs.**

The course introduces students to electronic information processing. Emphasis is placed on various computer concepts and applications. Contemporary computer software including System Software, and Application Software for word processing, spreadsheets and databases relevant to business and industry are taught. Not Open as Free or Program Elective.

### **BUED 333 Business Communications 3 crs.**

This course prepares students for the future by enhancing writing, speaking, and delivery skills, as well as critical thinking and analytical skills that focus on how to organize reports and presentations, solve problems, and build arguments. Students will utilize technology in demonstrating presentation and organization skills associated with communicating in a business/management environment. Prerequisites: ENGL 102, ENGL 203, and Junior Standing.

### **BUED 411 Office Technology and Records 3 crs.**

The course is designed to provide instruction and skill development in the use of common business technologies and principles of record keeping. Individualized lab used. Prerequisite(s): BUAD 213 and Junior Standing.

### **BUED 412 Office Procedures 3 crs.**

The course is designed to acquaint students with simulated work experience of the modern office. Office management skills are integrated under realistic conditions. Prerequisite: Completion of required lower-level major courses and Senior Standing.

### **BUED 414 Office Management 3 crs.**

A study of the various scientific and management principles applicable to office organization and control, office systems and procedures. Also included are office layout and equipment and personal supervision. Prerequisites: Senior Standing, BUAD 302, BUED 411 and BUED 412.

## FINANCE

### **FINA 340/340H Financial Management 3 crs.**

The course is designed to provide a basic understanding of principles and practices in the area of business finance as an integral part of the business enterprise. It deals with sources and allocation of funds, channels and procedures of financing in the capital market, internal and external financing and inter-firm relations, corporate finance and international capital markets, and public regulations by government and non-government agencies. Prerequisites: ACCT 202, ECON 201, and ECON 202.

**FINA 341/341H Investment and Security Analysis** 3 crs.

The course involves financial analysis of investment alternatives available to individual and institutional investors. Security analysis is employed in the allocation and evaluation of specific investments and in dealing with the problems of changing economic and financial conditions. Prerequisite: FINA 340.

**FINA 440/440H Advanced Financial Management** 3 crs.

The course is designed to develop analytical and decision-making abilities of students in relation to varied problems that normally confront financial management. Problem areas include financial planning and control of current operations and long-term capital commitments, income management, evaluation of income-producing property, and expansion through merger and consolidation. Prerequisite: FINA 340.

**FINA 441 Insurance and Business Risks** 3 crs.

The course deals with the study of risks and the methods of meeting them through the insurance mechanism. Basic principles and types of coverage for social business relations, and principles and types of coverage for social business risks are studied. Special emphasis is placed on business risks, coverage, and problems of risk management. Prerequisite: FINA 340

**FINA 442 Principles of Real Estate** 3 crs.

The course is designed to study the principles, techniques, and legal implications of acquiring and selling real estate. Areas covered include the factors influencing real values of residential, commercial, and industrial properties, and relevant laws, governing contracts, agency, brokerage, listings, agreements, sale deeds, titles, mortgage instruments, liens and encumbrances, landlord and tenant relationship, settlements, appraisal, real estate financing, relicensing laws and ethics. The course satisfies Maryland's education requirements for licensing of Real Estate Salespersons. Prerequisites: FINA 340, Senior standing or permission of instructor.

**MARKETING**

**MKTG 308 Principles of Marketing** 3 crs.

The focus is on introducing the nature and fundamentals of marketing activities in the modern industrial economy. This course deals with the analysis of the socio-economic and psychological factors, influencing consumer behavior, market measurement and forecasting methods, development of marketing programs in the areas of product-line, price, promotion and channels of distribution, procedures for planning and controlling marketing operations and the legal aspects of marketing. Prerequisites: ECON 201, ECON 202, ACCT 202 and Junior standing. (Fashion Merchandising Majors only. ECON 202 and permission of the respective Dept. Chairs.)

**MKTG 310 Marketing Management** 3 crs.

This course emphasizes the managerial aspects of marketing and distribution problems. The course specifically deals with the factors affecting consumer demand, methods of satisfying it, the structure of the market, marketing methods, and the problems of various agencies, competitive practices, and management of the selling activities of a business, including distribution policies, pricing, and organizing and planning of market operations. Prerequisite: MKTG 308.

**MKTG 312 Sales Management** 3 crs.

The course involves a study of the techniques and policies in the administration of the sales organization with respect to the market strategies. Managerial functions, such as selecting, training, compensating, and supervising field sales personnel, are also dealt with. The course also includes planning, implementing, and coordinating the sales program with the total marketing effort of the firm. Prerequisite: MKTG 308.

**MKTG 314 Retail Management** 3 crs.

The course involves a study of retailing as a marketing institution from the standpoint of management. Topics covered include the store location, layout and facilities, policy formulation in the areas of buying, merchandising, pricing, inventory planning and controlling, sales promotion, customer service, and general management problems. Prerequisite: MKTG 308.

**MKTG 315 E-Commerce** 3 crs.

This course is designed to familiarize students with the emergence and importance of electronic commerce. The course examines the exchange of business information, products, services and payments over the Internet and World Wide Web. Students will understand the field of electronic commerce and its basic vocabulary, as well as learn the skills to develop electronic commerce applications (on the web). Prerequisite: MKTG 308.

**MKTG 401 Advertising Management** 3 crs.

Emphasis is on an analysis of advertising problems from the points of view of the general administrator and marketing manager. The major topics covered are determining the role of advertising in an organization's total set of strategies, coordinating and integrating advertising with the total marketing effort, developing of appropriate copy, media selection, client-agency relationships, and available techniques to measure the effectiveness of advertising expenditures. Prerequisite: MKTG 308

**MKTG 404 Consumer Behavior and Theory** 3 crs.

This course examines motivation, cognition, and learning of preferences and tastes from the interdisciplinary perspective of the social sciences. Dynamics of consumer demand and behavior are emphasized. Prerequisite: MKTG 308.

**MKTG 406 Purchasing Management**                      **3 crs.**  
The course involves a study of the problems in industrial, institutional, and government purchasing, such as the purchasing of raw material, supplies, and equipment. Procedures for procurement, value analysis, quality control, and inventory control are covered. Factors in determining suitability of product, preparation of specifications, and legal aspects are also dealt with. Prerequisite(s): Junior standing, and MKTG 308.



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M.S., Meerut University  
M.S., University of North Carolina  
Ph.D., Chaudhary Charan Singh University

## DEPARTMENT OF ENGINEERING AND AVIATION SCIENCES

### Dean:

Eddie Boyd, Ph.D.

### Professor and Chair:

Ibibia K. Dabipi, Ph.D.

### Professor

Ali Eydgahi, Ph.D.

### Associate Professors

Abhijit Nagchaudhuri, Ph.D.

### Lecturers

Robert W. Conry, M.S.,

### Lecturer and Director, Aviation Sciences

Ronald B. Levy, M.Av.Mgt.,

### Coordinator

Anthony J. Stockus, MBA

Coordinator of Engineering Programs

- To expose students to social, historical, and ethical issues involving Engineering and Aviation Sciences.
- To promote interaction between the University and the community through faculty and students in the department.
- To promote faculty development to accomplish the objectives of the department.

## DESCRIPTION OF PROGRAM

The Department offers a four-year baccalaureate degree program in Electrical Engineering. It also offers 2+2 engineering programs in several engineering fields such as mechanical, civil, nuclear, chemical, etc. In the 2+2 program, students receive instruction for the first two years of the program and then apply to the Clark School of Engineering, University of Maryland, College Park (UMCP), MD, for transfer to complete the last two years of study in the field of their choice.

Students in the Electrical Engineering (EE) program complete all four years of study at UMES. The EE program at the University of Maryland Eastern Shore is under a collaborative arrangement with the Clark School of Engineering at UMCP. Under this program, all the lower division courses, junior and senior level laboratories, and some of the senior level electives and design courses are taught live at UMES by its faculty. Selected EE junior/senior lecture courses are taught by the UMCP Engineering faculty via Interactive Video Network (IVN) using state-of-the-art distance education technology. Upon completion of the first forty-five credits of the electrical engineering curriculum, students apply to the Clark School of Engineering for formal admission. However, the transfer is automatic provided the scholastic performance requirements are met. When the Clark School of Engineering accepts a student, he or she becomes a UMCP student for the purpose of tuition, fees, financial aid or scholarships, and Co-op arrangements. However, he or she continues to complete the degree requirements on the UMES campus. Upon completion of degree requirements, the student receives the B.S. degree in EE from the Accreditation Board for Engineering and Technology (ABET) accredited Clark School of Engineering, UMCP.

The Engineering Program is founded on the basic sciences and emphasizes the development of a high degree of technical competence. It integrates these elements: (1) basic sciences, including mathematics, physics, and chemistry; (2) engineering sciences including mechanics of solids and fluids, engineering materials, thermodynamics, electrical and electronic circuits, and transport phenomena; (3) engineering design, which applies the above elements into the creation of systems, components and processes while optimizing resources; and (4) humanities and social sciences as part of the general education requirements. The program lays a broad base for continued learning after

## MISSION

The mission of the Department of Engineering and Aviation Sciences is to prepare students for employment in their chosen field as well as preparing them for advanced studies. The Department of Engineering and Aviation Sciences offers a B.S. degree program for students majoring in Aviation Sciences with concentrations in Aviation Electronics, Aviation Management, Professional Pilot, and Software Engineering. The department also offers a collaborative B.S. Electrical Engineering degree program with the University of Maryland College Park along with an articulated two-year program that prepares students to smoothly and seamlessly transfer at the upper division level in other engineering fields.

## GOALS

The programs in the Department of Engineering and Aviation Sciences aim to produce graduates capable of excelling in industry and in graduate school. The faculty of this department pursues a "customer focused" approach to higher education where the needs, interests, and career goals of the individual student are our primary concern.

## OBJECTIVES

The objectives of the programs offered in the Department of Engineering and Aviation Sciences are as follows:

- To provide students with academic curricula to develop a strong background in Engineering and Aviation Science concentration areas.
- To prepare students to be life long learners.

college in professional practice, in business and industry, in public service, or in graduate study and research.

### GENERAL EDUCATION REQUIREMENTS

General educational requirements vary widely among different colleges of engineering. Students transferring to Maryland public colleges of engineering will be able to transfer UMES General Education Requirements but must also meet minimum general education requirements established by the Accreditation Board for Engineering and Technology. All students should seek individual advisement concerning general education requirements for the Engineering Program.

### ADMISSION REQUIREMENTS

In order to maintain high quality, the Engineering Program limits enrollment through a selective admission procedure. SAT scores, high school or college grades, and preparation in mathematics and science required for admission to the Engineering Program are substantially higher than those required for admission to UMES. Students qualified to start with Calculus I in their freshman year at UMES will be considered as regular admits. However, other students admissible to UMES will be admitted to the Engineering Program with conditional status

#### Conditional Admission

UMES Freshman or transfer applicants who do not meet the direct admission requirements as engineering majors can be admitted as “conditional” engineering majors. They will undergo a review upon completion of prerequisites for Calculus I to ascertain their eligibility to become regular admits. Those who are not eligible will be advised whether they will be permitted to remain in the department.

Moreover, all regular-admits are expected to maintain an acceptable level of performance. Students must maintain a GPA of 2.2 or higher and earn a grade of C or better in all math, science and engineering courses with no more than two attempts. Engineering students should meet their academic advisor on a regular basis. Students performing **below the expected level** should seek advice to transfer to other suitable majors where they may be more successful.

### GENERAL HONORS PROGRAM

For students meeting the requirements for admission to the General Honors Program, a minimum of one Honor’s engineering course will be offered at the 200 level each semester. These courses have more rigorous requirements than the standard versions of these courses and are designed to increase the depth of knowledge of participants. In addition to honors engineering and chemistry courses, honors engineering students normally complete honors versions of most of their General Education Requirements. Students transferring to UMCP may enter the appropriate Engineering Honors Program if they meet the admissions criteria.



**ENGINEERING PROGRAM**  
**Required and Recommended Course Sequence**  
**For First two-years at UMES and last two-years at UMCP College of Engineering**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 42 credits**

Students should consult with their freshman or departmental advisor when making course selections

**A. Curriculum Area I – (Arts and Humanities) 6 credits**

Students must select one course from each Discipline (ARTS - HA 1):

**ARTS:** ARTS 101, ENGL 410 (GE Requirement for College Park)

MUSI 100, MUSI 101, MUSI 310H

**LITERATURE:** ENGL 325, ENGL 326 (GE Requirements for College Park)

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 credits**

Students must select one course from each Discipline

**SOCIAL SCIENCES:** ECON 201, ECON 202, POLI 200, SOCI 101

(ECON 201 required in Biological Resources Engr.)

**BEHAVIORAL SCIENCES:** CRJS 101, PSYC 200, SOCI 201

**C. Curriculum Area III - (Biological and Physical Sciences) 8 credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1

**D. Curriculum Area IV – (Mathematics) 4 credits**

Course No.	Title	Credits
MATH 112	Calculus I	4

**E. Curriculum Area V – (English Composition) 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II (FE)	3
ENGL 305	Technical Writing (FE)	3

**F. Curriculum Area VI – (Emerging Issues) 9 credits**

\*Student must choose one course from each Area:

History (SH): HIST 101, HIST 102, HIST 111H, HIST 112H,  
HIST 201, HIST 202 3

Advanced Studies (D, Advanced Studies, Depth<sup>2</sup>) - ENGL 403, HIST 334,  
HIST 360, HIST 361, SOCI 430 3

Second Advanced Studies Course Capstone Course or Non-Departmental  
Technical Elective (taken as part of UMCP Engineering Curriculum) 3

**\*UMES Emerging Issues Courses are Non-Transferable to UMCP.**

<sup>1</sup> UMCP CORE Requirements listed in parenthesis

<sup>2</sup> A lower-level general education course must be taken with the same prefix as the chosen course to satisfy depth requirement.



**Codes used as General Education Requirements for Engineering:**

HL	-	Literature
SB	-	Behavioral and Social Science
PL	-	Physical Science Lab
MS	-	Mathematics and Formal Reasoning Non-Lab
FE	-	Fundamental English
HO	-	Humanities

**II. Engineering Core Courses** **18 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENES 100	Introduction to Engineering Design	3
MATH 211	Calculus II	4
MATH 321	Differential Equations	4
PHYS 161	General Physics I: Mechanics and Particle Dynamics	3
PHYS 163	General Physics I Lab	1
PHYS 262	General Physics II: Waves, Heat and Electricity	3
PHYS 263	General Physics II Lab	1

(PHYS 181H/PHYS183 and 182H/PHYS184 may be substituted for PHYS 161 and 262. This is highly recommended in Computer and Environmental Engineering and required in Biological Resources Engineering.)

**III. Engineering Field Requirements Available at UMES** **21-40 credits****Aerospace Engineering** **30 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENAE 281	Fundamentals of Aeronautical Systems	3
ENAE 282	Fundamentals of Astronautical Systems	3
ENEE 114	Programming Concepts for Engineers	4
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
ENES 221	Dynamics	3
ENME 232	Thermodynamics	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Biological Resources Engineering** **39 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Lab	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Lab	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
BIOL 326	Cell Biology	3
BIOL 327	Cell Biology Lab	1
CHEM 102	General Chemistry II	3
CHEM 104	General Chemistry Lab II	1
ENEE 114	Programming Concepts for Engineers	4
ENEE 204	Basic Circuit Theory	3
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
ENES 220	Mechanics of Materials	3
ENME 232	Thermodynamics	3
MATH 212	Calculus III	4

**Chemical Engineering****34 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Lab	1
CHEM 212	Fundamentals of Organic Chemistry II	3
CHEM 214	Fundamentals of Organic chemistry II Lab	1
CHEM 401	Principles of Physical Chemistry I	4
CHEM 402	Principles of Physical Chemistry II	4
ENEE 114	Programming Concepts for Engineers	4
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Civil Engineering****27 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENEE 114	Programming Concepts for Engineers	4
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
ENES 220	Mechanics of Materials	3
ENES 221	Dynamics	3
ENME 232	Thermodynamics	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Computer Engineering****18 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CSDP 321	Introduction to Discrete Structures	3
ENEE 114	Programming Concepts for Engineers	4
ENEE 204	Basic Circuit Theory	3
ENEE 206	Fundamental Electric & Digital Circuit Lab	2
ENEE 241	Numerical Techniques in Engineering	3
ENEE 244	Digital Logic Design	3

**Electrical Engineering****23 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENEE 114	Programming Concepts for Engineers	4
ENEE 204	Basic Circuit Theory	3
ENEE 206	Fundamental Electric and Digital Lab	2
ENEE 241	Numerical Techniques in Engineering	3
ENEE 244	Digital Logic Design	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Environmental Engineering****26 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BIOL 301	Microbiology	3
BIOL 303	Microbiology Lab	1
CHEM 102	General Chemistry II	3
CHEM 104	General Chemistry II Lab <b>or</b>	1
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Lab	1
CHEM 401	Principles of Physical Chemistry I	4
ENEE 114	Programming Concepts for Engineers	4
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
MATH 212	Calculus III	4

**Fire Protection Engineering****27 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENEE 114	Programming Concepts for Engineers	4
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
ENES 220	Mechanics of Materials	3
ENES 221	Dynamics	3
ENME 232	Thermodynamics	3
MATH 212	Calculus III, <b>or</b>	
MATH 412	Linear Algebra	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Materials Science and Engineering****18 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CHEM 211	Fundamentals of Organic Chemistry I	3
CHEM 213	Fundamentals of Organic Chemistry I Lab	1
CHEM 401	Principles of Physical Chemistry I	4
ENEE 204	Basic Circuit Theory	3
ENES 102	Statics	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

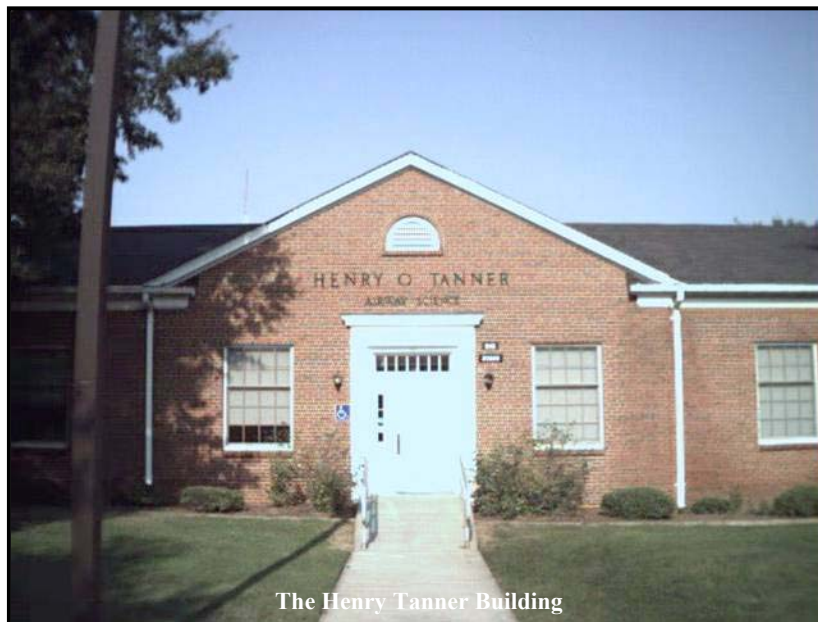
**Mechanical Engineering****23 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENES 102	Statics	3
ENES 220	Mechanics of Materials	3
ENES 221	Dynamics	3
ENME 232	Thermodynamics	3
ENME 271	Introduction to MATLAB	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**Nuclear Engineering****27 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ENEE 114	Programming Concepts for Engineers	4
ENEE 204	Basic Circuit Theory	3
ENEE 241	Numerical Techniques in Engineering	3
ENES 102	Statics	3
ENES 221	Dynamics	3
ENME 232	Thermodynamics	3
MATH 212	Calculus III	4
PHYS 263	General Physics III: Magnetism, Electrodynamics, Optics and Modern Physics	3
PHYS 265	General Physics III Lab	1

**IV. Engineering Field Requirements taken in a College of Engineering**  
 These courses are taken at receiving institution offering the engineering degree

**46-57 Credits****TOTAL PROGRAM REQUIREMENTS****125-131**

**ELECTRICAL ENGINEERING**  
**Recommended Course Sequence**  
**(All courses at UMES or SU but**  
**After 60 credits under**  
**UMCP's College of Engineering)**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	111	General Chemistry I	3
CHEM	113	General Chemistry I Lab	1
ENGL	101	Basic Composition I	3
ENES	100	Intro. Engr. Design	3
MATH	112	Calculus I	<u>4</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	112	General Chemistry II	3
CHEM	113	General Chemistry II Lab	1
ENEE	114	Programming Concepts	4
ENGL	102	Basic Composition II	3
MATH	211	Calculus II	4
PHYS	161	General Physics I	3
PHYS	163	General Physics I Lab	<u>1</u>
<b>Semester Total</b>			<b>19</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA	3
ENEE	241	Numerical Techniques in Engrn.	3
ENEE	244 <sup>1</sup>	Digital Logic Design	3
MATH	212	Calculus III	4
PHYS	262	General Physics II	3
PHYS	264	General Physics II Lab	<u>1</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA	3
ENEE	204	Basic Circuit Theory	3
ENEE	206	Fund. Elec. & Digit. Circuits Lab	2
MATH	321	Differential Equations	4
PHYS	263	General Physics III	3
PHYS	265	General Physics III Lab	<u>1</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA	3
ENEE	302	Analog Electronic Circuits	3
ENEE	322	Signal & System Theory	3
ENEE	380	Electromagnetic Theory	3
MATH		Advanced MATH Elective	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		GER CURR. AREA	3
ENEE	306	Elect. Cir. Design Lab	2
ENEE	312	Digital Electronics	3
ENEE	324	Engineering Probability	3
ENEE	350	Computer Organization	3
ENEE	381	EM Wave Propagation	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
		Advanced Lab Elective	2
		GER CURR. AREA	6
ENEE	4XX		3
ENEE	4XX		3
		Non-EE Tech Elective <sup>3</sup>	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		Advanced Lab Elective	2
		GER CURR. AREA	3
ENEE	4XX		3
		Non-EE Tech Elective	3
		Non-EE Tech Elective	<u>3</u>
<b>Semester Total</b>			<b>14</b>

Notes:

<sup>1</sup>SU {PHYS 311 + PHYS 322} = UMES { ENEE 244 + ENEE 204 + ENEE 206}

<sup>2</sup>SU PHYS 315 = UMES' ENEE 380

<sup>3</sup>PHYS 314, 316, and 318 among others.

<sup>4</sup>UMES' MATH 411, 412, and 442

**ENGINEERING PROGRAM  
Recommended Course Sequence**

**FRESHMAN AND SOPHOMORE YEARS  
AT UMES**

Students who are not prepared to take MATH 112 are advised to take MATH 110 or 111H as a preparatory course. This can usually be done during the summer prior to entering the program. Chemical Engineering, Environmental Engineering, Materials Science and Engineering, and Nuclear Engineering students should take one or two summer courses at UMCP before or after their sophomore year.

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
ENES	100	Intro. to Engineering Design	3
ENGL	101	Basic Composition I	3
GNST	100	First Year Experience	1
MATH	112	Calculus I	4
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chem. II Lab	1
ENEE	114	Program. Concepts for Engineers <sup>1</sup>	4
ENES	102	Statics <sup>2</sup>	3
MATH	211	Calculus II	4
PHYS	161	General Physics I <sup>3</sup>	3
PHYS	163	General Physics I Lab	1
<b>Semester Total</b>			<b>18</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENEE	241	Numerical Tech. in Engineer. <sup>4</sup>	3
ENES	221	Dynamics <sup>6</sup>	3
MATH	321	Differential Equations	4
PHYS	262	General Physics II <sup>7</sup>	3
PHYS	264	General Physics II Lab	1
GER <sup>8,9</sup> CURR. AREA			3
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENEE	204	Basic Circuit Theory <sup>10</sup>	3
ENME	232	Thermodynamics <sup>11</sup>	3
MATH	212	Calculus III <sup>12</sup>	4
PHYS	263	General Physics III <sup>13</sup>	3
PHYS	265	General Physics III Lab	1
GER <sup>9,14</sup> CURR. AREA			3
<b>Semester Total</b>			<b>17</b>

<sup>1</sup>Replace with a General Education Requirement in Materials Science and Engineering and Mechanical Engineering.

<sup>2</sup>Replace with a General Education Requirement in Computer Engineering and Electrical Engineering.

<sup>3</sup>Replace with a General Education Requirement in Biological Resources Engineering.

<sup>4</sup>Replace with CHEM 211 in Materials Science and Engineering and a Mechanics of Materials (ENES 220) in Mechanical Engineering.

<sup>5</sup>Delete in Chemical Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, and Materials Science and Engineering.

<sup>6</sup>Replace with BIOL 111 or 112 in Biological Resources Engineering; CHEM 211 in Chemical Engineering and Environmental Engineering; a second General Education Requirement in Materials Science and Engineering; and ENEE 244 in Computer Engineering and Electrical Engineering.

<sup>7</sup>Replace with PHYS 181H in Biological Resources Engineering.

<sup>8</sup>Replace with ENAE 281 in Aerospace Engineering; ENES 220 in Biological Resources, Civil, and Fire Protection Engineering; and CSDP 250 in Computer Engineering.

<sup>9</sup>Consult an Engineering Adviser concerning the General Education Requirements.

<sup>10</sup>Replace with ENAE 282 in Aerospace Engineering; CHEM 212 in Chemical Engineering; ENME 271 in Mechanical Engineering; and BIOL 301 in Environmental Engineering.

<sup>11</sup>Replace with a second General Education Requirement in Chemical Engineering, Environmental Engineering, and Material Science and Engineering and ENEE 206 in Computer Engineering and Electrical Engineering.

<sup>12</sup> May be replaced with MATH 412 in Fire Protection Engineering. Replace with CSDP 321 in Computer Engineering.

<sup>13</sup>Replace with PHYS 182H in Biological Resources Engineering and an additional General Education Requirement in Computer Engineering and Environmental Engineering.

<sup>14</sup> Replace with CHEM 102 and CHEM 104 in Biological Resources Engineering.

## AVIATION SCIENCES PROGRAM

The mission of the Aviation Sciences program at the University of Maryland Eastern Shore (UMES) is to educate future professional technical specialists, managers, and professional pilots for the field of aviation, both in the private and public sectors. The graduates will help strengthen the profession and the industry. Career opportunities include Professional Pilots, Air Traffic Controllers, Airport Managers, Airline Managers, General Aviation Operation Managers, and Navigation/Communication/Flight Control System Designers and Programmers.

### GOALS

To provide the State of Maryland and the region with an Aviation Science Program that will develop professionally qualified pilots and technical and management graduates to fulfill the critical aviation needs of government and industry.

To offer students an Aviation Science major leading to a B.S. Degree that will provide a sound foundation in liberal education and the skills required to function efficiently in the field of aviation.

To strengthen the UMES curriculum with a full four-year professional program that is in demand and is unique to UMES and the State of Maryland.

To encourage, through recruitment, outreach, and intervention programs, minorities and women to pursue careers in the aviation sciences.

To provide opportunities for scholarship, work-study arrangements, summer employment for its students, and ultimately, jobs in the work place.

### DESCRIPTION OF PROGRAM

The Federal Aviation Administration (FAA), the airlines, and the aviation industry foresee the need for many highly qualified employees with professional aviation educational backgrounds to enter government service and industry at a consistent pace in the coming years. The curriculum has been designed under the guidance of the FAA and the standards of the Council of Aviation Accreditation (CAA). The program is FAA and UAA recognized and also satisfies university academic and Middle States accreditation agency requirements.

### ACADEMIC REQUIREMENTS

The Aviation Science Curricula consist of the following areas of study:

- General Educational Requirements
- Aviation Core Courses
- Supportive Courses
- Technical and Free Elective Courses

Each program consists of approximately 120-122 credit hours, and details of each program are listed under Degree Requirements and Recommended Course Sequences.

### AREAS OF CONCENTRATION

Students select one area of concentration from the following:

- **Professional Pilot:** Academic and flight training in all areas of flight operations including safety, human factors, aerodynamics, aircraft systems, and aviation law, as well as completion of Commercial Pilot (Airplane Single/Multi-Engine Land, Instrument-Airplane) and Flight Instructor (Airplane Single Engine, Instrument-Airplane) designed to prepare the student for a career as a professional pilot in airlines, corporations, the military, or government.
- **Aviation Management:** A joint program between the Aviation Sciences and Business, Management, and Accounting Departments including a mix of aviation and business, economics, finance, accounting, and marketing courses designed to prepare students for managerial positions with airports, airlines, flight operations, and the FAA.
- **Aviation Electronics:** A joint program between the Aviation Sciences and Technology departments, including a mix of aviation and electronics courses designed to prepare students for hardware design in the aviation industry.
- **Aviation Software Engineering:** A joint program with the Mathematics and Computer Science department, which includes a mix of aviation and computer science courses designed to prepare the student to develop software for the aviation industry ranging from applications, such as flight planning or crew scheduling systems, to object-oriented programming, such as flight control or on-board navigation systems.
- **Aviation Maintenance Management:** Academic training to prepare the holder of either an Associate degree in Aviation Maintenance Technology or an FAA Airframe and Powerplant mechanic certificate for a management position in the aircraft maintenance industry or an independent maintenance shop. Students take upper level aviation management and basic and upper level business administration and management courses.

Total Credit Hour Requirements for a B.S. Degree in Aviation Science depends on the selected Area of Concentration and varies from 120 to 122 credit hours.

## GENERAL EDUCATION REQUIREMENTS

The General Educational Requirements (GER) described elsewhere in this catalog are built into the Aviation Sciences Degree Requirements and Recommended Course Sequences. In certain instances, the Aviation Sciences Program requires its students to take one specific course out of a number of options listed in that GER Area. Generally, this is to ensure that students do not have to take extra courses to meet prerequisites for required core or supporting courses in their concentration.

## ADMISSION REQUIREMENTS

At this time, the Aviation Sciences Program does not have any specific admissions requirements above those for general admission to UMES, although this is subject to change starting with admissions for the Fall 2003 semester. However, the course sequence and prerequisites for this degree require that the student place into MATH 109 College Algebra or higher (MATH 112 Calculus I for Aviation Electronics) in order to complete the program in eight semesters. Students admitted to the University who do not place appropriately in mathematics will be permitted to enroll in the Aviation Sciences Program. These students will require additional preparatory courses at UMES prior to starting the aviation core program, and this may extend their program by one or more semesters. Successful completion of either the Bridge, or PACE programs during the summer prior to their Freshman year, or Winter/Summer courses prior to starting their Sophomore year, may help those students complete the program in only eight regular semesters.

## FLIGHT TRAINING

The flight training course syllabus (certified by the Federal Aviation Administration under Part 141 of the Federal Air Regulations) is designed to prepare students for their FAA pilot and flight instructor certificates in the most effective and efficient manner possible. UMES' ground instruction is thorough and provides a broad base for good pilot decision-making. Flight training is currently provided by FAA Part 141-approved flight schools operating under contract to UMES at airports near the UMES Aviation Sciences Program. Sites used by UMES at the Princess Anne campus and the Catonsville extension site which supports the 2+2 program with the CCBC-Catonsville and Frederick Community College. Training is monitored by appropriately-rated UMES aviation faculty, who also conduct periodic stage checks in flight as part of the students' flight training courses.

Training aids used in the program provide a complete selection of visual aids, computer access, and the latest software support for pilots, such as PC-based flight simulation programs and FAA knowledge ("written") test.

To qualify for flight training, a student must be enrolled in a degree program at UMES or other member school of the University System of Maryland and pass an appropriate FAA Aviation Medical Examination prior to first solo, which is expected in the student's first semester of flight training. An Aviation Medical Examination is a physical exam given by an FAA-approved physician known as an Aviation Medical Examiner (AME).

It is important that students embarking on a career as a Professional Pilot know before they proceed whether they have a medical condition which would prevent employment as a pilot. Therefore, students intending to enroll in the Professional Pilot concentration should obtain an FAA Second Class medical (the level required to act as a pilot for compensation or hire) and Student Pilot certificate before arriving on campus. Students not in the Professional Pilot concentration may obtain a Third Class medical (the level required to fly as a pilot but not for compensation or hire) with their Student Pilot Certificate. AME's are listed at <http://ame.cami.jccbi.gov/>; for further assistance, contact the UMES Aviation Sciences program office. AME's are available in the UMES area to provide examinations to those who do not have one when they arrive. Fees for this examination are approximately \$60-75, and for students under age 40 with no abnormal conditions, the examination is good for three years of training.

Students who arrive with FAA pilot and/or flight instructor certificates will be granted academic credit for completion of the courses for the certificates and ratings held upon satisfactory demonstration of proficiency to the University's standards. Further flight training information is listed under the Flight Practicum Fee policy.

## 2 + 2 PROGRAMS

UMES maintains collaborative 2+2 programs with the Community College of Baltimore County – Catonsville Campus (CCBC) and Frederick Community College (FCC) to provide their aviation students the opportunity to complete a bachelor's degree in Aviation Sciences by combining upper level courses taken through UMES with their lower level courses taken at the community college. In all cases, students desiring to earn a UMES B.S.A.S. degree must complete all UMES degree requirements. UMES courses may be taken at Catonsville or Princess Anne.

Students may enter the 2+2 program upon completion of their A.A.S. degree at CCBC or FCC, or may elect to enroll concurrently in both programs, taking UMES courses and community college courses simultaneously. In some cases, credit towards the community college degree may be training device resides on campus for instrument and procedures instruction at all levels from basic flight to advanced multi-engine operations granted for UMES courses; for details, the student's community college must be consulted. Attainment of an associate degree is not required for award of a UMES B.S.A.S. degree if all UMES degree requirements are met.



Transfer credit toward a UMES degree for courses taken at the community college is granted in accordance with the MHEC regulations appended to this catalog. The important points to note are that a maximum of only 60 credit hours of work completed at the community college may be transferred, and only courses in which a “C” or higher was earned will be granted credit. Transfer credit for courses not listed in this section will be granted in accordance with the Maryland State Board for Higher Education Articulation Agreement. Details of that process are available elsewhere in this catalog.

At this time, only the Professional Pilot, Aviation Management, and Aviation Maintenance Management concentrations are offered at Catonsville. UMES will offer all necessary upper level aviation courses to achieve this degree in these concentrations at Catonsville, but elective courses not required for any of the three offered concentrations may not be offered at Catonsville. For students in the 2+2 program, upper level non-aviation courses and lower-level non-aviation courses in excess of the 60 hour community college transfer allowance will be taken via interinstitutional enrollment at UMBC or other USM institutions. Courses taken via interinstitutional enrollment will be credited as taken at UMES for the purposes of the “last 30 hours” requirement described elsewhere in this catalog.

CCBC/FCC students who wish to enroll in the UMES 2+2 program must apply for admission to UMES as transfer students using the procedures specified elsewhere in this catalog. Students accepted in the program will be assigned a UMES advisor for planning their degree completion. This assignment does not relieve the student of the requirement to continue obtaining advisement from the student’s CCBC/FCC advisor until the student has completed studies at CCBC/FCC.

To aid the student in course selection, 2+2 coordination outlines are included in this catalog. These do not relieve the student of the obligation to complete all UMES degree requirements as specified in this catalog in order to receive a B.S.A.S. degree from UMES, nor do they guarantee that they will ensure completion of all degree requirements for an A.A.S. from CCBC/FCC. Coordination with assigned advisors at both the community college and UMES is mandatory.

In all cases, students must complete the admission, enrollment, registration, billing, and payment procedures of the school through which each course is taken. Payment for CCBC/FCC courses will be billed by and paid to CCBC/FCC, and payment for courses registered for through UMES will be billed by and paid to UMES. This includes all applicable student fees and charges as described in each school’s catalog.

### **FLIGHT PRACTICUM FEE POLICY**

Because the per-student cost of flight training is so much greater than the costs of other University of Maryland Eastern Shore (UMES) educational activities, this cost is

not included in the basic UMES tuition. It is charged to the student in the form of a Flight Practicum Fee. This helps make flight training more affordable, since practicum fees charged to the student’s university account are qualified educational expenses for the purposes of financial aid including student loans, grants, and scholarships.

#### Fees Associated With The Policy

Each semester, the student will complete a Flight Practicum Fee agreement setting the amount of the fee for that semester. That amount will be added to the student’s UMES account bill, and deposited in the student’s Flight Practicum Fee account. The amount of the fee is based on the amount and type of flying done in each flight course, and costs in effect for the academic year. These fees are subject to change based on annual review of flight training costs. The average fee during the 2003-2004 academic year is expected to be \$3500 per semester. This provides \$27,000 over the eight flight training courses.

These fees are estimated based on the minimum flight hours under Federal Aviation Regulations (FAR) Part 141 required to get the FAA certificate and ratings necessary to graduate in the professional pilot concentration, along with a small surplus based on our experience to cover any additional flight training needed to achieve required proficiency. Also, UMES has contracts with several flight schools to provide flight training in different locations. These schools operate different aircraft and have different costs depending on location and other factors. The exact amount to be deposited each semester will depend on the course in which the student is enrolled and which flight school is providing the training. The student’s advisor will assist the student in determining how much should be deposited each semester.

Funds are deducted from the fee account balance based on the student’s actual flight training time. Any unused balance for flight instruction carries over to the next semester and/or flight course. In addition, some students may not reach the required flight proficiency within the planned number of flight hours. Those students must add to their Flight Practicum account in order to cover the costs of the additional flight training when the need for such additional training arises. Students may add to their Flight Practicum Fee account at any time and may add any amount approved by the Aviation Sciences Program Director on a case-by-case basis. However, no reduction or credit of the fee is permitted, except as described in the Refund Policy.

#### Simulator Use Fees

Under Part 141 of the Federal Air Regulations (FAR), the FAA allows up to 5.25 hours of the required minimum 35 hours for Private Pilot Certificate, 14 hours of the required minimum 35 hours for the Instrument Rating, and 11 hours of the required minimum 120 for the Commercial Pilot certificate to be conducted in the University’s Frasca 142 flight simulator. Additional solo practice in the simulator is also very useful. As with other laboratory facilities at UMES, it is necessary to charge for the use of the flight simulator to cover the costs of operation and maintenance.

Students in the Private Pilot, Instrument Rating, and Commercial Pilot courses will be charged \$325.00 per course against their Flight Practicum account for unlimited use of the simulator. As there is no requirement for simulator use in the Multiengine Pilot (AVSC 472) or Flight Instructor-Airplane (AVSC 352) courses, those students are not charged the Simulator Use Fee but may elect to pay it and have unlimited use of the simulator for the semester, or pay for simulator use at a rate of \$45.00/hour charged against their Flight Practicum account. The election of paying the unlimited use fee must be made prior to the end of registration for that semester, or all use that semester will be on a per-hour basis.

#### Procedure

The Aviation Sciences Program Director identifies the students to be charged the Flight Practicum Fee and Simulator Use Fee.

Each flight student consults with his/her advisor to determine the amount to be deposited that semester.

The student is given a Flight Practicum Fee Agreement to sign and return to the Aviation Sciences program office. Students not required to pay the Simulator Use Fee may elect on that agreement to pay it and have unlimited use of the simulator during that semester.

The student is responsible for signing each flight invoice from the contracted flight training organization, attesting to the accuracy of the invoice.

The student will keep a copy of the invoice.

The contractor will submit invoices to the Aviation Sciences Program office for payment.

The Aviation Sciences Program office initiates action for the bill to be paid to the contracted flight training organization, based on invoices received.

The student's Flight Practicum account is debited for the amount paid.

If there is a question as to the accuracy of the invoice submitted by the contractor, the student must produce the student's copy of the invoice in order to contest it.

#### Refund Policy

The refund policy recognizes the fact that the Flight Practicum Fee is a fee-for-service, and there is no expense to the university for charges not made to the student's Flight Practicum Fee account by the contractor flight schools. Therefore, any unused portion of the Flight Practicum Fee will be credited to the student's university account upon the student's departure from the flight training program, including completion of the program, graduation, permanent withdrawal from flight training, or withdrawal from the university. Withdrawal from an individual flight course will not result in credit of unused fees unless the student withdraws from the flight training program. Otherwise, the unused balance will be held on

account for future flight training. The Simulator Use Fee follows the university's policy for any other fee. Aviation Sciences students who drop out of UMES before the end of the semester follow UMES policy for withdrawal and refund of fees as outlined in the catalog. The current policy is:

Two weeks or less: 80% refund,  
Between two to three weeks: 60% refund,  
Between three and four weeks: 40% refund, and  
After four weeks no refund.  
Refunds will be credited to the student's university account.

In no case will any Flight Practicum Fee or Simulator Use Fee refund be given in the form of cash or other monetary instrument. Refunds will only be credited to the student's University account. Refunds from that account must be handled under "WITHDRAWAL AND REFUND OF FEES" elsewhere in this catalog.

Note: Flight instruction or flight simulator instruction and book debts incurred prior to leaving the program will be charged against the student's account. The University reserves the right to increase the Flight Practicum Fee as the cost of flight instruction increases.

#### Additional Flight Training Expenses

In addition to the end-of-course checks and tests performed by the University, Federal Air Regulations require a knowledge ("written") and a practical ("flight") test from an FAA Inspector or Designated Examiner for issuance of pilot/flight instructor certificates. The University is not designated to conduct these tests, and fees are charged by Designated Examiners for those tests. The student is responsible for direct payment of any practical or knowledge test fees in the form required by the examiner at the time of the test. As of May 2002, these fees are approximately \$75 for written tests and \$250 for practical tests. In all, students should expect to spend approximately \$2000 spread over the four years of the program for these other expenses.



**AVIATION MAINTENANCE MANAGEMENT**  
**Recommended Course Sequences**  
**(Based on completion of A.A.S. in Aviation**  
**Maintenance Technology)**

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ACCT	201	Intro to Financial Accounting	3
AVSC	331	Aviation Law	3
EDHE	111	Personalized Health Fitness	3
SOCI	101	Introduction to Sociology	3
		GER CURR. AREA I	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	202	Corporate/Managerial Acct.	3
BUAD	212	Computer Concepts/Aps. I	3
ENGL	102	Basic Composition II	3
		GER CURR. AREA I	3
		GER CURR. AREA III	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	3/4xx	Upper Level Elective	4
AVSC	441	Human Factors in Aviation	3
BUAD	252	Calculus for Business Aps.	3
BUAD	302	Mngt. and Org. Behavior	3
ENGL	305	Technical Writing	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	431	Maintenance Management	3
AVSC	442	Safety Management	3
AVSC	490	Special Topics in Avn Mngt.	3
BUAD	300	Business Ethics	3
BUAD	304	Small Bus./Entrepreneurship	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**AVIATION MANAGEMENT**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	101	First Year Experience – Aviation	1
AVSC	131	Air Transportation	3
ENGL	101	Basic Composition I	3
		GER CURR AREA I	3
MATH	109	College Algebra	3
SOCI	101	Introduction to Sociology	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	112	Aviation Fundamentals	3
AVSC	152	Meteorology & Environ. Issues	3
ENGL	102	Basic Composition II	3
		GER CURR. AREA I	3
MATH	110	Trig. and Analytic Geometry	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ACCT	201	Introductory Financial Acct.	3
AVSC	201	The National Airspace System	3
AVSC	241	Aviation Safety	3
BUAD	252	Calculus with Busi./Mngt. Aps.	3
ECON	201	Principles of Economics I	<u>3</u>
		<b>Semester Hours</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ACCT	202	Introductory Corp./Mang. Acct.	3
AVSC	202	Air Traffic Control	3
AVSC	231	Intro. to Airline Economics	3
BUED	212	Computer Concepts/Aps I	3
ECON	202	Principles of Economics II	<u>3</u>
		<b>Semester Totals</b>	<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	331	Aviation Law	3
AVSC	332	Airport Management	3
BUAD	302	Mngt. and Org. Behavior	3
ENGL	203	Funds of Contemporary Speech	3
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab	<u>1</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	355	Airport Planning	3
BUAD	300	Business Ethics	3
BUAD	304	Small Bus./Entrepreneurship	3
ENGL	305	Technical Writing	3
PSYC	200	Introduction to Psychology	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AVSC 441	Human Factors in Aviation	3
BUAD	Upper Level Business Elective	3
	GER CURR. AREA III	3
MKTG 308	Principles of Marketing	3
	Advanced Behavior Course	<u>3</u>
<b>Semester Total</b>		<b>15</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
AVSC 380	Internship	1
AVSC 490	Special Topics/Aviation Mngt.	3
AVSC ULE	AVSC Upper Level Elective	3
	Upper Level Business Elective	3
EDHE 111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>		<b>13</b>

**Total Credits Required 121**

**AVIATION ELECTRONICS****FRESHMAN YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AVSC 101	First Year Exp. – Aviation	1
AVSC 131	Air Transportation	3
ENGL 101	Basic Composition I	3
MATH 112	Calculus I	4
PHYS 121	General College Physics I	3
PHYS 123	General College Physics I Lab	<u>1</u>
<b>Semester Total</b>		<b>15</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
AVSC 112	Aviation Fundamentals	3
AVSC 152	Meteorology & Environ. Issues	3
EDHE 111	Personalized Health Fitness	3
ENGL 102	Basic Composition II	3
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	<u>1</u>
<b>Semester Total</b>		<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AVSC 201	The National Airspace System	3
EDTE 211	Electrical & Electronics Tech. I	3
ENES 100	Intro. to Engineering Design	3
ENGL 203	Fund of Contemporary Speech	3
MATH 211	Calculus II	<u>4</u>
<b>Semester Total</b>		<b>16</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
AVSC 202	Air Traffic Control	3
CSDP 220	Intro. to Computer Program.	4
EDTE 212	Electrical & Electronics Tech. II	3
ENGL 305	Technical Writing	3
SOCI 101	Intro to Sociology	<u>3</u>
<b>Semester Total</b>		<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AVSC 241	Aviation Safety	3
AVSC ULE	AVSC Upper Level Elective	3
ETEE 303	Circuit Theory III	3
ETEE 335	Logic & Switching	3
ETEE 421	Instrumentation & Measurement	
	Lab	<u>4</u>
<b>Semester Total</b>		<b>16</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
PSYC 200	Intro. to Psychology	3
ETEE 355	Adv. Electron./Comp. Network	3
ETEE XXX	Upper Level ETEE Elective	3
	GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>		<b>12</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>		<b>HOURS</b>
AVSC 441	Human Factors in Aviation	3
CHEM 101	General Chemistry I	3
CHEM 103	General Chemistry I Lab	1
ETEE 425	Comm. & Microwave Tech	3
ETEE 485	Design Technology I	3
	GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>		<b>16</b>

<b>SPRING SEMESTER</b>		<b>HOURS</b>
AVSC 302	Advanced Aircraft Systems	3
AVSC ULE	AVSC Upper Level Elective	3
AV/ET ULE	Upper Level AVSC/ETEE Elec.	3
ETEE 486	Design Technology II	3
AVSC 498	Special Topics/Aviation Sci. <u>or</u>	
ETEE 499	Undergraduate Research in ETEE	<u>1</u>
<b>Semester Total</b>		<b>13</b>

**Total Credits Required 120**

**PROFESSIONAL PILOT****FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	101	First Year Exp. – Aviation	1
AVSC	131	Air Transportation	3
AVSC	141	Private Pilot Ground	4
AVSC	142	Private Pilot Flight	3
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	152	Meteorology & Environ Issues	3
AVSC	161	Instrument Rating Ground	3
AVSC	162	Instrument Rating Flight	3
ENGL	102	Basic Composition II	3
MATH	110	Trig. and Analytic Geometry	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	251	Commercial Pilot Ground	3
AVSC	252	Commercial Pilot Flight I	2
AVSC	201	The National Airspace System	3
AVSC	241	Aviation Safety	3
ENGL	203	Fund. of Contemporary Speech	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	202	Air Traffic Control	3
AVSC	253	Commercial Pilot Flight II	2
BUED	212	Computer Concepts/Aps. I	3
ENGL	305	Technical Writing	3
SOCI	101	Introduction to Sociology	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	254	Commercial Pilot Flight III	2
AVSC	331	Aviation Law	3
PSYC	200	Introduction to Psychology	3
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab	1
GER CURR. AREA I			<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	302	Advanced Aircraft Systems	3
AVSC	342	Flight Physiology	3
AVSC	351	CFI - Airplane (Ground)	3
AVSC	352	CFI - Airplane (Flight)	2
MATH	112	Calculus I	<u>4</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	311	Aerodynamics & Aircraft Performance	3
AVSC	441	Human Factors in Aviation	3
AVSC	461	CFI - Instrument (Ground)	2
AVSC	462	CFI - Instrument (Flight)	2
BUAD		Business Elective	3
GER CURR. AREA III			<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	472	Multi Engine Pilot Flight	1
AVSC	ULE	AVSC Upper Level Elective	3
PSYC		Advanced Behavior Course	3
BUAD		Business Elective	3
GER CURR. AREA I			3
EDHE	111	Personalized Health Fitness	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**Total Credits Required 124****AVIATION SOFTWARE ENGINEERING****FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	101	First Year Exp. - Aviation	1
AVSC	131	Air Transportation	3
EDHE	111	Personalized Health Fitness	3
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
SOCI	101	Intro to Sociology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	112	Aviation Fundamentals	3
AVSC	152	Aviation Weather	3
CSDP	220	Intro to Computers	4
ENGL	102	Basic Composition II	3
MATH	110	Trig. and Analytic Geometry	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	201	The National Airspace System	3
AVSC	241	Aviation Safety	3
CSDP	222	Advanced Programming	4
MATH	112	Calculus I	<u>4</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC	202	Air Traffic Control	3
AVSC	231	Intro to Airline Economics	3
CSDP	250	Intro to Data Structures	3
		GER CURR. AREA I	3
MATH	211	Calculus II	<u>4</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP	305	Software Engineering I	3
CSDP	321	Intro to Discrete Structures	3
ENGL	203	Funds. of Contemporary Speech	3
PSYC	200	Intro. to Psychology	3
PHYS	121	General College Physics I	3
PHYS	123	General College Physics I Lab	<u>1</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	301	Machine & Assembly Language	3
CSDP	405	Software Engineering II	3
PHYS	122C	General College Physics II	3
PHYS	124L	General College Physics II Lab	1
ENGL	305	Technical Writing	3
		GER CURR. AREA I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
AVSC	441	Human Factors in Aviation	3
CSDP	401	Operating Systems	3
CSDP	403	Computer Language Theory	3
CSDP	451	Computer Organization	3
CSDP	350	Linear Programming <u>or</u>	
MATH	412	Linear Algebra	<u>3</u>
<b>Semester Total</b>			<b>12-15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
AVSC		Upper Level Elective	3
CSDP	402	Computer Networks	3
CSDP	404	Database Mngt. Systems	3
CSDP	450	Data Structures/Algorithms	3
MATH	412	Linear Algebra <u>or</u>	
CSDP	350	Linear Programming	<u>3</u>
<b>Semester Total</b>			<b>12-15</b>

**Total Credits Required**      **120-124**



## COURSE DESCRIPTIONS

### AVIATION SCIENCE

**AVSC 101 First Year Exp - Aviation 1 cr.**  
An overview of the aviation industry and an overview of college life. This course is an orientation for incoming freshmen and covers stress and time management and life skills. In addition, the course explores ethics, educational requirements, FAA requirements, scholarship availability, career opportunities, and the need to be trained.

**AVSC 112 Aviation Fundamentals 3 crs.**  
This course provides a basic overview of aviation, including Fundamentals of Flight, Flight Operations, Aviation Weather, Performance and Navigation, and Integrating Pilot Knowledge and Skills. Critical thinking is stressed.

**AVSC 131 Air Transportation 3 crs.**  
This course covers the history, development, and present status of air transportation, including government legislation, regulations, the FAA and CAB organizations and functions, classification of air carriers, facilities and airline operations, future air transportation requirements; economics, and social implications.

**AVSC 141 Private Pilot Ground 4 crs.**  
This course provides ground and simulator instruction to meet FAA private pilot aeronautical knowledge requirements. Subjects include all applicable Federal Aviation Regulations (FAR's), visual flight rules (VFR) navigation, aviation weather, aircraft operations, safety considerations, etc. Successful completion of this course includes completion of the Private Pilot Airplane airmen knowledge test (FAA written exam). Prerequisite: MATH 101 with "C" or better, or placement into MATH 109, or permission of instructor.

**AVSC 142 Private Pilot Flight 3 crs.**  
This course includes actual and simulator time to meet private requirements. Topics include all FAA required maneuvers, such as aircraft pre-flight operations, airport and traffic pattern operations, flight maneuvering, flight at slow airspeeds, normal and crosswind takeoffs and landings, control and maneuvering of the aircraft solely by reference to flight instruments, cross-country navigation, maximum performance takeoffs and landings, night flying, and emergency operations. Upon successful completion of this course, the student will have the aeronautical experience and skill requirements for, and will have obtained, an FAA Private Pilot Airplane Single Engine Land certificate. Co-requisite: AVSC 141.

**AVSC 152 Meteorology & Environmental Issues 3 crs.**

Topics the course covers are: the atmosphere, atmospheric energy and temperature, pressure and density altitude, wind, atmospheric circulation systems, air-masses, fronts, vertical motion and stability, atmospheric moisture, tornadoes, thunderstorms, and local winds. Hazards

associated with weather, such as wind shear, turbulence, icing, instrument meteorological conditions (IMC), etc. are also covered, as are applications of weather knowledge, including aviation weather resources and weather evaluation for flight. Air and noise pollution are introduced. Co-requisite: AVSC 112 or AVSC 141.

**AVSC 161 Instrument Rating Ground 3 crs.**  
This course provides ground and simulator training to meet FAA's instrument pilot aeronautical knowledge requirements. Subjects include Federal Aviation Regulations (FAR's) for instrument flight; IFR navigation; aviation weather; function, use, and limitations of flight instruments; etc. Successful completion of this course includes passing the FAA Instrument Airplane airmen knowledge test (written exam). Prerequisite: AVSC 141. Co-requisite: AVSC 152.

**AVSC 162 Instrument Rating Flight 3 crs.**  
This course provides flight and simulator training for instrument pilot operations necessary to operate an airplane safely and accurately under instrument flight rules (IFR) within the National Airspace System. Upon successful completion of this course the student will have demonstrated both the aeronautical knowledge and skill requirements for, and will have obtained, an FAA Instrument Airplane Rating. Prerequisites: AVSC 141 and AVSC 142. Co-requisites: AVSC 161 and AVSC 152.

**AVSC 201 The National Airspace System 3 crs.**  
Students review federal aviation regulations (FAR), the National Airspace System (NAS) structure, equipment, and cloud clearance requirements for the different airspace classifications including special use airspace (SUA). Students study the different air traffic control (ATC) facilities, terminal and en-route, to learn the various controller positions and functions. Students use the ATC simulator to demonstrate confidence in their ability to safely control at least 10 aircraft in a high density terminal environment. Students plan a flight and fly their flight plan on the flight simulator, describing the airspace and communications requirements as they proceed. Future plans for the NAS are discussed. Prerequisite: AVSC 112 or AVSC 141.

**AVSC 202 Air Traffic Control 3 crs.**  
This course briefly reviews the history of the US Air Traffic Control (ATC) system. Students learn current ATC procedures and phraseology by flying and controlling air traffic in high density terminal environments. Students learn the ATC facilities and required operational positions (workstations). Teamwork, between pilots and controller, to move aircraft safely through today's ATC system is stressed. Prerequisite: AVSC 201.

**AVSC 231 Introduction To Airline Economics 3 crs.**  
This course studies the utilization of air transportation systems and includes the efficient flow of air traffic, handling of passengers, baggage, freight, and visitors. The configurations and designs of airports are discussed, which includes aircraft types and features, cost-effective operations, marketing considerations, facility, equipment suitability, and modernization. Prerequisite: AVSC 131 or Co-requisite ECON 201.

**AVSC 241 Aviation Safety 3 crs.**  
Aviation Safety is designed to promote sound practice, and an understanding of the safety-net for commercial and general aviation. This course provides the student with a foundation and framework in aviation and transportation safety. The course objectives are: to gain an understanding of the knowledge, skills, and abilities required in aviation; to enhance the student's safety awareness; to familiarize the student with hazards associated with the aviation environment; and to impart to the student a broad understanding of the United States' safety system. Some typical areas are: safety data, investigations, aviation maintenance, collision avoidance, Cockpit Resource Management (CRM), physiology, situation awareness, and human factors. Prerequisite: AVSC 112 or AVSC 141.

**AVSC 251 Commercial Pilot Ground 3 crs.**  
In this course, ground instruction to meet FAA Commercial Pilot aeronautical knowledge requirements is provided. Subjects include all FAR's applicable to commercial pilot privileges, limitations, and flight operations; airplane performance, aerodynamics, performance prediction, weight and balance control; advanced airplane systems, including fuel injection, high performance power plants, environmental systems, complex aircraft systems, and commercial flight maneuvers. Successful completion of this course includes passing the FAA Commercial Pilot Airplane airmen knowledge test (written exam). Prerequisite: AVSC 161 and AVSC 152. Co-requisites: AVSC 201 and 241.

**AVSC 252 Commercial Pilot Flight I 2 crs.**  
This course is actual flight and simulator time for private pilots to learn commercial pilot operations. Emphasis is on advanced cross-country and night operations. Upon successful completion of this course, the student will have mastered the VFR cross-country and night aeronautical knowledge and skill requirements for an FAA Commercial Pilot Certificate. Prerequisite: AVSC162. Co-requisite: AVSC 251.

**AVSC 253 Commercial Pilot Flight II 2 crs.**  
This course is actual flight and simulator time for private pilots to learn commercial pilot operations. Emphasis is on more advanced aerodynamics, aircraft performance, and practical experience to pilot a complex aircraft. Upon successful completion of this course the student will have mastered the complex aircraft aeronautical knowledge and skill requirements for an FAA Commercial Pilot Certificate. Prerequisites: AVSC 251 and AVSC 252.

**AVSC 254 Commercial Pilot Flight III 2 crs.**  
This course is actual flight and simulator time for private pilots to learn commercial pilot operations. Emphasis is on commercial flight maneuvers and practical experience to master the aircraft. Upon successful completion of this course, the student will have mastered all flight maneuvers, procedures, aeronautical knowledge, and skill requirements for, and will have obtained, an FAA Commercial Pilot Airplane Single Engine Land certificate. Prerequisites: AVSC 251 and AVSC 253.

**AVSC 301 Aircraft Dispatcher 0 crs.**  
This is a preparatory course for the FAA Aircraft Dispatcher written examinations. The course is a review of the aviation core concepts and technology as they apply to the Aircraft Dispatcher. Prerequisites: AVSC 152, AVSC 201, AVSC 202, AVSC 241, and either AVSC 251 or AVSC 112 and permission of the instructor. Co-requisite: AVSC 302.

**AVSC 302 Advanced Aircraft Systems 3 crs.**  
This course covers all aircraft systems, their theory of design, operations, trouble shooting and maintenance standards. Study includes propulsion systems, associated instruments, auxiliary systems, and propeller and control. Aircraft structure, aircraft electrical and lighting, hydraulic and pneumatic systems, avionics, brakes and tires, deicing, flight instrumentation, navigation systems, and ELT are also covered. This course provides an in-depth understanding of a typical turboprop commuter-type aircraft. Prerequisite: AVSC112 or AVSC 251 or permission of instructor.

**AVSC 311 Aerodynamics Aircraft Performance 3 crs.**  
Students in this course study the fundamentals and more advanced theory of flight, the standard atmosphere, and subsonic and supersonic aerodynamics. Topics include airfoils, the complete aircraft, various aerodynamic shapes, wind tunnels, elements of airplane performances, principles of stability and control, and propeller and jet propulsion. Performances envelopes include load factors, weight and balance, and air worthiness. Prerequisites: AVSC 112 or AVSC 121, MATH 112 or BUAD 252, PHYS 121 or PHYS 161 or PHYS 181, and Junior standing.

**AVSC 312 Advanced Aerospace and Performance of Flight Vehicles 3 crs.**  
This course is designed for Junior or Senior students who have interest in pursuing in-depth studies of aircraft performance, including stability, sonic and hypersonic propulsion, and an introduction into space mechanics and reentry techniques. Prerequisite: AVSC 311.



**AVSC 331 Aviation Law 3 crs.**

This course is a study of the foreign and domestic legal system (federal, state, and local laws and regulations) concerning air transportation and implications as they relate to operations, contracts, insurance, liability, and regulatory status, in the field of aviation. Emphasis is on domestic and international legal aspects of air transportation. Prerequisites: AVSC 112 or AVSC 141, AVSC 131 and Junior standing.

**AVSC 332 Airport Management 3 crs.**

The student is provided knowledge of airport administration, design, and planning. Airport operations and practices discussed include security, fire protection, facility maintenance, environment, public affairs, political, social and economical issues. Prerequisites: AVSC 231 or permission of instructor and Junior standing.

**AVSC 342 Flight Physiology 3 crs.**

This course provides an understanding and overview of physiological situations that can interfere with safety. Topics include high altitude physiology, gas laws, human anatomy, hypoxia, fatigue, jet lag, stress, drugs, alcohol, spatial disorientation, vision, and associated human factor issues. Prerequisites: AVSC 241 and Junior standing.

**AVSC 351 CFI Airplane Ground 3 crs.**

This course provides ground instruction required by the FAA for the student to become a FAA certified flight instructor. This course includes fundamentals of instruction, including responsibilities and requirements for instruction of private and commercial airplane flight students. Successful completion of this course includes passing the FAA knowledge tests (written exam) for Fundamentals of Instruction and Certified Flight Instructor-airplane. Prerequisite: AVSC 251. Co-requisites: AVSC 311 and Junior standing.

**AVSC 352 CFI Airplane Flight 2 crs.**

Flight instruction required by the FAA for the student to become a FAA certified flight instructor is the focus of this course. The course includes: fundamentals of instruction; technical subject areas; preflight preparation; preflight lessons on a maneuver to be performed in flight; preflight procedures; airport and seaplane base operations; takeoffs, landings, and go-arounds; fundamentals of flight; performance maneuvers; ground reference maneuvers; slow flight, stalls and spins; basic instrument maneuvers; emergency operations; and post flight procedures. Successful completion of this course includes passing the FAA practical test for Certified Flight Instructor - Airplane. Prerequisite: AVSC 254. Co-requisite: AVSC 351, AVSC 311 and Junior standing.

**AVSC 355 Airport Planning 3 crs.**

This course provides a step by step process of airport design, layout, construction and all planning aspects of a medium hub-sized commercial airport. The student is provided with the knowledge of zoning laws, environment considerations, blueprint design, etc. The student will design and complete his/her own airport layout.

Prerequisites: AVSC 131 and either AVSC 231 or permission of instructor.

**AVSC 361 Communication Electronics 3 crs.**

This course introduces the fundamentals of communication electronics. Topics introduced include signal, noise, FM/AM modulation, digital modulation, FSK, transmitting and receiving circuits, antenna, wave propagation, microwave devices, transmission lines, wave guides, radar systems, fiber optics, and practical applications. Prerequisites: PHYS122, MATH112, either ENEE114 or CSDP220, and Junior standing.

**AVSC 380 Cooperative Or Internship 1-6 crs.**

Students are provided a cooperative or internship in the public or private sector to give the student an opportunity to gain experience and professional skills in an area related to aviation. Prerequisite: Junior standing.

**AVSC 431 Maintenance Management 3 crs.**

The aviation industries are concerned about the design and operation of maintenance control systems. The ratio of maintenance craftsmen to operators is higher than traditional industry standards. This fact leads to the realization that the effective management of production resources would yield more benefits to the organization. The course emphasis is placed on computer information systems. Seniors or Juniors will demonstrate the knowledge needed to setup and maintain a maintenance program. Prerequisite: FAA A&P mechanic certification, A.A.S. in aviation maintenance field, or Junior Standing in Aviation Sciences program.

**AVSC 432 Airline Management 3 crs.**

This course studies the business practices, operations, and management principles used by domestic and international airlines. The following topics are discussed: regional airline, fleet planning, customer services, routing the efficient flow of air traffic, domestic and foreign airline competition, and fare structuring. Prerequisite: AVSC 231 or Permission of Instructor.

**AVSC 441 Human Factors in Aviation 3 crs.**

Human factors, an interdisciplinary subject, is an empirical science that deals with human capabilities and behavior as applied to a given system. Technical disciplines contributing to human factors are anthropometry, biomechanics, engineering, mathematics, and psychology. This course is a study of the interface and relationship between humans and machines in the aviation environment. The outcome adjusts the things or ways people use them and the environment for a better match of capabilities, limits, or needs. Human Factors in Aviation is designed to bridge the gap between the theory and the practical application in aviation. The course material will include performance, design, human senses, information processing, workload, group interaction, fatigue, errors, memory allocation, introduction to control and displays. Prerequisite: PSYC 200 or equivalent, AVSC 241 and Junior Status.

**AVSC 442 Safety Management 3 crs.**  
This course is a design course. Students will design their own safety plan for the company of the student's choice. The course covers safety quantification, laws, regulations and policies. Topics include: OSHA, cost analysis, hazardous conditions, failure modes, risk analysis, and performance measurements. Prerequisite: AVSC 241 or permission of instructor, and Junior Status.

**AVSC 461 CFI Instrument Ground 2 crs.**  
Ground instruction and practice teaching dealing with flight operations pertinent to training students in the instrument flight environment. Training will include instruction necessary to complete the airmen knowledge requirements (FAA written exam) for the certified flight instructor, instrument-airplane rating, and simulator console instructor. Prerequisites: AVSC351 and Junior Standing.

**AVSC 462 CFI Instrument Flight 1 cr.**  
Flight instruction and practice teaching dealing with flight operations pertinent to training students in the instrument flight environment. Training will include instruction necessary to complete the aeronautical skill and experience requirements for the practical test for a FAA Certified Flight Instructor - Airplane certificate. Prerequisites: AVSC 352 and Junior Standing. Co-requisite: AVSC 461.

**AVSC 472 Multi-Engine Pilot Flight 1 cr.**  
Flight instruction necessary to provide the aeronautical skill and knowledge to meet the requirements for the addition of the multi-engine land class rating with instrument privileges. Prerequisite: AVSC 254.

**AVSC 482 Multi-Engine Instructor 1 cr.**  
Ground and flight instruction necessary to provide the aeronautical skill and knowledge to meet the requirements for the addition of the Airplane Multi Engine rating to an FAA Certified Flight Instructor certificate. Prerequisites: AVSC 472 and AVSC 352 and Junior standing.

**AVSC 498 Special Topics In Aviation/Aerospace 1-6 crs.**  
This is a reading or research course. Credits can vary with the workload of the research. This course may be repeated (with different topics) for a maximum of 12 credits. Prerequisite: Senior Standing with appropriate prerequisites for the special topic.

**AVSC 499 Senior Seminar 3 crs.**  
This is a senior seminar course. Topics of this course will vary from year to year. The purpose of this course is to expose Seniors to developing concepts and technology in aviation or aerospace. Prerequisite: Senior Standing.

### AEROSPACE ENGINEERING

**ENAE 281 Fundamentals of Aeronautical System 3 crs.**  
This course provides an introduction to the airplane as an aeronautical system and covers the fundamental disciplines that describe this system. Topics included are: elements of

aerodynamics, airfoils, wings, and airplane performance, stability and control. Synthesis of airplane design concepts and notes on the history of aeronautics and airplane design are also included. Prerequisites: MATH 211, ENES 102. Co-requisite: PHYS 262, or PHYS 182H.

**ENAE 282 Fundamentals of Astronautical Systems 3 crs.**

This course provides an introduction to space vehicles as a system. Topics included are: rocket performance, fundamentals of orbital motion, vehicle preliminary design, and an introduction to underlying disciplines, including structures, propulsion, and human factors. Historical perspectives on spacecraft design and development are also included. Prerequisites: MATH 211, ENES 102. Co-requisites: PHYS 182H/183 or PHYS 262/263

### ENGINEERING – ELECTRICAL

**ENEE 114 Programming Concepts for Engineers 4 crs.**

This course includes principles of software development, high level languages, compiling and linking pseudo-code, input/output, data types and variables, operators and expressions, conditionals and loops, functions, arrays, pointers, structure data types, memory allocation, introduction to algorithms, software projects, debugging, and documentation. (Programs will use the C language with the UNIX operating system) Prerequisite: ENES 100. Co-requisite: MATH 112.

**ENEE 204 Basic Circuit Theory 3 crs.**

This course includes the basic circuit elements: resistors, capacitors, inductors, sources, mutual inductance and transformers; their current-voltage relationship Kirchoff's Laws. Explanations of DC and AC, steady-state analysis, phasors, node, mesh analysis, superposition, theorems of Thevenin, and Norton are topics covered. Transient analysis for first-and-second-order circuits are also included. Prerequisite: MATH 321. Co-requisite: PHYS182H/PHYS183. Permission from Engineering Program required.

**ENEE 206 Fundamental Electric & Digital Circuit Lab 2 crs.**

This course provides an introduction to basic techniques in electrical and electronic measuring using electronic laboratory equipment, i.e. (power supplies, oscilloscopes, voltmeters, etc.). Explanations of design, construction, and characterization of circuits containing passive elements, operational amplifiers, and digitally integrated circuits are provided. Transient and steady-state responses are presented and discussed. Co-requisites: ENEE 204 and ENEE 244.

**ENEE 241 Numerical Techniques in Engineering 3 crs.**

An introduction to error analysis, conditioning and stability of algorithms is provided. Numerical solutions of non-linear equations, vector spaces and linear transformations are presented. Matrix algebra Gaussian elimination, LU factorization, matrix inversions are discussed. Similarity

transformations, Diagonalization, iterative computation of Eigen values as well as Interpolation of splines, data fitting and numerical integration are also included. Note: Cannot receive credit for both ENES 240 and ENEE 241. Prerequisites: ENEE 114 and MATH 211.

**ENEE 244 Digital Logic Design 3 crs.**

This course covers gates, flip-flops, registers and counters. Karnaugh map simplification of gate networks. Switching algebra, synchronous sequential systems and PLA's with elements of binary and arithmetic units. Prerequisites: ENEE 114 and MATH 112.

**ENEE 302 Analog Electronic Circuits 3 crs.**

Explanations of basic electronic elements, including diodes, bipolar transistors, MOSFET's their characteristics, and principles of operation, and Small signal analysis are provided. Other topics covered include: circuit models with controlled sources, a discussion of Diode Circuits, Low-frequency amplifiers, feed back, and frequency response of amplifiers. Also, a review of operational amplifiers their applications, wave-shaping, waveform generators, and elements of power electronics is provided. Prerequisite: ENEE 204 and completion of all lower division technical courses in the EE curriculum.

**ENEE 306 Electronic Circuits Design 2 crs.**

Students will design, construct and test analog and digital circuits at the transistor level. Bipolar and Field Effect transistors will be covered. Circuits designed will include common emitter and differential amplifiers, active filter, TTL and CMOS logic gates. Students should gain much of the background required for the design of modern microelectronic circuits. Note: One lecture and three lab hours per week. Prerequisite: ENEE 206 and ENEE 302.

**ENEE 312 Digital Electronics 3 crs.**

This course includes a review of basic semiconductor devices and their technology including an explanation of inverters, gates and logic families, analysis and design of combination circuits (adder, comparator, and encoder/decoder). Presentation and analysis of memories, analysis and design of sequential circuits with a discussion of flip-flops, registers and counters; large-scale integrated systems (dynamic MOS register, EPROM's, PLS, CCDs); and a discussion of Analog-to-digital converters, elements of CADE, including use of the SPICE computer package are also included. Prerequisites: ENEE 302 and completion of lower division technical courses in the EE curriculum.

**ENEE 322 Signal and System Theory 3 crs.**

This course is a presentation of linear systems, including state space equations for continuous and discrete systems, with a discussion of time and domain analysis for linear systems. It also includes Fourier, Laplace and Z transforms and applications of theory to problems in electrical engineering. Prerequisite: ENEE 204 and MATH 321 and completion of all lower division technical courses in the EE curriculum.

**ENEE 324 Engineering Probability 3 crs.**

Topics covered include axioms of probability, conditional probability and Bayes' rules, random variables, probability distribution and densities, functions of random variables, weak law of large numbers and central limit theorem. Introductions to random processes, correlation functions, spectral densities, and linear systems are provided. Applications to noise in electrical systems, filtering of signals from noise, estimation, and digital communications are covered in depth. Prerequisite: ENEE 322 and completion of all lower division technical courses in the EE curriculum.

**ENEE 350 Computer Organization 3 crs.**

This course is NOT open to students who have completed ENEE 250. Subjects covered are structure and organization of digital computers, registers, memory, control and I/O. Data and instruction formats, addressing modes, assembly language programming. The elements of system software, subroutines, and their linkage are explained. Prerequisite: ENEE 244 and completion of all lower-division technical courses in the EE curriculum.

**ENEE 380 Electromagnetic Theory**

**3 cr.**

This course includes the introduction to electromagnetic fields, Coulomb's law, Gauss' law, electrical potential, dielectric materials, capacitance, boundary value problems, BiotSavart law, Ampere's law, Lorenz force equation, magnetic material, magnetic circuits, inductance, time varying fields and Maxwell's equations. Prerequisites: MATH 212 and PHYS 263 and completion of all lower-division technical courses in the EE curriculum.

**ENEE 381 Electromagnetic With Propagation 3 crs.**

This course provides a review of Maxwell's equations, the wave equation, potentials, and Poynting's theorem. Topics covered are transmission, lossy medium, skin effect, parallel-plate and rectangular waveguides, and radiation, retarded potentials, as well as radiation from dipole. Prerequisites: ENEE 380 and completion of all lower division technical courses in the Electrical Engineering curriculum.

**ENEE 407 Microwave-Circuits Lab 2 crs.**

Course entails one lecture and three lab hours per week. Experiments concerned with circuits constructed from microwave components designed to provide practical experience in the design, construction and testing of such circuits are conducted. Projects include microwave filters and S-parameter design with applications of current technology. Prerequisites: ENEE 306 and ENEE 381 and completion of all lower division technical courses in the EE curriculum.

**ENEE 417 Microelectronics Design Laboratory 2 crs.**  
One lecture and three laboratory hours per week required. Course is for electrical engineering majors only. Experiments are designed to provide students with different aspects of modern microelectronics. Students will design and build circuits to meet certain specifications. The topics include solid state physics, semiconductor characteristics, computer simulation, CAD circuit design, Neural Network hardware/software implementation, etc. Prerequisites: ENEE 306 and ENEE 312 and completion of all lower division technical courses in the Electrical Engineering curriculum.

**ENEE 420 Communication Systems 3 crs.**  
Topics covered include: Fourier series, Fourier transforms and linear system analysis, random signals, autocorrelation functions and power spectral densities. Additionally topics from analog communication systems including amplitude modulation, single sideband modulation, frequency and phase modulation, sampling theorem and pulse-amplitude modulation, digital communication systems, pulse-code modulation, phase-shift keying, differential phase shift keying, frequency shift keying; performance of analog and digital communication systems in the presence of noise are covered. Prerequisites: ENEE 324 and completion of all lower division technical courses in the Electrical Engineering curriculum.

**ENEE 428 Communication Design Laboratory 2 crs.**  
One hour of lecture and three laboratory hours per week are required. Course is for electrical engineering majors only. This course deals with exploring the signal processing and communication systems theoretical concepts presented in ENEE 420 Communication Systems and ENEE 425 Digital Signal Processing by implementing them on actual DSP based hardware in real time. Prerequisites: ENEE 324 and completion of all lower-division technical courses in the EE curriculum. Co-requisites: ENEE 420 or ENEE 425.

**ENEE 440 Microprocessors 3 crs.**  
Course offered to electrical engineering majors only. Topics covered include microprocessor architectures, instruction sets, and applications. Bus structures, memory, I/O interfacing and assembly language programming, LSI device configuration, and the embedding of microprocessors in systems. Prerequisites: ENEE 350 and completion of all lower-division technical courses in the EE curriculum.

**ENEE 445 Computer Laboratory 2 crs.**  
Course offered to Electrical Engineering majors only. This laboratory course focuses on the hardware/software interface in computer systems. Hand-on experiments are used to teach design, construction, analysis, and measurement of both hardware and software for embedded systems. Projects emphasize using microcontrollers for control, sensing, and communication through various I/O devices. Prerequisites: ENEE 206 and ENEE 350; and completion of all lower-division technical courses in the EE curriculum.

**ENEE 448 Microprocessor Systems Design 3 crs.**  
Course offered to electrical engineering majors only. Topics covered include product specification, component selection, circuit schematic design, logic design, software design, printed circuit design, component purchasing, prototype assembly, and hardware and software debug of a prototype microprocessor based commercial product. Prerequisites: ENEE 440 and completion of all lower-division technical courses in the Electrical Engineering curriculum.

**ENEE 482 Design of Active & Passive Micro Devices 3 crs.**  
Course topics covered includes design and operation of passive and active microwave devices. The passive components include waveguides, resonators, and antennas. The active devices include klystrons, magnetrons, gyrotrons, and free electron lasers. Prerequisites: ENEE 381 and completion of all lower division technical courses in the Electrical Engineering curriculum.

**ENEE 483 Electromagnetic Measurement Lab. 2 crs.**  
Course includes one hour lecture and three one hour labs per week. Experiments are designed to provide familiarity with a large class of micro-wave and optical components, techniques for interconnecting them into useful systems, and techniques of high frequency and optical measurements. Prerequisites: ENEE 380 and completion of all lower-division technical courses in the EE curriculum.

### ENGINEERING - MECHANICAL ENGINEERING

**ENME 232 Thermodynamics 3 crs.**  
Topics covered in this class include the properties, characteristics, and fundamental equations of state of materials. Work and heat transfer, first and second laws of thermodynamics, availability, thermodynamic power and refrigeration cycles, mixtures, psychrometrics and reactions. Prerequisites: PHYS 262/PHYS264.

**ENME 252 Electronics & Instrumentation 3 crs.**  
Topics covered include modern instrumentation-basic circuit design, standard microelectronic circuits, digital data acquisition and control, signal conditioning, interfacing design and testing analog circuits. There are laboratory experiments. This is a two hour lecture and one hour laboratory course. Co-requisite: PHYS 263/PHYS265.

**ENME 271 Introduction to MATLAB 3 crs.**  
This course is designed to develop skills with MATLAB to obtain numerical solutions to many of the problems that appear in the junior and senior level courses in the mechanical engineering curriculum. Topics may include matrices and MATLAB, data input/output, user and MATLAB created functions, differential equations, 2- and 3D graphics, MATLAB tools, and symbolic mathematics. Two one hour lectures and two-hour laboratory hours per week. Prerequisites: MATH 211, Co-requisite: MATH 321

**ENGINEERING – ENGINEERING SCIENCE**

**ENES 100 Introduction to Engineering Design 3 crs.**

The course provides an introduction to the engineering design process with emphasis on the use of computer software for word processing, spreadsheet, CAD, and communication skills. Students work as teams to design and build a project. Prerequisite: High school physics or one college physics course. Co-requisite: MATH 110 or 111H.

**ENES 102 Statics 3 crs.**

Topics discussed in this course include the equilibrium of stationary bodies under the influence of various kinds of forces. Forces, moments, couples, equilibrium, trusses, frames and machines, beams, and friction. Students solve real engineering problems and perform design analysis. Vector and scalar methods are used to solve problems. Prerequisite: MATH 112 or permission of Coordinator of Engineering Program.

**ENES 220 Mechanics of Materials 3 crs.**

Material covered includes distortion of engineering materials in relation to changes in stress or temperature, geometry of internal strain and external displacement, application to beams, columns, shafts, tanks, and other structural, machine and vehicle members. Prerequisites: ENES 102, MATH 211 and PHYS 161 or 181H. Recommended: Co-requisite: ENES 202.

**ENES 221 Dynamics 3 crs.**

Course material includes systems of heavy particles and rigid bodies at rest and in motion, force-acceleration, work-energy and impulse-momentum relationships, motion of one body relative to another in a plane and in space. Prerequisites: ENES 102, MATH 211, and PHYS 161/PHYS163 or PHYS181H/PHYS183.



**Captain Levy, Coordinator, Aviation Sciences Program**

**FACULTY****Dabipi, Ibibia K.**

Professor

B. S. Electrical Engineering, B. S. Physics/Mathematics,  
Texas A&I University

M.S., PhD., Louisiana State University

**Eydgahi, Ali**

Professor

B. S., Detroit Institute of Technology

M. S., Ph. D., Wayne State University

**Conry, Robert W.**

Lecturer

B.A., Assumption College

M.S., Central Connecticut State University

Airline Transport Pilot, Certified Flight Instructor

**Levy, Ronald B.**

Lecturer and Director

B.S.Eng., University of Michigan

M.Av.Mgt., Embry-Riddle Aeronautical University

Airline Transport Pilot, Certified Flight Instructor

**Nagchaudhuri, Abhijit**

Associate Professor

B. S., Jadavpur University

M. S., Tulane University

Ph. D., Duke University

**Stockus, Anthony J.**

Program Coordinator

B. A. Chapman College

M.B.A. Central Missouri State University

## DEPARTMENT OF HOTEL AND RESTAURANT MANAGEMENT

### Dean

Eddie Boyd, Ph.D.

### Chair:

John M. Dixon, M.B.A., J.D.

### Assistant Professor:

Richard Gormley, M.B.A.

### Lecturers:

Oliver B. Childs, M.S.

Katherine A. Quinn, M.B.A.

Ralston G. Whittingham, A.A., B.S.

### Chef:

Ralston G. Whittingham, A.A., B.S.

### Lecturer/Coordinator, Off-Campus Programs

Karl V. Binns, M.B.A.

### Lecturer/Director, Shady Grove Program

Michael G. Brizek, Ph. D.

## MISSION

The mission of the Department of Hotel and Restaurant Management is to educate students who will be attractive to the hospitality industry for careers in hospitality management, as well as, well prepared for graduate study in hospitality fields. This will be accomplished by students being academically and vocationally challenged to achieve excellence in their pursuit of the Baccalaureate degree in Hotel and Restaurant Management and to qualify for such minors as: Culinary Arts, Restaurant Management, Food and Beverage Management, Hotel Administration, and Tourism. The department also engages the community by offering non-degree certificates and training through continuing educational courses.

## GOALS

The goals of the Department of Hotel and Restaurant Management are to

- provide instruction and professional assistance to the students in the department,
- provide students with an opportunity to earn a Bachelor of Science degree in Hotel and Restaurant Management,
- prepare students for graduate study,
- assist students towards professionalism and an attitude of continued professional growth and individual development,

- assist students in recognizing their responsibilities as members of society and the hospitality industry,
- provide seminars and workshops for the hospitality industry of the State of Maryland,
- conduct research in the hospitality field,
- increase the quality and accessibility of hospitality education to the citizens of Maryland, and
- provide professional assistance to the citizens of Maryland.

In order to meet its stated goals, the Department of Hotel and Restaurant Management will

- maintain a liaison relationship with professional organizations for student participation and development;
- provide on-going advising to assist students in decisions affecting their academic programs, professional development, industry work experience, career planning, and possible future study;
- offer all courses necessary for students to complete a Bachelor of Science degree in Hotel and Restaurant Management within eight consecutive semesters;
- relate course content to contemporary issues and trends of society and the hospitality industry;
- encourage discussion of the individual's responsibilities to society and the hospitality industry;
- seek appropriate industry and government support to conduct research in the hospitality industry;
- maintain a hospitality industry resource center; and
- assist the citizens and hospitality industry of Maryland through guest speaking, committee appointments, advising and other activities.

Upon completion of the Bachelor of Science degree in Hotel & Restaurant Management, the student will be able to do the following:

- Demonstrate adequate knowledge in general and specific matters of communications, mathematics, computers, social sciences, natural sciences, humanities, and health and physical

education, as measured by course grades and competency exams.

- Explain the historical development and current market segmentation of the hospitality industry, as measured by course grades of "C" or better.
- Plan, purchase and prepare meals for up to 50 customers in a variety of service styles, as measured by course grades of "C" or better and performance in hospitality experience.
- Demonstrate basic knowledge and management skills related to front office, housekeeping, and engineering departments of hotel operations, as measured by course grades of "C" or better and performance in hospitality experience and/or simulations.
- Demonstrate basic business administration skills of accounting, financial analysis and marketing as measured by course grades of "C" or better and/or performance in hospitality experience.
- Demonstrate a basic understanding of the legal system in the United States and its application to the hospitality industry as measured by course grades of "C" or better.
- Demonstrate basic management skills of planning, organizing and controlling, as measured by course grades of "C."

#### DESCRIPTION OF PROGRAM

The HRM program now has the opportunity to teach and study the hospitality industry through the facilities located on the campus of UMES. The Richard A. Henson Center accommodate the growth experienced and anticipated by HRM and provides the proper facilities of sufficient quality and diversity to support academic needs now and in the future. The Henson Center is supported by state-of-the-art computer technology, culinary art, sensory analysis laboratories, demonstration kitchens, seminar rooms, exhibition space, dining facilities, classrooms, and faculty offices.

The HRM students now study Lodging Management, Computer Information and Technology Literacy, Culinary Arts Restaurant Management, Empowerment, and Service Orientation. The curriculum, through these five characteristics, has been established around the facilities and activities of the Henson Center.

In addition to the B.S. degree, the HRM program also grants minors in Culinary Arts, Restaurant Management, Travel and Tourism Management, and Food and Beverage Management.

#### CURRICULUM

Students wishing to pursue a major in Hotel and Restaurant Management must meet all University of Maryland Eastern Shore entrance requirements. Freshmen must take the McGraw-Hill Basic Skills Test during their first semester as a major and demonstrate ability at a determined grade level. In order to remain in the Hotel and Restaurant Management Program, the student must show progress in major and professional course work, attend and actively participate in the Hospitality Student Foundation (Eta Rho Mu), and demonstrate interest in the hospitality industry.

#### HOTEL & RESTAURANT MANAGEMENT PROFESSIONAL ATTIRE FOR THE PROFESSIONAL ATTITUDE

HRM's philosophy is to emphasize the development of professional hospitality management knowledge and skills through the study of theory in the classroom that, in turn, is experienced in supervisory, management and team-approached situations beginning with the freshman year. Given this philosophy, several HRM classes require specific professional dress codes and materials. To be fully prepared for these experiences, an itemized list is included herein.

**BUSINESS ATTIRE:** Monday and Wednesday are Professional Development days; industry recruiters visit with students, present their companies, and interview students for practicums, co-ops, internships, and entry level management positions. Dress requirements are as follows:

**MALES:**

- 1 Business suit (dark)
- 2 Dress shirts- long sleeve
- 1 Tie
- 1 Pair of dress shoes (dark with dark socks)

**FEMALES:**

- 1 Business suit (dark)
- 2 Dress blouses- long sleeve
- 1 Pair of dress shoes (dark with stockings)

**UNIFORMS & MATERIALS:** During the school year, all students are required to participate in departmental functions and various classes that require special attire and materials. The following list is provided with estimated costs.

<u>ITEMS</u>	<u>COST</u>
1 White chef's jacket	\$20.00
2 White cook's pants (hemmed)	\$20.00
2 White cook's shirts	\$15.00
1 Fabric chef's hat	\$10.00
White shoes/rubber soles with treads, and socks (Sports shoes are not considered safe)	\$55.00
2 White wing-top Tuxedo shirts	\$24.00
2 White undershirts or camisoles	\$20.00



2 pair Black dress slacks	\$25.00
Black shoes (black socks)	\$54.00
2 Black bow ties	\$11.00
1 Cummerbund, black	\$20.00
1 Set of Professional Knives	\$110.00

Includes:

- 1 10" Chef's knife
- 1 3.75" Paring Knife
- 1 6" Curved de-boning knife
- 1 Chef Sharpening Steel
- 1 Padlock

(May be purchased at Book Store located in the Student Services Center).

The suggested business attire, uniforms, and materials presented will contribute to the development of students' knowledge and skills necessary for success in the hospitality industry.



**HOTEL AND RESTAURANT MANAGEMENT**  
**Required and Recommended Courses for the Bachelor of Science Degree**

**I. General Education Requirements****TOTAL REQUIRED FOR GENERAL EDUCATION -42 Credits Minimum**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 Credits**

Students must select ENGL 203 plus two additional courses

**ARTS:** ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109, MUSI 310H

**HISTORY:** HIST 201, HIST 202, HIST 333, HIST 334, HIST 341, HIST 360

**LANGUAGE:** FREN 101, FREN 102, SPAN 101, SPAN 102

**LITERATURE:** ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, ENGL 218, ENGL 328, ENGL 329, ENGL 327, ENGL 401

**B. CURRICULUM AREA II - (Social and Behavioral Sciences) 6 Credits**

Students must select one course from each Social and Behavioral Sciences

**SOCIAL SCIENCES:** ECON 201 Principles of Economics I or 3  
 ECON 202 Principles of Economics II

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 200, HUEC 361, 3  
 HUEC 380, SOWK 200 or SOWK 200H,  
 PSYC 200, SOCI 201

**C. CURRICULUM AREA III - (Biological and Physical Sciences) 7-8 Credits**

Students must select two science courses which must include laboratories:

ANSC 114, BIOL 101, BIOL 103 (lab), BIOL 112, BIOL 114 (lab), CHEM 102, CHEM 103 (lab), CHEM 104 (lab), CHEM 111, CHEM 113 (lab), PHYS 101, PHYS 103 (lab), PHYS 121, PHYS 123 (lab), PHYS 122, PHYS 124 (lab), PHYS 161, PHYS 181H, PHYS 183H (lab), PHYS 182H, PHYS 184H (lab), PHYS 263, PLSC 184

**D. CURRICULUM AREA IV - (Mathematics) 3 Credits**

One course at or above the level of Survey of College Algebra--MATH 102

**E. CURRICULUM AREA V - (English Composition) 9 Credits**

Course	No.	Title	Credits
ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3
ENGL	310	Advanced Composition	3

**F. CURRICULUM AREA VI - (Emerging Issues) 7 Credits**

Course	No.	Title	Credits
EDHE	111	Personalized Health Fitness	3
GNST	100	First Year Experience	1
TMGT	306	Eco & Cultural Tourism	3

**II. MAJOR CORE REQUIREMENTS 55 Credits**

Course	No.	Title	Credits
FMGT	101	Applied Foodservice Sanitation	2
FMGT	110	Restaurant and Table Service	2
FMGT	211	Food Production I	3
FMGT	212	Food Production II	3
FMGT	301	Food and Beverage Cost Accounting	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
FMGT 350	Commercial Food Production	3
FMGT 371	Hospitality Purchasing	2
FMGT 372	Purchasing Laboratory	1
HMGT 100A	Professional Development	.5
HMGT 100B	Professional Development	.5
HMGT 101	Analysis of the Hospitality Industry	3
HMGT 110	Hospitality Experience	0
HMGT 120	Hospitality Experience	0
HMGT 130	Hospitality Experience	0
HMGT 200A	Professional Development	.5
HMGT 200B	Professional Development	.5
HMGT 220	Technology Management in the Hospitality Industry	4
HMGT 300A	Professional Development	.5
HMGT 300B	Professional Development	.5
HMGT 303	Hospitality Facilities Operations & Maintenance	3
HMGT 304	Hospitality Facilities Design Project	3
HMGT 340	Hospitality Industry Accounting	3
HMGT 350	Marketing Hospitality & Leisure Services	3
HMGT 401	Law and the Hospitality Industry	3
HMGT 402	Hotel Management and Operations	3
HMGT 440	Financial Analysis for the Hospitality Industry	3
HMGT 490	Hospitality Research I	3
HMGT 491	Hospitality Research II	3
HMGT 497	Professional Development	1
HMGT 498	Professional Development	1
<b>III. SUPPORTIVE COURSE REQUIREMENTS</b>		<b>6 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 132	Introduction to Business	3
BUAD 304	Business and Entrepreneurship	3
<b>IV. RECOMMENDED MAJOR ELECTIVE COURSES</b>		<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CARM 301	American Cuisine	3
CARM 303	International Cuisine	3
CARM 401	Garde Manger	3
CARM 403	Baking Basic Breads	3
CARM 405	Pastry Shop	3
CARM 407	Classical Kitchen	3
HMGT 301	Management Systems in the Hospitality Industry	3
HMGT 309	Beer, Wine & Spirits	2
HMGT 405	Resort and Convention Management	3
HMGT 470	Hospitality Management Internship (Fall)	3
HMGT 475	Hospitality Management Internship (Spring)	1-6
HMGT 480	Hospitality Management Internship (Summer)	1-6
HMGT 488	Hospitality Co-op	3
HMGT 499	Independent Study in Hotel and Restaurant Management	1-6
TMGT 130	Analysis of Travel and Tourism	3
TMGT 300	Tourism and Transportation	3
TMGT 306	Eco and Cultural Tourism	3
TMGT 309	Tourism Economics	3
TMGT 420	Marketing of Tourism Destination	3
TMGT 499	Independent Study	1-3
<b>TOTAL PROGRAM REQUIREMENTS</b>		<b>120</b>

## MINOR PROGRAMS

Four minor programs are offered by the Department: Culinary Arts Restaurant Management Program, Hotel Administration, Food and Beverage Management, and Travel and Tourism. The following course sequence for each minor is recommended for students with the necessary prerequisites. Consent of the Chairman of the Department of Hotel and Restaurant Management is required.

### CULINARY ARTS RESTAURANT MANAGEMENT PROGRAM

The Culinary Arts Restaurant Management (CARM) minor degree program is an extension of the Hotel and Restaurant Management program. This minor degree program is open to all students and provides basic knowledge and skills in culinary management principles.

<b><u>Culinary Arts Restaurant Management</u></b>			<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>		<b>Credits</b>
CARM 301	American Cuisine		3
CARM 303	International Cuisine		3
CARM 401	Garde Manger		3
CARM 403	Baking Basic Breads		3
CARM 405	Pastry Shop		3
CARM 407	Classical Kitchen		3

### FOOD AND BEVERAGE MANAGEMENT

The Food and Beverage Management minor degree program is open to all students and is designed primarily for students seeking majors in other areas. The program provides basic knowledge in the food service areas.

<b><u>Food and Beverage Management Minor</u></b>			<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>		<b>Credits</b>
FMGT 211	Food Production I		3
FMGT 212	Food Production II		3
FMGT 301	Food & Beverage Cost Accounting		3
FMGT 350	Commercial Food Production		3
FMGT 371	Hospitality Purchasing		2
FMGT 372	Purchasing Laboratory		1
FMGT	Elective		3

### HOTEL ADMINISTRATION

The Hotel Administration minor degree program is open to those students who have completed or will complete the following prerequisites: BUAD 132 Introduction to Business; BUAD 304 Small Business Management and Entrepreneurship.

The minor provides specialized knowledge of the hospitality industry with emphasis on the application of business principles to the hotel industry. It is recommended that students seek an interview with an academic advisor from the Department of Hotel and Restaurant Management to ensure that course sequence and scheduling are available.

<b><u>Hotel Administration Minor</u></b>			<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>		<b>Credits</b>
HMGT 101	Analysis of the Hospitality Industry		3
HMGT 301	Management Systems in the Hospitality Industry		3
HMGT 340	Hospitality Industry Accounting		3
HMGT 350	Marketing Hospitality & Leisure Services		3
HMGT 401	Law and the Hospitality Industry		3
HMGT 402	Hotel Management and Operations		3

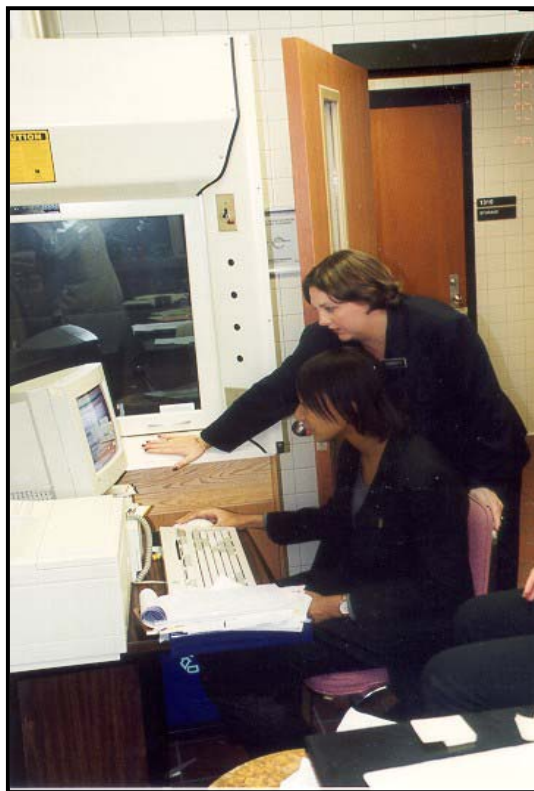
### TRAVEL AND TOURISM

The Tourism Management (TMGT) minor degree program is an extension of the Hotel and Restaurant Management program. This minor degree program is open to all students and provides basic knowledge and skills in Travel and Tourism with management principles.

#### Travel and Tourism

**18 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
TMGT 130	Analysis of Travel and Tourism	3
TMGT 300	Tourism Transportation Systems	3
TMGT 306	Eco & Cultural Tourism	3
TMGT 309	Tourism Economics	3
TMGT 420	Marketing of Tourism Destinations	3
TMGT 499	Independent Study	1-3



**HOTEL AND RESTAURANT MANAGEMENT  
PROGRAM**

**Off-Campus Recommended Course Sequence**

**Statewide Programs**

A Bachelor of Science degree in Hotel and Restaurant Management through the University of Maryland Eastern Shore is available at various locations. The Universities at the Shady Grove Center in Montgomery County and Catonsville in Baltimore County are models of the programs utilizing articulation agreements with community colleges and/or being housed on a community college campus. These off-campus programs are focused on the offering of Junior and Senior-level courses across the state. Freshman and Sophomore courses may be taken at various area community colleges. Program flexibility allows for full or part-time study and the transfer of a maximum of 60 credits of successful community college study.

**JUNIOR YEAR**

<b>FALL SEMESTER III</b>			<b>HOURS</b>
FMGT	301	Food & Bev. Cost Acct.	3
HMGT	300A	Professional Development	.5
HMGT	110	Hospitality Experience	0
HMGT	220	Tech. Mngt. in the Hosp. Ind.	4
TMGT	306	Eco and Tourism	3
		HRM Elective	3
		HRM Elective	<u>3</u>
<b>Semester Total</b>			<b>16.5</b>

<b>SPRING SEMESTER III</b>			<b>HOURS</b>
ENGL	305	Technical Writing	3
FMGT	371	Hospitality Purchasing	2
FMGT	372	Purchasing Lab	1
HMGT	120	Hospitality Experience	0
HMGT	300B	Professional Development	.5
HMGT	303	Hosp. Facil. Oper. & Maint.	3
HMGT	304	Hosp. Facil. Design Project	3
HMGT	402	Hotel Mngt. & Operations	<u>3</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER IV</b>			<b>HOURS</b>
BUAD	304	Small Bus. Mngt. & Entrep.	3
FMGT	350	Commercial Food Production	3
HMGT	130	Hospitality Experience	0
HMGT	350	Marketing Hosp. & Leisure Serv.	3
HMGT	497	Professional Development	1
HMGT	490	Hospitality Research I	3
		HRM Elective	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER IV</b>			<b>HOURS</b>
HMGT	401	Law & the Hosp. Industry	3
HMGT	440	Financial Analy. For the Hosp.	3
HMGT	491	Hospitality Research II	3
HMGT	498	Professional Development	1
		HRM Elective	<u>3</u>

**Semester Total** 13

**HOTEL AND RESTAURANT MANAGEMENT  
PROGRAM**

**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
BUAD	132	Introduction to Business	3
ENGL	101	Basic Composition I	3
FMGT	101	Applied Food Service Santa.	2
		GER CURR. AREA III	3
GNST	100	First Year Experience	1
HMGT	100A	Professional Development	.5
HMGT	101	Analysis of Hosp. Industry	<u>3</u>
<b>Semester Total</b>			<b>15.5</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDHE	111	Personal Health Fitness	3
ENGL	102	Basic Composition II	3
FMGT	110	Restaurant & Table Service	2
		GER CURR. AREA III	4
		GER CURR. AREA IV	3
HMGT	100B	Professional Development	<u>.5</u>
<b>Semester Total</b>			<b>15.5</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ECON	201	Principles of Economics I <u>or</u>	
ECON	202	Principles of Economics II	3
ENGL	203	Fund. of Contemp. Speech	3
FMGT	211	Food Production I	3
		GER CURR. AREA I	3
HMGT	110	Hospitality Experience	0
HMGT	200A	Professional Development	.5
		HRM Elective	<u>3</u>
<b>Semester Total</b>			<b>15.5</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
FMGT	212	Food Production II	3
		GER CURR. AREA I	3
		GER CURR. AREA II	3
HMGT	200	Professional Development	.5
HMGT	220	Tech. Mngt. Hospitality Industry	4
		HRM Elective	<u>3</u>
<b>Semester Total</b>			<b>16.5</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	305	Advanced Composition	3
FMGT	301	Food & Beverage Cost Acct.	3
FMGT	350	Commercial Food Production	3
HMGT	120	Hospitality Experience	0
HMGT	300A	Professional Development	.5
HMGT	301	Mngt. Syst. Hospitality Industry	3
HMGT	303	Hosp. Facil. Oper. & Maint.	<u>3</u>
<b>Semester Total</b>			<b>15.5</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
FMGT	371	Hospitality Purchasing	2
FMGT	372	Purchasing Lab	1
HMGT	300B	Professional Development	.5
HMGT	304	Hosp. Facil. Design Project	3
HMGT	340	Hospitality Industry Accounting	3
HMGT	350	Marketing Hospitality	3
TMGT	306	Eco and Cultural Tourism	<u>3</u>
<b>Semester Total</b>			<b>15.5</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
HMGT	130	Hospitality Experience	0
HMGT	402	Hotel Mngt. & Operations	3
HMGT	440	Financial Analysis & Hosp. Ind.	3
HMGT	490	Hospitality Research I	3
HMGT	497	Professional Development	1
		HRM Elective	3
		HRM Elective	<u>2</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
		HMGT Elective	3
HMGT	401	Law & the Hospitality Industry	3
HMGT	491	Hospitality Research II	3
HMGT	498	Professional Development	1
		HRM Elective	<u>3</u>
<b>Semester Total</b>			<b>13</b>

**Total Credits Required            120**

## COURSE DESCRIPTIONS

### CULINARY ARTS RESTAURANT MANAGEMENT

**CARM 301 American Cuisine** **3 crs.**  
In this course, students examine menus reflecting the influence from New England, New York, California and the mid-western states. Daily production focuses on braising, stewing and roasting. The course format is a 50-minute lecture and one four-hour laboratory per week. Chef knives and uniforms are required. Prerequisite: FMGT 212.

**CARM 303 International Cuisine** **3 crs.**  
In this course, students are introduced to the techniques, ingredients, and spices unique to a variety of international cuisines. Students research and prepare representative regional menu items from the European and American continents. Timing, organization, mise en place, and plate presentation are stressed. The course format is a 50-minute lecture and one four-hour laboratory per week. Chef knives and uniforms are required. Prerequisite: FMGT 212.

**CARM 401 Garde Manager** **3 cr.**  
This course introduces students to the modern and traditional techniques in the preparation of cold entrees, pates, terrines, galantine chaud-froid, and ice carving. Students plan, organize, and direct buffets. This course also concentrates on the practical techniques of showpieces and centerpieces. The course format is a 50-minute lecture and one four-hour laboratory per week. Prerequisite: FMGT 212.

**CARM 403 Baking Basic Breads** **3 crs.**  
The second semester of a two-semester sequence, this course introduces students to the fundamental concepts, skills, and techniques of baking. Special emphasis is placed on the study of ingredient functions, product identification, and weights and measures as applied to the baking industry. Yeast-raising dough, rolled dough, pie dough, and cake mixing methods are studied, as well as preparation of puddings and pastry creams and finishing techniques. The course format is a 50-minute lecture and one four-hour laboratory per week. Prerequisite: FMGT 212.

**CARM 405 Pastry Shop** **3 crs.**  
In this course, emphasis is placed on pastry work and management, such as the production of specialty breads, including brioche, puff pastry, Danish, and croissants. Cookie and tart dough, torts and specialty cakes are covered. This course also introduces the student to chocolate ganache, piping with gelee, Bavarian, and marzipan. The course format is a 50-minute lecture and one four-hour laboratory per week. Chef knives and uniforms are required. Prerequisite: FMGT 212.

**CARM 407 Classical Kitchen** **3 crs.**  
In this course, students examine the history and terms relating to classical menus, food preparation, and

presentation. Students prepare a classical French menu each day following the principles and techniques of Auguste Escoffier. Emphasis is placed on organization, timing, and platter and plate presentation. The course format is a 50-minute lecture and one four-hour laboratory per week. Chef knives and uniforms are required. Prerequisite: FMGT 212.

### FOOD AND BEVERAGE MANAGEMENT

**FMGT 101 Applied Food Service Sanitation** **2 crs.**  
This course covers, in detail, the principles and practices of sanitation and hygiene as applied to the food service industry. Successful completion of the course qualifies students for a National Restaurant Association Educational Foundation Sanitation Certificate. The emphasis of the course is on the training of supervisory personnel in sanitation procedures.

**FMGT110 Restaurant and Table Service** **2 crs.**  
In this introductory class to the organization and management of the front of the house, students learn to plan service, write standards, schedule labor, and execute service for up to 50 customers. The course format is a 50-minute lecture and two three-hour laboratory periods per week. A uniform is required.

**FMGT 211 Food Production I** **3 crs.**  
This introductory course in food production includes food chemistry, basic cooking techniques, preparing utensils and equipment, and product evaluation. The course format is two 50-minute lectures and two two-hour laboratory periods per week. Chef knives and two white uniforms are required.

**FMGT 212 Food Production II** **3 crs.**  
In this advanced course in food production, students learn to plan menus, write recipes, schedule labor and production, and execute meals for up to 50 customers. The course format is a 50-minute lecture and one five-hour laboratory per week. Chef knives and two white uniforms are required. Prerequisite: FMGT 211.

**FMGT 301 Food & Beverage Cost Accounting** **3 crs.**  
Emphasis in this course is on the management and control of food services. The principles and theories of quantitative and qualitative control from the operational and accounting viewpoints are stressed. Laboratory sections are scheduled as needed. Prerequisite: HRM Department Major.

**FMGT 350 Commercial Food Production** **3 crs.**  
Preparation and service for large volume commercial and banquet operations are the foci of this course. It includes menu layout, design, and costing, preparation techniques, service, terminology, facilities, tools and equipment, menus, and recipe development. The course format is two 50-minute lectures and one five-hour laboratory per week. Prerequisite: FMGT 212



**FMGT 371 Hospitality Purchasing 2 crs.**  
In this study of the selection, purchase and storage of hospitality supplies, with special emphasis on foods, students will learn to survey purveyors, write specifications, place orders, evaluate quality vs. cost, and keep purchasing financial records. FMGT 372 should be taken concurrently. Prerequisite: HRM Department Major

**FMGT 372 Purchasing Laboratory 1 cr.**  
In this course, students apply the theories learned in FMGT 371 (Hospitality Purchasing) to actual purchasing, receiving, storing, issuing, and utilizing accounting principles in appropriate situations. FMGT 371 should be taken concurrently. Prerequisite: HRM Department Major

### HOTEL AND RESTAURANT MANAGEMENT

**HMGT 101 Introduction to the Hospitality Industry 3 crs.**  
The course provides the student with an understanding of the scope and complexity of the hospitality industry. The student is introduced to the opportunities available and the training necessary to achieve a successful hospitality management career. Laboratory sections are scheduled as needed.

**HMGT 110, 120, 130 Hospitality Experience 0 cr.**  
Students are required to obtain a total of 1000 hours of acceptable hospitality experience during their freshman (110), sophomore (120) and junior (130) years. It is recommended that the student work a minimum of nine weeks per summer. The 1000-hour hospitality experience requirement may be obtained prior to enrollment, during studies or after completion of course work, but must be completed before graduation.

**HMGT 220 Technology Management in the Hospitality Industry 4 crs.**  
An introduction to the basic and specific use of computers in the hospitality industry, this course features a hands-on approach with two 50-minute lectures and two 100-minute laboratories each week. It develops students abilities in management and decision-making and hospitality software applications. Prerequisite: HRM Department Major

**HMGT 301 Management Systems in the Hospitality Industry 3 crs.**  
In this detailed study of the management systems in the hotel front office, students are able to identify and evaluate the information systems used in the hotel to facilitate management decision making. The course includes inter-departmental communications, managerial reporting, computer applications, and a review of future trends. Laboratory sections are scheduled as needed.

**HMGT 100A/B, 200A/B, 300A/B Professional Development .5 cr.**  
This course provides students the opportunity to view aspects of the hospitality industry and related areas that are not available in regularly scheduled courses. It includes,

but is not limited to, professional conduct, guest speakers, industry visitations, student presentations, and films. It is required of all majors, each semester (A –fall, B –spring) of their freshman, sophomore and junior years. Grading will be satisfactory/ unsatisfactory depending on the student's end-of-semester status in Eta Rho Mu.

**HMGT 303 Hospitality Facilities, Operations, and Maintenance 3 crs.**

This course includes a study of basic engineering, public safety, building codes, equipment selection, and design procedures related to the hospitality industry. In addition, all hotel operating departments are reviewed and discussed.

**HMGT 304 Hospitality Facilities Design Project 3 crs.**  
In this course the student completes a hospitality facilities design project. The project draws on previous work and includes facility design, market analysis, and budgetary control. Prerequisite: FMGT 301, HMGT 303.

**HMGT 309 Beer, Wine and Spirits 2 crs.**  
The major emphasis in this course is on wines in this detailed study of the classification, production, identification, and service of alcoholic beverages. A systematic approach to tasting and evaluating is utilized. A term project is required. The course format is one 50-minute lecture and two two-hour laboratory periods per week. Prerequisites: HRM major and at least 21 years old.

**HMGT 340 Hospitality Industry Accounting 3 crs.**  
In this study of managerial accounting applied to the hospitality industry, topics covered include financial statements, uniform systems, analytical analysis, working capital, cash flow, and management information systems. The student learns the accounting principles involved in management decision making. Prerequisites: Curriculum Area IV Mathematics, HRM Department Major.

**HMGT 350 Marketing Hospitality and Leisure Services 3 crs.**  
Focusing on the application of marketing principles and techniques to the hospitality and travel industries, this course examines how the marketing concepts of product, place, price and promotion, can be effectively utilized in the hospitality industry. Practical applications of promotion publicity, public relations, and advertising are demonstrated in case studies and class assignments.

**HMGT 401 Law and the Hospitality Industry 3 crs.**  
A study of laws applicable to the hospitality industry, this course includes the host's responsibility, negligence, liability, contract, torts, regulations, and insurance.

**HMGT 402 Hotel Management and Operations 3 crs.**  
Supervisor and employee relations with emphasis on human relations, organization, and manpower planning and development, are the foci of this course. Also, employee compensation and benefits in the hospitality industry, as well as, ethics and policies, are included. Laboratory sections are scheduled as needed.

**HMG 405 Resort & Convention Management 3 crs.**

A study of resort and club planning, development, operation, and management, this course includes the planning and servicing of meetings, conventions, and other group business functions.

**HMG 440 Financial Analysis for the Hospitality Industry 3 crs.**

Financial analysis concepts and techniques necessary for managerial decision making are emphasized through studying their applications to the hospitality service industries. Prerequisites: HMG 340, HRM Department Major.

**HMG 470, 475, 480 Hospitality Management 1-6 crs. Internship**

A fall (spring, summer) based course designed to permit the student to obtain an applied management internship in a specialized area of the hospitality industry, this course is structured to meet the needs of both the student and the hospitality operation offering the management internship. The enrolled student is assigned an HRM faculty member with whom he/she will work out a specific plan of study. Credit hours vary in accordance with the type and amount of work assigned. Prerequisites: FMGT 301, HMG 301, HMG 303, HMG 340, and written permission of HRM Department Chairman.

**HMG 488 Hospitality Co-op 3 crs.**

A summer semester field-based course designed to permit the student to obtain applied experience in a specialized area of the hospitality industry, this course is structured to meet the needs of both the student and the hospitality operation offering the co-op. The enrolled student is assigned an HRM faculty member with whom he/she will work out a specific plan of study. Prerequisites: Written permission of HRM Department Chairman and BUAD 132, FMGT 101, FMGT 211, FMGT 212, HMG 101.

**HMG 490 Hospitality Research I 3 crs.**

This first semester of a two-semester senior-level, project-based hospitality course requires departmental approval and close liaison with the course instructor. The students are assigned an approved project designed to synthesize the learning of other departmentally offered classes. Students write term papers, manage hospitality activities, perform accounting and financial analysis, and develop new operating procedures. Prerequisite: Senior level HRM major or written permission of HRM instructor.

**HMG 491 Hospitality Research II 3 crs.**

This course is the second semester of the senior-level hospitality projects-based class (see HMG 490). Prerequisite: HMG 490 or written permission of HRM instructor.

**HMG 497 Professional Development 1 cr.**

This course is an extension of HMG 100A, 200A, and 300A- Professional Development. In addition, each student

is expected to organize, chair, and successfully accomplish the objectives of one Eta Rho Mu committee. Prerequisite:

Senior-level HRM major or written permission of HRM Department Chairman.

**HMG 498 Professional Development 1 cr.**

This course is an extension of HMG 100B, 200B, and 300B- Professional Development. In addition, each student is expected to organize, chair, and successfully accomplish the objectives of one Eta Rho Mu committee. Prerequisite: Senior-level HRM major or written permission of HRM Department Chairman.

**HMG 499 Independent Study in Hotel and Restaurant Management 1-3 crs.**

The course is designed to permit the student to obtain directed study in a specialized area of the hospitality industry. The course is structured to meet the needs of the student. The enrolled student is assigned a faculty member with whom he will work out a specific plan of study. The course is similar to tutorials in structure. The student has the primary responsibility of completing the assignments. Credit hours may vary in accordance with the need and amount of work assigned. Prerequisite: Written permission of HRM Department Chairman, 3.0 GPA, and Junior/Senior status.

**TRAVEL AND TOURISM MANAGEMENT****TMGT 130 Analysis of Travel and Tourism 3 crs.**

In this study of the components of the tourism industry and their interrelationships, the roles of the tour companies, travel agencies, government bureaus, tourism associations, and others who assemble, promote, and sell tourism services will be investigated.

**TMGT 300 Tourism Transportation Systems 3 crs.**

An analysis of major land, sea, and air transportation systems supporting travel will be undertaken. Key components include airlines, cruise ships, buses, rail, and transportation packages.

**TMGT 306 Eco & Cultural Tourism 3 crs.**

This course is a study of purposeful travel to natural habitats to create an understanding of the cultural and natural history pertaining to the environment. The course emphasizes the philosophy of not altering the ecosystem, while producing economic benefits to local people and governments that encourage the preservation of the inherent resources of the environments locally and elsewhere.

**TMGT 309 Tourism Economics 3 crs.**

This course includes the application of economic principles and research methods to tourist and tourism industry behavior.

**TMGT 420 Marketing of Tourism Destinations 3 crs.**

This course includes procedures for analyzing the tourism and travel resources of a region and guidelines for

formulating destination-oriented marketing goals and strategies.

**TMGT 499 Independent Study 3 crs.**

This course provides a comprehensive review of the tourism planning and policy process used to develop or modify major travel destination areas.



**FACULTY****Dixon, John M.**

Assistant Professor and Chair  
B.S. University of Montana  
M.B.A. Boston University  
J.D. New England School of Law

**Binns, Karl V.**

Coordinator Off-Campus Programs  
B.S. Morris Brown College  
M.B.A. Morgan State University

**Brizek, Michael G.**

Director, Shady Grove Programs  
B.S. University of South Carolina  
M.S. University of South Carolina  
Ph.D. Virginia Polytechnic Institute and State University

**Childs, Oliver B.**

Assistant Professor  
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**Whittingham, Ralston G.**

Chef/Lecturer  
A.A. Culinary Institute of America  
B.S. University of Maryland European Division  
B.S. University of Maryland Eastern Shore

## DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

### Dean:

Eddie Boyd, Ph.D.

### Chair and Associate Professor:

Daniel Okunbor, Ph.D.

### Professor Emeritus:

Frank Lin, Ph.D.

### Associate Professor:

Michael Almeida, Ph.D.

### Assistant Professors:

**Albert E. Casavant, Ph.D.**

William E. Chapin, Ph.D.

Joseph Dudis, Ph.D.

Peter Ezekwenna, Ph.D.

Robert Johnson, Jr., Ph.D.

Malik Malik, Ph.D.

Martin Ndumu, Ph.D.

Daniel Seaton, Ph.D.

Mark Williams, Ph.D.

### Lecturers:

David Alls, M.S.

Rakesh Arya, M.S.

Tina Dube, M.S. (Study Leave)

Lois Jones-Douglas, M.S.

Annette Noble, M.S.

Manal Salamabi, M.S.

Carolyn Shackelford, M.S.

Ojiabo Ukoha, M.S.

George Wooley, M.S.

Shewan Yoo, Ph.D.

## MISSION

The mission of the Department of Mathematics and Computer Science is the development and dissemination of the knowledge of quantitative and algorithmic skills and methods necessary in our technological society.

## GOALS

- Providing service to the entire University community, from entering freshmen with weak academic backgrounds to graduate students and faculty of other departments who need to upgrade their quantitative and algorithmic skills;
- Preparing graduate and undergraduate students in Mathematics and Computer Science for advanced study, teaching in secondary schools, and careers as practitioners in the field;

- Advancing knowledge in the areas of mathematics and computer science through research by faculty and students; and,
- Making the results of current mathematical, statistical, and computer science methods and techniques available to the University and surrounding communities.

## OBJECTIVES

The objectives of the programs offered in the Department of Math and Computer Science are

- the ability to think clearly, independently, and critically;
- the ability to compose and interpret mathematical statements;
- a strong foundation of classical and modern concepts in mathematics and computer science for majors;
- the understanding and successful application of basic quantitative and algorithmic skills and techniques necessary for non-majors to enable them to analyze and solve problems;
- the necessary skills and competencies, both theoretical and practical, involved in the use of computers as a tool in solving problems in the rapidly expanding number of fields now influenced by computer science technology;
- the necessary specialized background required for students planning to continue with advanced graduate coursework or pursue graduate degrees;
- general knowledge of the design, implementation, and application of software systems to “real life” problems for computer science majors;
- functional knowledge of computer hardware systems for computer science majors ; and
- effective communication skills in mathematics and computer science both orally and in writing.

Likewise, the Department seeks to develop in each faculty member;

- the ability to teach a broad range of subjects for its service role, majors, graduates and for the community;
- skills to keep abreast in the fields of mathematics and computer science through research in appropriate areas of academic specialization; and
- skills in counseling students, colleagues, and community members in the planning of their academic careers.

## CURRICULUM

In meeting its goals, the Department of Mathematics and Computer Science serves all departments of the University. It offers undergraduate majors in Mathematics (teaching and non-teaching); in Computer Science (directed towards Business Applications and Scientific Applications); and, a graduate degree program in Applied Computer Science. Students in the department may specialize in classical mathematics, probability and statistics, applied mathematics, and/or computer science.

## DEGREE PROGRAMS

The Department offers a full range of undergraduate mathematics and computer science courses, both for its majors and for service to almost every other University department. The Department also provides graduate courses in mathematics and in computer science for its own graduate programs, for majors in other UMES graduate programs, and for eligible members of the local community.

### **Major in Mathematics**

This Program covers a broad spectrum of pure mathematics. Courses include Calculus, Real and Complex Analysis, Number Theory, Topology, Linear Algebra, Statistics, and Probability. It is designed for persons who wish to pursue careers in statistics, actuarial science, mathematics modeling, and graduate study in Mathematics or Statistics.

### **Major in Mathematics-Teaching**

The content of this program is similar to Math non-teaching. It is supplemented by professional education coursework. This program is designed for persons who wish to pursue careers in mathematics education.

### **Major in Computer Science toward Business**

The content of this program is designed to train students in the theory and application of the most current computing technology. Courses include Software Engineering, Operations Research, Computer Organization, Data Structure, Theory of Computation, Programming Languages, and Operating Systems. Courses such as Accounting and Operations & Decision Theory augment the computer science curriculum. This program is designed for persons who wish to pursue careers in information systems, operations research, and database management.

### **Major in Computer Science toward Science**

The content of this program is similar to Computer Science towards Business, except that more emphasis is placed on Scientific Computing. This program is ideal for persons who wish to pursue graduate study or careers in programming, software engineering, and networks/communication.

## COMPUTING RESOURCES

The Department has a Sun Lab consisting of Ultra 10 workstations and a Sun Enterprise 450 server and three Computer Laboratories consisting of high-end Pentium computers. Users have access to a wide variety of Windows and UNIX type microcomputers, plus special purpose facilities for graphics and parallel processing. These computer facilities and several other campus wide computer facilities are available for students.

**MATHEMATICS (NON-TEACHING)**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 40-42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities) 9 credits**

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech <b>and</b>	3
FREN 101	Fundamentals of French I	3
FREN 102	Fundamentals of French II <b>or</b>	3
SPAN 101	Fundamentals of Spanish I	3
SPAN 102	Fundamentals of Spanish II	3

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 credits**

Students must select one course in each of two disciplines:

**SOCIAL SCIENCES:** ECON 201 **or** ECON 201H, ECON 202 **or** ECON 202H,  
GEOG 201 **or** GEOG 202, HIST 101 **or** HIST 111H,  
HIST 102 **or** HIST 112H, POLI 200 **or** POLI 200H, POLI 342  
SOCI 101 **or** SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 200,  
SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III - (Biological and Physical Sciences) 8 credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Lab	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Lab <b>or</b>	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Lab	1

**D. Curriculum Area IV - (Mathematics) 4-6 credits**

Course No.	Title	Credits
MATH 109	College Algebra <b>and</b>	
MATH 110	Trigonometry & Analytical Geometry <b>or</b>	6
MATH 111/H	Elementary Mathematical Analysis/Honors <b>or</b>	4
MATH 112	Calculus I	4

**E. Curriculum Area V - (English Composition) 9 credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <b>or</b>	
ENGL 101H	Honors Basic Composition I	3
ENGL 102	Basic Composition II <b>or</b>	
ENGL 102H	Honors Basic Composition II	3
ENGL 305	Technical Writing <b>or</b>	
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 4 credits**

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3

**II. Program Core Requirements 37-41\* credits**

Course No.	Title	Credits
MATH 112	Calculus I	4
MATH 211	Calculus II	4
MATH 212	Calculus III	4
MATH 232	Introduction to Linear Algebra	3
MATH 309	Introduction to Probability	3
MATH 310	Mathematical Statistics I	3
MATH 321	Differential Equations	4
MATH 342	Advanced Calculus	3
MATH 411	Modern Algebra	3
MATH 443	Real Analysis I	3
MATH 490	Senior Seminar	1
CSDP 341	Numerical Analysis I	3
CSDP 350	Linear Programming	3

\*37 credit hours if MATH 112 is used to fulfill General Education Curriculum Area IV

**Major Electives: 9 credits**  
Any **three** of the following

Course No.	Title	Credits
MATH 302	Number Theory	3
MATH 410	Mathematical Statistics II	3
MATH 412	Linear Algebra	3
MATH 440	Topology	3
MATH 444	Real Analysis II	3
MATH 442	Complex Analysis	3
MATH 455	Mathematical Models	3
CSDP 442	Numerical Analysis II	3

(Other 300 and 400 level courses in Mathematics and in the Computer Sciences may be substituted for some of these electives, with the permission of the Department Chair, in cases where it is judged that the substitution will be equally beneficial.)

**III. Supportive Course Requirements 16 credits**

Course No.	Title	Credits
PHYS 181H	Introductory Physics I (Honors)	3
PHYS 183H	Introductory Physics I (Honors) Lab	1
PHYS 182H	Introductory Physics II (Honors)	3
PHYS 184H	Introductory Physics II (Honors) Lab	1
CSDP 220	Introduction to Computer Programming	4
CSDP 222	Advanced Programming	4

**IV. Free Elective Courses 14-18 credits**

(It is advisable to take 300 and 400 upper level computer science, natural sciences, engineering, and technology courses relevant to fields of interest)

**TOTAL PROGRAM REQUIREMENTS 120-122**



## MATHEMATICS (TEACHING)

### I. General Education Requirements

#### TOTAL REQUIRED FOR GENERAL EDUCATION - 36-38 Credits

Students should consult with their freshman or departmental advisor when making course selections.

#### A. Curriculum Area I - (Arts and Humanities) 9 credits

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech <b>and</b>	3
FREN 101	Fundamentals of French I	3
FREN 102	Fundamentals of French II <b>or</b>	3
SPAN 101	Fundamentals of Spanish I	3
SPAN 102	Fundamentals of Spanish II	3

#### B. Curriculum Area II - (Social and Behavioral Sciences) 6 credits

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 201H, ECON 202 or ECON 202H,  
 GEOG 201 or GEOG 202, HIST 101 or HIST 111H,  
 HIST 102 or HIST 112H, POLI 200 or POLI 200H, POLI 342  
 SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361, PSYC 200,  
 SOCI 201, SOWK 200 or SOWK 200H

#### C. Curriculum Area III - (Biological and Physical Sciences) 8 credits

Course No.	Title	Credits
PHYS 181H	Introductory Physics I (Honors)	3
PHYS 183H	Introductory Physics I (Honors) Lab	1
PHYS 182H	Honors Introductory Physics II	3
PHYS 184H	Introductory Physics II (Honors) Lab	1

#### D. Curriculum Area IV - (Mathematics) 4-6 credits

Course No.	Title	Credits
MATH 109	College Algebra <b>and</b>	
MATH 110	Trigonometry & Anal. Geometry <b>or</b>	6
MATH 111/H	Elementary Mathematical Analysis/Honors <b>or</b>	4
MATH 112	Calculus I	4

#### E. Curriculum Area V - (English Composition) 9 credits

Course No.	Title	Credits
ENGL 101	Basic Composition I <b>or</b>	3
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <b>or</b>	3
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305	Technical Writing <b>or</b>	3
ENGL 310	Advanced Composition	3

**II. Program Core Requirements 36-40\* credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
MATH 112	Calculus I	4
MATH 211	Calculus II	4
MATH 212	Calculus III	4
MATH 232	Introduction to Linear Algebra	3
MATH 301	College Geometry	3
MATH 302	Number Theory	3
MATH 304	History of Mathematics and Computer Science	3
MATH 309	Introduction to Probability	3
MATH 310	Mathematical Statistics I	3
MATH 321	Differential Equations	4
MATH 342	Advanced Calculus	3
MATH 411	Modern Algebra	3

\*36 credit hours if MATH 122 is used to fulfill General Education Curriculum Area IV

**Professional Education Requirements 42 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200	Introduction to Contemporary Education	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 410	Teaching Reading in the Content Areas: Part II	3
EDCI 400	Senior Seminar in Education	3
EDCI 425C	Curriculum and Instruction in the Mathematics	3
EDCI 460/480	Teaching Internship: Secondary Education	12
EDSP 200	Introduction to Special Education	3
PSYC 305	Development Psychology	3
PSYC 307	Educational Psychology	3

**III. Supportive Course Requirements 8 credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CSDP 220	Introduction to Computer Programming	4
CSDP 222	Advanced Programming	4

**TOTAL PROGRAM REQUIREMENTS****126-128**

**Department of Mathematics and Computer Science Faculty**

**MAJOR IN COMPUTER SCIENCE DIRECTED TOWARDS SCIENTIFIC APPLICATIONS**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 40-42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I - (Arts and Humanities) 9 credits**

Course No.	Title	Credits
ENGL 203	Fundamentals of Contemporary Speech <b>and</b>	3
FREN 101	Fundamentals of French I	3
FREN 102	Fundamentals of French II <b>or</b>	3
SPAN 101	Fundamentals of Spanish I	3
SPAN 102	Fundamentals of Spanish II	3

**B. Curriculum Area II - (Social and Behavioral Sciences) 6 credits**

Students must select one course from each of three categories

**SOCIAL SCIENCES:** ECON 201 **or** ECON 201H, ECON 202 **or** ECON 202H,  
 GEOG 201 **or** GEOG 202, HIST 101 **or** HIST 111H,  
 HIST 102 **or** HIST 112H, POLI 200 **or** POLI 200H, POLI 342  
 SOCI 101 **or** SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEDC 220, HUEC 361,  
 PSYC 200, SOCI 201, SOWK 200 or SOWK 200H

**C. Curriculum Area III - (Biological and Physical Sciences) 8 credits**

Course No.	Title	Credits
BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
BIOL 112	Principles of Biology II	3
BIOL 114	Principles of Biology II Laboratory <b>or</b>	1
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Laboratory	1
CHEM 112	Principles of Chemistry II	3
CHEM 114	Principles of Chemistry II Laboratory	1

**D. Curriculum Area IV - (Mathematics) 4-6 credits**

Course No.	Title	Credits
MATH 109	College Algebra <b>and</b>	
MATH 110	Trigonometry & Anal. Geometry <b>or</b>	6
MATH 111/H	Elementary Mathematical Analysis/Honors <b>or</b>	4
MATH 112	Calculus I	4

**E. Curriculum Area V - (English Composition) 9 credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I <b>or</b>	3
ENGL 101H	Basic Composition I (Honors)	3
ENGL 102	Basic Composition II <b>or</b>	3
ENGL 102H	Basic Composition II (Honors)	3
ENGL 305	Technical Writing <b>or</b>	3
ENGL 310	Advanced Composition	3

**F. Curriculum Area VI - (Emerging Issues) 4 credits**

Course No.	Title	Credits
GNST 100	First Year Experience	1
EDHE 111	Personalized Health Fitness	3

**II. Program Core Requirements 54-58\* credits**

Course No.	Title	Credits
MATH 112	Calculus I	4
MATH 210	Elementary Statistics	3
MATH 211	Calculus II	4
MATH 232	Introduction to Linear Algebra	3
CSDP 220	Introduction to Computer Programming	4
CSDP 222	Advanced Programming	4
CSDP 250	Data Structures	3
CSDP 301	Machine and Assembly Languages	3
CSDP 305	Software Engineering I	3
CSDP 321	Introduction to Discrete Structures	3
CSDP 341	Numerical Analysis I	3
CSDP 350	Linear Programming	3
CSDP 401	Operating Systems	3
CSDP 402	Computer Networks/Communications	3
CSDP 403	Computer Language Theory	3
CSDP 404	Database Management Systems	3
CSDP 450	Advanced Data Structures/Algorithm Analysis	3
CSDP 451	Computer Organization	3

**\*54 credit hours if MATH 112 is used to fulfill General Education Curriculum Area IV**

**III. Supportive Course Requirements 8 credits**

Course No.	Title	Credits
PHYS 121	General College Physics I <b>and</b>	3
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II <b>and</b>	3
PHYS 124	General College Physics II Lab <b>or</b>	1
PHYS 181H	Introductory Physics I (Honors) <b>and</b>	3
PHYS 183H	Introductory Physics I (Honors) Laboratory <b>or</b>	1
PHYS 182H	Introductory Physics II (Honors) <b>and</b>	3
PHYS 184H	Introductory Physics II (Honors) Laboratory	1

**IV. Free Elective Courses 14-18 credits**

**(It is advisable to take 300 and 400 upper level computer science, natural sciences, engineering, and technology courses relevant to fields of interest)**

**TOTAL PROGRAM REQUIREMENTS 120-122**

**MAJOR IN COMPUTER SCIENCE DIRECTED TOWARD BUSINESS APPLICATIONS**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION - 40-42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

<b>A.</b>	<b>Curriculum Area I - (Arts and Humanities)</b>	<b>9 credits</b>																																							
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## MINOR PROGRAMS

A grade of “C” or better is required in the courses taken to satisfy the minor. In accordance with the particular guidelines given below, specific minor programs for individual students will be set up and approved by the Chair of the Department, or a designee, in consultation with the student involved. **Courses used to satisfy degree requirements cannot be applied to the requirements for minors.**

### MATHEMATICS

Students interested in a minor in Mathematics should complete the following courses: MATH 110 or MATH 111H, MATH112, MATH 211 and at least three 3-credit 300 and 400 level courses in mathematics or computer science. **Twenty-one (21)** credits are needed for the minor.

### COMPUTER SCIENCE

Students who want minors in Computer Science and are interested in business applications should complete the following courses: CSDP 220, CSDP 222, CSDP 250, CSDP 301, CSDP 350, and two 3-credit 400-level computer science course. Twenty-one (21) credits are needed for the minor.

Students who want minors in Computer Science and are interested in scientific applications should complete the following courses: CSDP 220, CSDP 222, CSDP 250, CSDP 321, CSDP 350, and two 3-credit 400-level computer science courses. Twenty-one (21) credits are needed for the minor.

Students who want minors in Computer Science but are **not** interested in either business or scientific applications should complete the following courses: CSDP 220, CSDP 222, CSDP 250, CSDP 321, CSDP 350, plus one 3 credit 300-level computer science course and one 3-credit 400-level computer science course. Twenty-one (21) credits are needed for the minor.



**COMPUTER SCIENCE**  
**(Directed toward Business Applications)**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	111H	Hnrs. Elementary Analysis	4
BIOL	111	Prin of Biology I <b>and</b>	
BIOL	113	Prin of Biology Lab <b>or</b>	
CHEM	111	Prin of Chemistry I <b>and</b>	
CHEM	113	Prin of Chemistry I Lab	4
		GER CURR. AREA I	
		Art or History	3
GNST	100	First Year Experience	<u>1</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
BIOL	112	Prin. of Biology II <b>and</b>	
BIOL	114	Prin. of Biology II Lab <b>or</b>	
CHEM	112	Prin. of Chemistry II <b>and</b>	3
CHEM	113	Prin of Chemistry II Lab	1
MATH	112	Calculus I	4
EDHE	111	Personalized Health Fitness	3
		GER CURR. AREA II:	
		Art or History	<u>3</u>
		<b>Semester Total</b>	<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund of Contemp Speech	3
MATH	210	Elementary Statistics	3
CSDP	220	Intro to Computer Program	4
BUAD	132	Intro to Business	3
FREN	101	Fundamentals of French I <b>or</b>	
SPAN	101	Fundamentals of Spanish I	<u>3</u>
		<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	222	Advanced Programming	4
MATH	212	Calculus III	4
FREN	102	Fundamentals of French I <b>or</b>	
SPAN	102	Fundamentals of Spanish II	3
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	<u>3</u>
		<b>Semester Total</b>	<b>14</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP	250	Intro to Data Structures	3
CSDP	301	Machine & Assembly Lang	3
		FREE Elective	3
ACCT	201	Intro. Financial Accounting I	3
CSDP	240	Prin. of Data Processing	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	232	Intro to Linear Algebra	3
CSDP	321	Discrete Structures	3
CSDP	241	File Structures	3
CSDP	305	Software Engineering I	3
ACCT	202	Intro Financial & Man Acct	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP	350	Linear Programming	3
CSDP	401	Operating Systems	3
CSDP	403	Computer Lang Theory	3
		FREE Elective	3
CSDP	451	Data Struct & Algorithms	<u>3</u>
		<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	402	Computer Networks	3
CSDP	404	Database Mgt. Systems	3
CSDP	450	Data Struct & Algorithms	3
		Free Elective	<u>4</u>
		<b>Semester Total</b>	<b>13</b>

**Total Credits Required      120-122**



**COMPUTER SCIENCE**  
**(Directed toward Science Applications)**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Comp I	3
MATH	111H	Hnrs. Elem Math Analysis	4
BIOL	111	Prin. of Biology I <b>and</b>	
BIOL	113	Prin. of Biology Lab <b>or</b>	
CHEM	111	Prin. of Chemistry I <b>and</b>	3
CHEM	113	Prin. of Chemistry I Lab	1
FREN	101	Fundamentals of French I <b>or</b>	
SPAN	101	Fundamentals of Spanish I	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
BIOL	112	Prin. of Biology II <b>and</b>	
BIOL	114	Prin. of Biology II Lab <b>or</b>	
CHEM	112	Prin. of Chemistry II	3
CHEM	113	Prin. of Chemistry II Lab	1
MATH	112	Calculus I	4
EDHE	111	Personalized Health Fitness	3
FREN	102	Fundamentals of French II <b>or</b>	
SPAN	102	Fundamentals of Spanish II	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund. of Contemporary Speech	3
MATH	210	Elementary Statistics	3
CSDP	220	Intro to Computer Programming	4
		GER CURR. AREA II: A or B	3
MATH	232	Intro to Linear Algebra	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	250	Intro to Data Structures	3
CSDP	301	Machine and Assembly Lang.	3
PHYS	181H	Intro. to Physics I (Honors)	3
PHYS	183H	Intro. to Physics I (Honors) Lab	1
		GER CURR. AREA II: A or B	3
MATH	311	Calculus II	<u>4</u>
<b>Semester Total</b>			<b>17</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP	250	Intro to Data Structure	3
CSDP	301	Machine & Assembly Lang	3
PHYS	182H	Intro to Physics II (Honors)	3
PHYS	184H	Intro to Physics II (Honors) Lab	1
CSDP	341	Numerical Analysis	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	321	Discrete Structures	3
PHYS	182H	Honors Intro Physics II	3
PHYS	184H	Intro to Physics (Honors) II Lab	1
		FREE Elective	5
CSDP	305	Software Engineering I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CSDP	350	Linear Programming	3
CSDP	401	Operating Systems	3
CSDP	403	Computer Language Theory	3
		FREE Elective	3
CSDP	451	Computer Organization	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CDSP	402	Computer Networks	3
CSDP	404	Database Management	3
CSDP	450	Data Struct & Algorithm	3
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**Total Credits Required**      **120-122**

**MATHEMATICS NON-TEACHING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	Basic Composition I	3
MATH	111H	Elementary Math Analysis	4
BIOL	111	Principles of Biology I <b>and</b>	
BIOL	113	Principles of Biology Lab <b>or</b>	
CHEM	111	Principles of Chemistry I <b>and</b>	1
CHEM	113	Principles of Chemistry I Lab	3
		GER CURR AREA II	3
GNST	100	First Year Experience	<u>1</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
		GER CURR. AREA II: A or B	3
MATH	112	Calculus I	4
EDHE	111	Personalized Health Fitness	3
BIOL	112	Principles of Biology II	
BIOL	114	Principles of Biology II Lab <b>or</b>	
CHEM	112	Principles of Chemistry II	3
CHEM	113	Principles of Chemistry II Lab	<u>1</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	181H	Intro to Physics I (Honors)	3
PHYS	183H	Intro to Physics I (Honors) Lab	1
MATH	211	Calculus II	4
MATH	232	Intro to Linear Algebra	3
FREN	101	Fundamentals of French I <b>or</b>	
SPAN	101	Fundamentals of Spanish I	<u>3</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CDSP	220	Intro to Computer Programming	4
PHYS	182H	Intro to Physics II (Honors)	3
PHYS	184H	Intro. to Physics II (Honors) Lab	1
Math	212	Calculus III	4
FREN	102	Fundamentals of French II <b>or</b>	
SPAN	102	Fundamentals of Spanish II	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	203	Fund of Contemporary Speech	3
MATH	309	Intro to Probability	3
MATH	321	Differential Equations	4
MATH	342	Advanced Calculus	3
CSDP	341	Numerical Analysis I	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	310	Mathematical Statistics	3
MATH	411	Modern Algebra	3
CSDP	222	Advanced Programming	4
ENGL	305	Technical Writing <b>or</b>	
ENGL	310	Advanced Composition	3
		FREE Elective	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CDSP	350	Linear Programming	3
MATH	443	Real Analysis	3
		MATH/CSDP Elective	3
		FREE Elective	<u>6</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	490	Senior Seminar	1
MATH/CSDP		Elective	6
		FREE Elective	<u>6</u>
<b>Semester Total</b>			<b>13</b>
<b>Total Credits Required</b>			<b>120-122</b>

**MATHEMATICS TEACHING**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ENGL	101	English Comp I	3
MATH	111H	Elementary Math Analysis	4
		GER CURR. AREA II: A or B	3
FREN	101	Fundamentals of French I <u>or</u>	
SPAN	101	Fundamentals of Spanish I	<u>3</u>
<b>Semester Total</b>			<b>13</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	English Comp II	3
CSDP	220	Intro to Computer Program	4
MATH	112	Calculus I	4
FREN	102	Fundamentals of French II <u>or</u>	
SPAN	102	Fundamentals of Spanish II	3
PSYC	200	Intro to Psychology	<u>3</u>
<b>Semester Total</b>			<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	181H	Intro to Physics (Honors)	3
PHYS	183H	Intro to Physics (Honors) Lab	1
MATH	211	Calculus II	4
EDCI	200	Intro. to Contemporary Ed.	3
ENGL	203	Fund. of Contemporary Speech	3
EDSP	200	Intro. to Special Education	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CSDP	222	Advanced Programming	4
PHYS	182H	Intro. to Physics (Honors) II	3
PHYS	184H	Intro. to Physics II (Honors) Lab	1
MATH	212	Calculus III	4
PSYC	305	Human Growth & Develop	3
ENGL	305	Technical Writing <u>or</u>	
ENGL	310	Advanced Composition	<u>3</u>
<b>Semester Total</b>			<b>18</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PSYC	307	Educational Psychology	3
MATH	309	Intro to Probability	3
MATH	321	Differential Equations	4
MATH	232	Intro to Linear Algebra	3
EDCI	311	Comprehensive Assess in Ed.	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	310	Mathematical Stat I	3
MATH	411	Modern Algebra	3
MATH	302	Number Theory	3
EDCI	406	Classroom Management	3
EDCI	409	Reading in Content Area I	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
MATH	301	College Geometry	3
EDCI	410	Reading in Content Area II	3
EDCI	425C	Curriculum & Instruc Math	3
MATH	342	Advanced Calculus	3
MATH	304	History of Math & Comp. Sci.	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	460	Teaching Internship	6
EDCI	480	Teaching Internship	<u>6</u>
<b>Semester Total</b>			<b>15</b>

**Total Credits Required      126-128**

## COURSE DESCRIPTIONS

### COMPUTER SCIENCE

**CSDP 120 Introduction to Computing 3 crs.**  
This course is for new students in Computer Science. The goal is to introduce students to different general computing aspects of the computer systems. Course topics include overview of the history of computing machines, computing codes and ethics, computing algorithms, programming languages, and mathematical software packages. Prerequisite: High school mathematics.

**CSDP 121 Microcomputer Applications 3 crs.**  
This course is designed for non-technical majors in different applications of modern computing systems. The course surveys computing hardware and software systems and introduces students to the present state-of-the-art word processing, spreadsheet, and database software. Applications to other discipline, such as medicine, administration, accounting, social sciences and humanities, will be considered. Prerequisite: high school mathematics.

**CSDP 150 Word Processing Workshop 1 cr.**  
This course is an introduction to current progress in word processing and/or office automation. The course involves considerable hands-on work with current equipment. **CSDP 150 does NOT satisfy the General Education Area III Requirement.** The course may be repeated (with different topics) for a maximum of six credits. Prerequisite: Variable, depending on topic selected.

**CSDP 151 Special Software Workshop 1 cr.**  
This course is an intensive introduction to various commercially available software packages, such as spreadsheet and database packages. The course involves considerable hands-on work with current equipment. **CSDP 151 does NOT satisfy the General Education Area III Requirement.** The course may be repeated for a maximum of six credits. Prerequisite: Variable, depending on the topic selected.

**CSDP 152 Programming Techniques Workshop 1 cr.**  
This course is an intensive introduction to special programming techniques, e.g., handling disk files on microcomputers and writing computer-assisted instruction materials. The course involves considerable hands-on experience in the area chosen. **CSDP 152 does NOT satisfy the General Education Area III Requirement.** The course may be repeated (with different topics) for a maximum of six credits. Prerequisite: Variable, depending on the topic selected.

**CSDP 153 Programming Language Workshop 1 cr.**  
This course is an intensive introduction to special implementations of programming languages, e.g., hypertext and operating systems languages. The course involves considerable hands-on experience in the area chosen. **CSDP 153 does NOT satisfy the General Education Area III Requirement.** The course may be repeated (with

different topics) for a maximum of six credits. Prerequisite: Variable, depending on the topic selected.

**CSDP 154 Computer Hardware Workshop 1 cr.**  
This course is an intensive introduction to new hardware and hardware methodology in special areas, e.g., microcomputer interacting with analogue devices, small-system data communications, etc. The course involves considerable hands-on experience in the area chosen. The course may be repeated for a maximum of six credits. **CSDP 154 does NOT satisfy the General Education Area III Requirement.** Prerequisite: Variable, depending on the topic selected.

**CSDP 155 Computer Utilities Workshop 1 cr.**  
This course is an intensive introduction to special computer utilities and operating systems such as OS/2, and UNIX look-alikes. The course involves considerable hands-on experience with the utilities or systems chosen. **CSDP 155 does NOT satisfy the General Education Requirement in Area III Requirement.** The course may be repeated (with different topics) for a total of six credits. Prerequisite: Variable, depending on topic selected.

**CSDP 220 Introduction to Computer Programming 4 crs.**  
This course is designed to introduce the student to computers and to programming in a high level language. Course topics include but are not limited to computer hardware, software algorithms, and programming methodology. The programming language C++ is used to learn input/output, arithmetic computation, control structures, subroutines and functions, string manipulation, arrays, and pointers. Significant emphasis is placed on coding and debugging of programs in the computer laboratory. Prerequisites: MATH 102 or MATH 109 or MATH 110.

**CSDP 222 Advanced Programming 4 crs.**  
This course covers advanced programming language features, including structured programming, top-down, and object-oriented techniques. Emphasis is placed on team projects and structured walk-throughs. Much of the work in this course involves the construction and debugging of programs that accomplish realistic applications. Prerequisite: CSDP 220.

**CSDP 240 Principles of Data Processing 3 crs.**  
This course is an introduction to the COBOL language and its business data processing environment. Topics may include the six divisions, arithmetic, input/output, control statements, control-break logic, tables, and searching logic. The course is a computer lab-based course involving extensive coding and debugging of small to large programs. Prerequisite: CSDP 220.

**CSDP 241 File Structures 3 crs.**

This course is an introduction to the theory of file structures and its applications. Topics include sequential direct, indexed sequential access methods, entry and updating techniques, and reports. The relationship between file structures and program structures is discussed with extensive program development and production. Prerequisites: CSDP 222 and CSDP 240.

**CSDP 250 Introduction to Data Structures 3 crs.**

This course provides an introduction to the analysis and implementation of data structures and to object-oriented programming styles. Topics may include search algorithms, sorting algorithms, linked lists, queues, stacks, binary trees, graphs, and garbage collection. Prerequisite: CSDP 222.

**CSDP 301 Machine and Assembly 3 crs.**

Topics covered in this course include machine languages, computer structure, machine and assembly language concepts, instruction execution, addressing techniques, assembler systems, macro definitions and generation, conditional assembly, I/O subroutine construction, and interrupts. This course requires considerable actual assembly language programming. Prerequisite: CSDP 222.

**CSDP 305 Software Engineering I 3 crs.**

This course introduces methodologies and tools that are useful in software engineering, including structured programming, software charts, sequence selection, and iteration structure charts. The course covers concepts of software design, software module structures, data flow diagrams, system dynamics, engineering system analysis, real-time data flow, and introduction to object-oriented analysis. Computer Aided Software Engineering (CASE) will be introduced. Prerequisite: CSDP 250.

**CSDP 321 Introduction to Discrete Structures 3 crs.**

Topics covered in this course include group, graph, Boolean, propositional, and other algebraic structures through detailed study of automata and their relationship to formal languages. This course requires teams creating relatively large application programs. Prerequisites: CSDP 222.

**CSDP 331 Data Ware Housing and Data Mining 3 crs.**

This course introduces students to concepts and techniques of data mining and data warehousing. Concepts, principles, architecture, design, implementation, application of data warehousing and data mining are taught. The course also introduces several systems for data warehousing and/or data mining. Prerequisite: CSDP 222.

**CSDP 332 Internet Programming 3 crs.**

This course introduces students to different aspects of internet programming and scripting languages. Topics include object-oriented programming, general information on Internet and World Wide Web, active server pages, HTML, DHTML, XML, JavaScript, VBScript, CSS, and databases. Prerequisite: CSDP 222.

**CSDP 341 Numerical Analysis 3 crs.**

This course is designed to introduce fundamental aspects of numerical analysis including the basic concepts, representation of numbers, error analysis, and iterative methods. Additional topics include solution techniques for non-linear equations, interpolation and approximation, numerical differentiation and integration, and their computer applications. Prerequisites: CSDP 222 and MATH 211.

**CSDP 350 Linear Programming 3 crs.**

This course introduces students to linear algebra, convexity, and linear programming models with various applications. Topics will include mathematical modeling, graphical method, simplex computation procedures, sensitivity analysis, degeneracy, and duality. Transportation, production, scheduling, inventory control, parametric, game theory, and integer programming models are taught. Prerequisite: CSDP 222.

**CSDP 398 Computer and Language Topics A 3 crs.**

A reading/research course recommended for all computer science majors. The course allows the student to gain experience in new or otherwise unavailable programming languages (e.g., JAVA, C/C++, MODULA-2, LISP, ADA, PROLOG). This course may be repeated (with different topics) for a maximum of 12 credits. Prerequisite: Permission of the instructor.

**CSDP 399 Computer and Language Topics B 3 crs.**

This is a reading/research course recommended for all computer science majors. This course allows the student gain experience in new or otherwise unavailable programming languages (e.g., C/C++, JAVA, PROLOG, XML, C#). This course may be repeated (with different topics) for a maximum of 12 credits. Prerequisite: Permission of the instructor.

**CSDP 401 Operating Systems 3 crs.**

This course is an introduction to the fundamentals of operating systems. Topics may include interrupts and recovery, inter-process communication and synchronization, process scheduling, deadlock, memory management, virtual memory file systems, scheduling, and distributed systems. Formal principles are illustrated with the examples and case studies of one or more contemporary operating systems. Prerequisite: CSDP 250 and CSDP 301.

**CSDP 402 Computer Networks 3 crs.**

This course is designed to introduce students to the basic concepts of computer network communication. Topics may include OSI model and computer network protocols (with emphasis on the TCP/IP suite of protocols), data signals and data encoding, transmission media and multiplexing, network architectures (with emphasis on the Ethernet and its various IEEE models), internetworking devices, IP addressing, and sub-netting. Prerequisite: CSDP 250 or permission of instructor.

**CSDP 403 Computer Language Theory 3 crs.**

This course examines the principles of programming languages. Topics include criteria, formal specifications of syntax, lexical analysis, declarations binding, allocation data and control structures, imperative programming, and functional programming. Prerequisite: CSDP 222 or CSDP 301.

**CSDP 404 Database Management Systems 3 crs.**

This course covers database management and the different data models currently used to structure the logical view of databases. It provides an introduction to concepts and design principles used in database management systems, including entity-relationship data model, physical and logical database design, relational databases, query language, transaction management, reliability, and security. Prerequisite: CSDP 250 or permission of instructor.

**CSDP 405 Software Engineering II 3 crs.**

This course is designed to expand software engineering skills using structured programming methodologies with object-oriented design. State of the art technique in software design and development of laboratory experience in applying the techniques are covered. Topics may include structured design, structured programming, top-down design and development, segmentation and modularization techniques, iterative enhancement, design and code inspection techniques, correctness, and chief-programmer teams. Software engineering metrics, including measures of size, reuse, functionality, complexity, and quality, will be taught. Critical human factors issues involving software design, reliability, team productivity, and project management are addressed for a clearer understanding of software engineering. Prerequisite: CSDP 305.

**CSDP 442 Numerical Analysis II 3 crs.**

This course involves the numerical solution of systems of equations by direct and by iterative methods. It also involves evaluation of determinants, matrix inversion, and calculation of eigenvalues and eigenvectors. Additional topics include the numerical solution of ordinary differential equations, boundary value problems, and partial differential equations. Prerequisite: CSDP 341.

**CSDP 450 Data Structures/Algorithms 3 crs.**

Topics covered in this course include growth of functions, recurrences, sorting and order statistics, linear and branched data structures, dynamic programming, greedy algorithms, B-trees, and heapgraph algorithms. Prerequisites: CSDP 301 and CSDP 321.

**CSDP 451 Computer Organization 3 crs.**

Topics include Boolean algebra and combinatorial logic, digital circuit basics, data representation and transfer, digital arithmetic, digital storage and accessing, control functions, input-output facilities, and system organization reliability. Additional topics include description and simulation techniques, as well as multi-programming, multi-process and real-time systems, and alternate organizations. Prerequisites: CSDP 301 and CSDP 321.

**CSDP 498 Selected Topics in Computer Science A 3 crs.**

This is a reading/research course recommended for all computer science majors. The grade for this course will be based primarily on a research project in an area of computer science chosen together by the student and the instructor. This course may be repeated (with different topics) for a maximum of 12 credits. Advanced undergraduate students may also enroll in graduate-level computer science courses below CSDP 610 with permission of the Department.

**CSDP 499 Selected Topics in Computer Science B 3 crs.**

This is a reading/research course recommended for all computer science majors. The grade for this course will be based primarily on a research project in an area of computer science chosen together by the student and the instructor. This course may be repeated (with different topics) for a maximum of 12 credits. Advanced undergraduate students may also enroll in graduate-level computer science courses below CSDP 610 with permission of the Department.

**MATHEMATICS****MATH 101 Intermediate Algebra 3 crs.**

Topics in this intermediate algebra course, include the algebra of signed numbers, solving linear equations and inequalities, quadratic equations, operations on algebraic expressions, and graphing. This course does not satisfy the General Education Requirement in Mathematics and does not count towards graduation requirements.

**MATH 102 Applications of College Mathematics 3 crs.**

This course reviews sets and logic, functions and graphing, and solution of sets of linear equalities and inequalities. It includes an introduction to linear programming, combinatorial principles, and counting, with application in the development of probability theory and statistics, numeration systems, and computer mathematics. All topics are covered making use of current educational technology, both from the point of view of their significance within mathematics and of their applicability in modeling the world using mathematics. In addition to regular class work, this course requires the successful completion of the Arithmetic Basic Skills Test administered by the Department. Students not receiving a satisfactory grade on this examination at entrance are required to attend special arithmetic skills laboratory sessions, in addition to their regular class work, until they do pass this test with a satisfactory score. Prerequisites: MATH101 with a grade of at least "C" or two years of high school mathematics (Algebra I or higher) plus permission of the Department (obtained by receiving a satisfactory score on the Department placement test).

**MATH 109 College Algebra** 3 crs.

The purpose of this course is twofold: for students requiring quantitative mathematical skills but not trigonometry or calculus, it may be viewed as a terminal course; it also provides the algebraic and graphing skills necessary for satisfactory performance involving relations and functions, graphing, solving systems of linear equations, and the logarithmic and exponential functions. Prerequisites: MATH 101 with a grade of at least "C"; or two years of high school algebra, plus permission of the Department (obtained by receiving a satisfactory score on the departmental placement test).

**MATH 110 Trigonometry and Analytic Geometry** 3 crs.

This course is intended for students majoring in mathematics, computer science, science, technology, or engineering, or for students preparing to take calculus. Topics covered include the unit circle and graphs of the trigonometric functions, trigonometric identities, trigonometric equations, inverse trigonometric function, complex numbers, and polar coordinates. Prerequisites: MATH 109 with a grade of at least "C", or three years of high school mathematics (Algebra I or higher) plus permission of the Department (obtained by receiving a satisfactory score on the Departmental placement test).

**MATH 111H Honors Elementary Mathematical Analysis** 4 crs.

This course covers the content of both MATH 109 and MATH 110. As such, it is limited to those students with three (3) years of secondary school mathematics (including Trigonometry).

**MATH 112 Calculus I** 4 crs.

This course covers differential calculus of functions of one variable, graphing, and differentiating algebraic and transcendental functions. It also covers limits, continuity, and Mean Value Theorem and applications, as well as maximizing and minimizing functions, related rate, and approximation applications. An introduction to integration is also included. Prerequisites: MATH 110 or MATH 111H with a grade of at least "C" or four years of high school mathematics (including Algebra I, II, Geometry, and Trigonometry) plus permission of the Department (obtained by receiving a satisfactory score on the Departmental placement test).

**MATH 210 Elementary Statistics** 3 crs.

The course covers frequency and graphs of distributions; calculation of averages from raw data and grouped data; the standard deviation; the Binomial, Poisson, and normal distribution and their properties; Bayes Theorem and Bayesian inference; Regression and correlation in two variables; and Times Series Analysis and applications. Prerequisite: MATH 109 or MATH 110 or MATH 111H.

**MATH 211 Calculus II** 4 crs.

This course covers Integral calculus of functions of one variable; techniques and theory of the Riemann integral, including the fundamental theorem and its application;

applications to area, volume, surface area work, centroids, arc length, and polar coordinates; and advanced work with transcendental functions. Prerequisite: MATH 112.

**MATH 212 Calculus III** 4 crs.

This course covers multivariable differential and integral calculus, which includes the chain rule and inverse function theorems for several variables, with applications to maxima and minima; integration in polar, cylindrical, and spherical coordinate systems; Taylor's Theorem, infinite series; convergence tests; and applications. Prerequisite: MATH 211.

**MATH 232 Introduction to Linear Algebra** 4 crs.

This course covers vector spaces, matrices, and their algebra; linear transformations; and normal forms. Also, systems of linear equations using the Gaussian Elimination method, Cramer's rule, LU decomposition, and the inverse matrix are studied. The reduction of a matrix to row-echelon form and the use of the reduced matrix to calculate the rank of the matrix, determine the solvability of a system of linear equations and the dependence and independence of rows and/or columns of the original matrix are also included. Prerequisite: MATH 112.

**MATH 260 Statistics for Scientists** 3 crs.

This course, available for departmental majors and intermediate between MATH 210 and the three-semester probability and statistics sequence, is a one-semester introduction to the methodology and application of statistics. Emphasis is placed on statistical methods commonly used in scientific and technical applications and their theoretical justification and limitations. Prerequisite: MATH 212.

**MATH 301 College Geometry** 3 crs.

This course covers basic concepts of Euclidean geometry, such as distance congruence, similarity, triangles, parallelism, Pythagorean theorem, axiomatic geometry, Non-Euclidean geometry, and comparison with Euclidean geometry. This course is essential as a part of the training of prospective teachers of secondary school mathematics. Prerequisite: MATH 110 or MATH 111H.

**MATH 302 Number Theory** 3 crs.

This course covers integers, divisibility, the Euclidean algorithm and its application, solution of Diophantine equations, prime numbers, congruencies, quadratic residues, number theoretic functions, and Moebius inversion and its applications. Prerequisite: MATH 110 or MATH 111H.

**MATH 304 History of Math and Computer Science** 3 crs.

This course covers the historical and cultural development of mathematics and computer science from ancient times to the present. Emphasis is placed on the development of mathematical reasoning, style, philosophy, and techniques within cultural settings, growth of computer hardware and software; and developmental styles of applications. Prerequisite: MATH 109 or MATH 110 or MATH 111H.

**MATH 309 Introduction to Probability** 3 crs.  
This course covers sample spaces, axioms, and elementary theorems of probability; it also covers combinatorics, dependence, conditional probability, random variables, probability distributions, expectation, mean variance, moment-generating functions, Chebychev's inequality, and limit theorems (law of large numbers, central limit theorem); examples of stochastic processes are also studied. Prerequisite: MATH 211.

**MATH 310 Mathematical Statistics I** 3 crs.  
This course covers the distributions of random variables and their properties, including such distributions as the Binomial, Poisson, Gamma, Chi-square, Normal and Bivariate; Normal distributions, transformation of variables for the discrete and continuous types, and T and F distributions. Prerequisites: MATH 211 and MATH 309.

**MATH 321 Differential Equations** 4 crs.  
This course covers first-order equations for which exact solutions are obtainable with applications. Higher order linear differential equations, systems of linear differential equations, Laplace transforms, non-linear differential equations, and numerical applications are also included. Prerequisite: MATH 212.

**MATH 322 Foundations of Mathematics** 3 crs.  
This course covers sets, relations, propositional calculus, first order theory and its model theory, completeness, incompleteness and independence theorems. Also, applications to axiomatic systems, number theory, geometry, set theory or computer science are included. Prerequisite: MATH 112.

**MATH 342 Advanced Calculus** 3 crs.  
This course includes a review of the real, topology of Cartesian spaces, limits, convergence, continuity, differentiability, integration, infinite series and products, Fourier series, and Laplace transforms. Prerequisite: MATH 212.

**MATH 410 Mathematical Statistics II** 3 crs.  
This course covers conditional distributions, point and interval estimation; the maximum likelihood, and other point estimation techniques; sufficiency, efficiency, unbiasedness, MVU of estimators and other characteristics of point estimators; Cramer-Rao and Rao-Blackwell theorems, testing of hypotheses, Neyman-Pearson lemma, and power functions. In addition, regression and correlation analysis, analysis of variance and analysis of covariance techniques are covered. Prerequisite: MATH 310.

**MATH 411 Modern Algebra** 3 crs.  
This course takes an axiomatic approach to studying the structures: groups, rings, and fields. Quotient structures, sub-structures, homomorphism and isomorphism are also included. In addition to abstract structures, numerous examples of well-known structures are investigated from the axiomatic point of view. Prerequisite: MATH 211.

**MATH 412 Linear Algebra** 3 crs.  
This course covers matrix algebra and determinants, vector spaces, subspaces, basis and dimension, inner product, orthogonal and orthonormal vectors and sets, Gram-Schmidt orthogonalization process, linear transformations, eigenvalues and eigenvectors, kernel and range, diagonalization of matrices, and quadratic forms. Also, application of linear algebra to Error-Correcting Codes, and linear programming are covered. Prerequisite: MATH211.

**MATH 440 Topology** 3 crs.  
This is a beginning course in topology with emphasis on the development of mathematical maturity in the area. Open and closed sets, connectedness, compactness, continuous functions and homeomorphisms, separation properties, and pathologies are included. Prerequisite: MATH 212 or MATH 411 or permission of instructor.

**MATH 442 Complex Analysis** 3 crs.  
The aim of this course is to give the student a solid foundation in the calculus of functions of a single complex variable. The course includes the calculus of complex variables, functions of a single complex variable, analytic functions, integrals, Cauchy's theorem, power series, residues, poles, and applications of complex variables. Prerequisite: MATH 212.

**MATH 443 Real Analysis I** 3 crs.  
This course covers the analysis on the real line and n-space from the abstract point of view. Point sets, completeness, convergence, differentiability, Riemann integration, measurable sets and functions, Lebesgue integration, differentiation vs. integration, interchange of order, Lebesgue-Stieltjes integrals, dominated and other convergence theorems are included. Prerequisite: MATH 212 or permission of instructor.

**MATH 444 Real Analysis II** 3 crs.  
This course is a continuation of MATH 443. Emphasis is placed on uniform convergence of sequences and series of functions, improper integrals, differentiation and integration in higher dimensions, inverse and implicit function theorems, introductory metric spaces, and metric space topologies. Prerequisite: MATH 443 or permission of instructor.

**MATH 455 Mathematical Models** 3 crs.  
This course covers construction, development, and study of mathematical models for real applications; Markov chain models; models for linear optimization; and selected case studies. Prerequisite: MATH 441 or permission of instructor.

**MATH 490 Senior Seminar** 1 cr.  
This course is designed for graduating seniors to acquaint them with research information and sources in the field of mathematics. The student develops and presents reports on current research problems from various fields of mathematics.



**MATH 498 Selected Topics in Mathematics 3 crs.**

This is a reading course recommended for all mathematics majors. The grade for this course is based primarily on a research project in an area of mathematics chosen by the student and the instructor. This course may be repeated (with different topics) for a maximum of 12 credits.

**MATH 499 Selected Topics in Mathematics 3 crs.**

This is a reading course recommended for all mathematics majors. The grade for this course is based primarily on a research project in an area of mathematics chosen together by the student and the instructor. This course may be repeated (with different topics) for a maximum of 12 credits.

## FACULTY

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 M.S., University of Maryland Eastern Shore

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 M.S., Jackson State University

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 B.S., Prairie View A&M University

**Yoo, Sehwan**

Lecturer  
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 Ph.D., University of Kansas at Lawrence

## DEPARTMENT OF TECHNOLOGY

### Dean:

Eddie Boyd, Ph.D.

### Chairperson and Professor:

Leon L. Copeland, Sr., Ed.D.

### Professors:

Kenny Fotouhi, Ph.D.

Emin Yilmaz, Ph.D.

### Associate Professor:

Joseph Arumala, Ph.D.

### Assistant Professor:

Gerald Day, Ph.D.

### Lecturer:

Carlos Salgado, M.S.

## MISSION

The central mission of the Department of Technology at the University of Maryland Eastern Shore is to serve the Eastern Shore region, the State of Maryland, and the nation by improving technical education and the professional technical practice of construction and engineering technology.

The mission is achieved through high quality instruction, research, and community service. Through the teaching and learning process the department aims to provide knowledge, skills, and values to students preparing for professional technical careers and persons currently employed in industry. New technical and professional knowledge is developed and disseminated through research and community service.

Academic programs include Construction Management Technology, Engineering Technology, and Technology Education. Each program emphasizes basic knowledge and up-to-date technical skills that will enable graduates to solve problems in a logical manner and to draw conclusions from principles and facts.

Through the humanistic studies in each program, students are taught to recognize their responsibilities as citizens to prepare themselves for active participation in society.

## GOALS

The goal of the **Construction Management Technology** program is the preparation of well educated professionals for challenging careers in the construction industry. Learning experiences are combined from the fields of construction technology, architecture, and business administration to prepare professionals with the ability to manage and supervise the total construction process. Graduates qualify for employment with general contracting and subcontracting firms and in government.

The goal of the **Engineering Technology** program is to prepare students for challenging careers in Electrical/Electronic Engineering Technology and Mechanical Engineering Technology. After receiving the Bachelor of Science degree, graduates are employed as Engineering Technologists. The emphasis in engineering technology courses is on the practical design and utilization of devices and systems, with a strong laboratory program supporting the lecture courses. Engineering Technology provides an engineering education with emphasis on systems operations and applications.

The goal of the **Technology Education** program is to prepare professionals who will qualify for certification to teach technology education at the middle school and high school levels. Emphasis is placed on improving the teaching- learning process and promoting and developing technological literacy, which is the ability to use, manage, understand, and assess technology. Study is focused on technical applications to support classroom and laboratory activities.

## OBJECTIVES

The educational experiences offered by the Department of Technology will provide students with opportunities to

- demonstrate an operational knowledge of the techniques associated with the design, construction and maintenance of residential and commercial structures;
- exercise independent judgment and sound ethical values in expediting work without jeopardizing its effectiveness, safety or cost;
- organize and manage personnel, materials and equipment for carrying out construction, maintenance and operation of complex engineering systems;
- demonstrate effective communication of ideas by means of spoken and written language as well as graphic techniques;
- solve technical problems that translate ideas into functioning, machines, structures and systems;
- plan and implement instructional programs to meet the needs of students in a technological age;
- plan and instruct technology education programs that promote technical literacy through the application of mathematics and science and other subjects in classroom and laboratory activities;
- improve the professional technical practice of Construction Management, Engineering Technology, and Technology Education through continuing education and community service; and

- demonstrate humanistic values and responsibilities that promote active participation as productive citizens.

#### DESCRIPTION OF PROGRAMS

The **Construction Management Technology (CMTE)** curriculum is a four year program of study leading to a Bachelor of Science Degree. This interdisciplinary curriculum accredited by the American Council for Construction Education (ACCE) provides a background in the several physical and applied sciences and construction technology. Technical content is balanced by courses in business management, communications, humanities, and social sciences. This broad diversification provides the technical base needed for immediate employment as well as the managerial concepts for career development. Students must complete 126 semester hours of designated coursework including supervised internship in the construction industry.

The curriculum in **Engineering Technology (ETEE/ETME)** follows TAC/ABET recommendations and offers upper division courses leading to a Bachelor of Science Degree in **Electrical/Electronic Engineering Technology** and **Mechanical Engineering Technology**. The program is designed to provide a flexible course of study for students holding an Associate Degree in Engineering Technology from the Maryland Community College system and for students transferring out of the regular engineering program. The first two years may be completed through any of the engineering technology programs offered by an accredited community college. The Electrical/Electronics option is designed to prepare graduates for a career in the Electrical Engineering field.

The curriculum provides in-depth exposure to the areas of communications, digital systems (including microprocessors), power machinery, and electronic systems design. The Mechanical option is designed to prepare graduates for a career in the Mechanical Engineering field. The curriculum provides in-depth exposure to the areas of manufacturing, thermal power, and mechanical systems design. It is anticipated that most students from community colleges will transfer about 60 credit hours. Total semester credits required for graduation is 126.

**Technology Education (EDTE)** is a four-year program of study leading to a Bachelor of Science degree, which will certify students to teach technology education in the secondary school. Students acquire technical knowledge and skills through creative and problem solving learning experiences related to the designed world. A sequence of professional education and liberal studies courses are also required to develop leadership and citizenship skills needed for successful teaching. A total of 126 credits is required for graduation.

Graduation requirements for each major program are divided among general education courses, major core courses, supportive courses, elective courses and professional education courses. Students must receive a grade of "C" or better in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses. Included in the total semester hours for graduation, technology majors are required to complete a minimum of forty (40) semester hours of general education courses.

**CONSTRUCTION MANAGEMENT TECHNOLOGY**  
**Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 41 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities)\* 9 Credits**

Course No.	Title	Credits
ARTS 101	Exploration of Visual Arts	3
ENGL 328	World Literature I	3
ENGL 203	Fundamentals of Contemporary Speech	3

**B. Curriculum Area II – (Social and Behavioral Sciences)\* 6 Credits**

Course No.	Title	Credits
ECON 201	Principles of Economics I	3
SOCI 201	Social Problems	3

**C. Curriculum Area III – (Biological and Physical Sciences)\*\* 8 Credits**

Course No.	Title	Credits
PHYS 121	General College Physics I	3
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	1

**D. Curriculum Area IV – (Mathematics)\*\* 8 Credits**

Course No.	Title	Credits
MATH 111	Elementary Mathematical Analysis	4
MATH 112	Calculus I	4

**E. Curriculum Area V – (English Composition)\*\* 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3
ENGL 001	English Proficiency Exam	

**F. Curriculum Area VI – (Emerging Issues) 1 Credit**

Course No.	Title	Credit
GNST 101	First Year Experience Seminar	1

\*Course Requirements other than those listed above should be selected in consultation with the advisor or Department Chairman.

\*\*Students are required to receive a grade of C or better in these courses.

**II. Program Core Courses 67 Credits**

Course No.	Title	Credits
CMTE 201	Architectural Drawing	3
CMTE 205	Computer Application in Construction	3
CMTE 211	Statics	3
CMTE 212	Strength of Materials	4
CMTE 214	Construction Surveying	3
CMTE 230	Construction Materials	3
CMTE 286	Construction Planning & Scheduling	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CMTE 295	Construction Management Internship I	2
CMTE 311	Construction Methods I	3
CMTE 312	Construction Methods II	3
CMTE 313	Structural Design I	3
CMTE 314	Structural Design II	3
CMTE 315	Environmental Technology I	3
CMTE 316	Environmental Technology II	3
CMTE 317	Soils In Construction	3
CMTE 342	Construction Estimating I	3
CMTE 395	Construction Management Internship II	2
CMTE 425	Construction Management I	3
CMTE 426	Construction Management II	3
CMTE 445	Construction Estimating II	3
CMTE 454	Site Development	3
CMTE 458	Senior Seminar	2
<b>EDTE 131</b>	<b>Computer-Assisted Drawing and Design I (CAD-I)</b>	<b>3</b>
<b>III.</b>	<b>Supportive Courses</b>	<b>12 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ACCT 201	Introduction to Financial Accounting	3
BUAD 304	Small Business Management and Entrepreneurship	3
ECON 202	Principles of Economics II	3
ENVS 101	Introduction to Environmental Science	3
<b>IV.</b>	<b>Elective Business Courses</b>	<b>6 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 132	Introduction to Business	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 412	Business Law	3
FINA 340	Financial Management	3
FINA 442	Principles of Real Estate	3
FINA 441	Insurance and Business Risk	3
<b>TOTAL PROGRAM REQUIREMENTS</b>		<b>126</b>



**The Arts and Technology Building**

**CONSTRUCTION MANAGEMENT  
TECHNOLOGY  
Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDTE	131	Computer-Assisted Drawing and Design I (CAD)	3
ENGL	101	Basic Composition I	3
MATH	111	Elem. Math Analysis	4
ARTS	101	Exp. of Visual Arts	3
GNST	100	First Yr. Experience Seminar	<u>1</u>
<b>Semester Total</b>			<b>14</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
ENGL	102	Basic Composition II	3
ECON	201	Prin. of Economics I	3
CMTE	230	Construction Materials	3
ENGL	001	English Proficiency Exam	0
ENVS	101	Intro. to Environmental Science	<u>3</u>
<b>Semester Total</b>			<b>12</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
PHYS	121	Gen. College Physics I	3
PHYS	123	Gen. College Physics I Lab	1
CMTE	201	Architect. Drawing	3
ENGL	203	Fund. of Cont. Speech	3
CMTE	205	Comp. Applic. in Construction	3
ECON	202	Prin. of Economics II	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	112	Calculus I	4
CMTE	214	Const. Surveying	3
ENGL	305	Technical Writing	3
PHYS	122	Gen. College Physics II	3
PHYS	124	Gen. College Physics II Lab	1
SOCI	201	Social Problems	<u>3</u>
<b>Semester Total</b>			<b>17</b>

<b>SUMMER</b>			<b>HOURS</b>
CMTE	295	Constr. Manag. Internship I	2

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CMTE	311	Construction Methods I	3
CMTE	315	Environ. Technology I	3
CMTE	211	Statics	3
CMTE	286	Construct. Plan. & Scheduling	3
ENGL	328	World Literature I	3
ACCT	201	Intro to Financial Accounting	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CMTE	316	Environ. Tech II	3
CMTE	312	Const. Methods II	3
CMTE	212	Strength of Materials	4
CMTE	342	Construction Estimating I	3
BUAD		Elective	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SUMMER</b>			<b>HOURS</b>
CMTE	395	Constr. Manag. Internship II	2

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
CMTE	317	Soils in Construction	3
CMTE	425	Const. Mgt. I	3
CMTE	445	Const. Estimating II	3
CMTE	313	Structural Design I	3
BUAD		Elective	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
CMTE	426	Const. Mgt. II	3
CMTE	454	Site Development	3
BUAD		Elective	3
CMTE	458	Senior Seminar	2
CMTE	314	Structural Design II	<u>3</u>
<b>Semester Total</b>			<b>14</b>

**Total Credits Required      126**

**ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY  
Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED FOR GENERAL EDUCATION – 40 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities)\* 9 Credits**

Course No	Title	Credits
ARTS 101	Exploration of the Visual Arts	3
ENGL 328	World Literature I	3
ENGL 203	Fundamentals of Contemporary Speech	3

**B. Curriculum Area II – (Social and Behavioral Sciences)\* 6 Credits**

Course No.	Title	Credits
SOCI 201	Social Problems	3
ECON 202	Principles of Economics II	3

**C. Curriculum Area III – (Biological and Physical Sciences)\*\* Credits**

Course No.	Title	Credits
PHYS 121	General College Physics I	3
PHYS 123	General College Physics I Lab	1
PHYS 122	General College Physics II	3
PHYS 124	General College Physics II Lab	1

**D. Curriculum Area IV – (Mathematics)\*\* 7 Credits**

Course No.	Title	Credits
MATH 110	Trigonometry and Analytic Geometry	3
MATH 112	Calculus I	4

**E. Curriculum Area V – (English Composition)\*\* 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3
ENGL 001	English Proficiency Exam	

**F. Curriculum Area VI - Emerging Issues 1 Credit**

Course No.	Title	Credit
GNST 100	First Year Experience Seminar	1

\*Course Requirements other than those listed above should be selected in consultation with the advisor or Department Chairman.

\*\*Students are required to receive a grade of C or better in these courses.



**II. Program Core Courses 44 Credits**

Course No.	Title	Credits
ETEE 114	Electronics I*	3
ETEE 201	Circuit Technology I*	3
ETEE 202	Circuit Technology II*	3
ETEE 215	Electronics II*	3
ETEE 216	Electronics III*	3
ETEE 218	Electronics Laboratory*	4
ETEE 303	Circuit Technology III	3
ETEE 314	Electric Power and Machinery	3
ETEE 335	Logic & Switching Circuits	3
ETEE 346	Control Circuits	3
ETEE 355	Advanced Electronic & Computer Networks	3
ETEE 421	Instrumentation & Measurements	4
ETEE 485	Design Technology I	3
ETEE 486	Design Technology II	3

**III. Supportive Courses 12 Credits**

Course No.	Title	Credits
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CSDP 220	Introduction to Computer Programming	4
MATH 211	Calculus II	4

**IV. Technical Elective Courses 24 Credits**

**Group I (Minimum of 18 hours)**

Course No.	Title	Credits
CMTE 211	Statics	3
CSDP 222	Advanced Computer Programming	4
EDTE 131	Computer-Assisted Drawing and Design I (CAD-I)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD-II)	3
ETEE 222	Advanced Electrical Networks*	3
ETEE 425	Communication and Microwave Technology	3
ETEE 474	Nuclear Fundamentals	3
ETME 318	Applied Dynamics	3
ETME 395	Industrial Practice	3

**Group II (Minimum of 6 hours)**

Course No.	Title	Credits
BUAD 302	Management and Organizational Behavior	3
BUAD 410	Production Management	3
BUAD 411	Operations Research and Decision Theory	3
BUAD 412	Business Law I	3
ECON 303	Labor Economics	3

**V. Elective Courses 6 Credits**

**Group III (Minimum 6 hours)**

Course No.	Title	Credits
	FREE Elective	3
	FREE Elective	3

**TOTAL PROGRAM REQUIREMENTS 126**

\*These are community college level courses; they, or appropriate substitutions, should be completed before enrolling at UMES.

**ELECTRICAL/ELECTRONICS  
ENGINEERING TECHNOLOGY**

**Recommended Course Sequence**

The following is a prototype of the associate degree program or equivalent experience that should be completed before enrolling for the junior and senior year.

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
Computer-Assisted Drawing and Design I (CAD-I)	3
Gen. College Physics I	3
Gen. College Physics I Lab	1
Algebra/Trigonometry/Geometry	3
Basic Composition I	3
Freshman Orientation	<u>1</u>
<b>Semester Total</b>	<b>14</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
Electronics I	3
Gen. College Physics II	3
Gen. College Physics II Lab	1
Calculus I	4
English Composition II	3
English Proficiency Exam	<u>0</u>
<b>Semester Total</b>	<b>14</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
Circuit Technology I	3
Electronics II	3
Principles of Chemistry I	3
Principles of Chemistry I Lab	1
Calculus II	4
Fund. Contemporary Speech	<u>3</u>
<b>Semester Total</b>	<b>17</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
Circuit Technology II	3
Electronics III	3
Electronics Laboratory	4
Introduction to Computers	4
Literature, Foreign Lang.	<u>3</u>
<b>Semester Total</b>	<b>16</b>

The following is a recommended course sequence for those graduates of associate-degree technology programs or equivalent experiences to complete requirements for the Bachelor of Science degree in Engineering Technology at UMES.

**JUNIOR YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
ETEE 303 Circuit Tech. III	3
ETEE 421 Instru. & Measurements	4
ENGL 305 Technical Writing	3
ETEE 335 Logic & Switching Circuit	3
<b>One course in:</b> Literature, Foreign Lang. <b>or</b> Fine Arts	<u>3</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
ETEE 346 Control Circuits	3
ETEE 314 Elec. Power & Mech.	3
ETEE 355 Adv. Elect. & Comp. Net.	3
CSDP 220 Intro. to Computer Program.	4
FREE Elective	<u>3</u>
<b>Semester Total</b>	<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
ETEE 485 Design Technology I	3
Technical Elective	3
<b>One course in:</b> Literature <b>or</b> Foreign Language	3
Technical Elective	3
Technical Elective	<u>3</u>
<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
ETEE 486 Design. Tech. II	3
FREE Elective	3
Technical Elective	2
Technical Elective	3
Technical Elective	3
FREE Elective	<u>3</u>
<b>Semester Total</b>	<b>17</b>

**Total Credits Required      125**

**MECHANICAL ENGINEERING TECHNOLOGY  
Required and Recommended Course Sequence**

**I. General Education Requirements**

**TOTAL REQUIRED IN GENERAL EDUCATION – 40 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

**A. Curriculum Area I – (Arts and Humanities)\* 9 Credits**

Course No.	Title	Credits
ARTS 101	Exploration of the Visual Arts	3
ENGL 328	World Literature I	3
ENGL 203	Fundamentals of Contemporary Speech	3

**B. Curriculum Area II –(Social and Behavioral Sciences)\* 6 Credits**

Course No.	Title	Credits
ECON 202	Principles of Economics II	3
SOCI 201	Social Problems	3

**C. Curriculum Area III – (Biological and Physical Sciences)\*\* 8 Credits**

Course No.	Title	Credits
PHYS1 121	General College Physics I	3
PHYS1 123	General College Physics I Lab	1
PHYS1 122	General College Physics II	3
PHYS1 124	General College Physics II Lab	1

**D. Curriculum Area IV – (Mathematics)\*\* 7 Credits**

Course No.	Title	Credits
MATH 110	Trigonometry and Analytic Geometry	3
MATH 112	Calculus I	4

**E. Curriculum Area V – (English Composition)\*\* 9 Credits**

Course No.	Title	Credits
ENGL 101	Basic Composition I	3
ENGL 102	Basic Composition II	3
ENGL 305	Technical Writing	3
ENGL 001	English Proficiency Exam	0

**F. Curriculum Area VI – (Emerging Issues)**

Course No.	Title	Credit
GNST 101	First Year Experience Seminar	1

\*Course Requirements other than those listed above should be selected in consultation with the advisor or Department Chairman.

\*\*Students are required to receive a grade of C or better in these courses.

**II. Program Core Courses 50 Credits**

Course No.	Title	Credits
CMTE 211	Statics	3
CMTE 212	Strength of Materials	4
EDTE 131	Computer-Assisted Drawing and Design I (CAD-I)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD-II)	3
ETEE 201	Circuit Technology I	3
ETEE 202	Circuit Technology II	3
ETME 301	Thermodynamics and Heat Power	3

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
ETME 303	Machine Design I	3
ETME 318	Applied Dynamics	3
ETME 325	Engineering Materials	3
ETME 342	Fluid Mechanics	3
ETME 356	Manufacturing Processes	3
ETME 381	Instrumentation and Measurements	4
ETME 423	Heating, Ventilating, & Air Conditioning	3
ETME 445	Computer Integrated Manufacturing	3
ETME 475	Mechanical Systems Design I	3
<b>III.</b>	<b>Supportive Courses</b>	<b>18 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
BUAD 411	Operations Research & Decision Theory	3
BUAD 410	Production Management	3
CHEM 111	Principles of Chemistry I	3
CHEM 113	Principles of Chemistry I Lab	1
CSDP 220	Introduction to Computer Programming	4
MATH 211	Calculus II	4
<b>IV.</b>	<b>Technical Elective Courses (minimum 15 hours)</b>	<b>15 Credits</b>
<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CMTE 214	Construction Surveying	3
CMTE 313	Structural Design I	3
CMTE 316	Environmental Technology II	4
CSDP 222	Advanced Programming	4
CSDP 341	Numerical Analysis I	3
EDTE 341	Transportation Technologies	3
EDTE 342	Energy and Power Technologies	3
ENEE 241	Numerical Technology in Engineering	3
ETME 304	Machine Design II	3
ETME 360	CNC Machines and Programming	3
ETME 395	Industrial Practice	3
ETME 476	Mechanical Systems Design II	3
ETEE 303	Circuit Technology III	3
ETEE 314	Electrical Power and Machinery	3
ETEE 474	Nuclear Fundamentals	3
MATH 212	Calculus III	4
MATH 321	Differential Equations	4
<b>V.</b>	<b>Free Elective</b>	<b>3 Credits</b>
<b>TOTAL PROGRAM REQUIRED CREDITS</b>		<b>126</b>

**MECHANICAL ENGINEERING  
TECHNOLOGY  
Recommended Course Sequence**

The following is a prototype of the associate degree program or equivalent experience that should be completed before enrolling for the junior and senior year.

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
Freshman Orientation	1
English Composition I	3
Computer-Assisted Drawing and Design I (CAD-I)	3
Trig. and Analytic Geometry	3
General College Physics I	3
General College Physics I Lab	1
<b>Semester Total</b>	<b>14</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
Behavioral Sciences	3
Computer-Assisted Drawing and Design II (CAD-II)	3
English Composition II	3
Calculus I	4
General College Physics II	3
General College Physics II Lab	1
<b>Semester Total</b>	<b>17</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
Statics	3
Fund. of Contemporary Speech	3
Circuit Technology I	3
Principles of Chemistry I	3
Principles of Chemistry I Lab	1
Literature, Foreign Lang.	<u>3</u>
<u>or</u> Fine Arts	<u>3</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
Strength of Materials	4
Principles of Economics II	3
Circuit Technology II	3
Literature, Foreign Lang.	<u>3</u>
<u>or</u> Fine Arts	<u>3</u>
Calculus II	<u>4</u>
<b>Semester Total</b>	<b>17</b>

**JUNIOR YEAR**

The following is a recommended course sequence for those graduates of associate-degree technology programs or equivalent experiences to complete requirements for the Bachelor of Science degree in Engineering Technology at UMES.

<b>FALL SEMESTER</b>	<b>HOURS</b>
ENGL 305 Technical Writing	3
ETME 301 Thermo. & Heat Power	3
ETME 303 Machine Design I	3
ETME 381 Instru. & Measurements	4
ETEE 325 Engineering Materials	<u>3</u>
<b>Semester Total</b>	<b>16</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
ETME 318 Applied Dynamics	3
ETME 342 Fluid Mechanics	3
ETME 356 Manufacturing Processes	3
CSDP 220 Intro to Computer Program.	4
FREE Elective	<u>3</u>
<b>Semester Total</b>	<b>16</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>	<b>HOURS</b>
BUAD 411 Oper. Resarch and Deci. Theory	3
ETME 423 Heating, Vent Manu. & Air Cond.	3
ETME 445 Compt. Integrated Man.	3
Technical Elective	3
Technical Elective	<u>3</u>
<b>Semester Total</b>	<b>15</b>

<b>SPRING SEMESTER</b>	<b>HOURS</b>
BUAD 410 Production Management	3
ETME 476 Mech. Systems Design I	3
Technical Elective	3
Technical Elective	3
Technical Elective	<u>3</u>
<b>Semester Total</b>	<b>15</b>

**Total Credits Required      126**

**TECHNOLOGY EDUCATION  
Required and Recommended Course Sequence**

**I. General Education Requirements****TOTAL REQUIRED IN GENERAL EDUCATION – 42 Credits**

Students should consult with their freshman or departmental advisor when making course selections.

<b>A.</b>	<b>Curriculum Area I – (Arts and Humanities)*</b>	<b>9 Credits</b>																		
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ENGL 203	Fundamentals of Contemporary Speech	3																		
<b>B.</b>	<b>Curriculum Area II – (Social and Behavioral Sciences)*</b>	<b>6 Credits</b>																		
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Course No.	Title	Credits																		
ECON 201	Principles of Economics I	3																		
PSYC 200	Introduction to Psychology	3																		
<b>C.</b>	<b>Curriculum Area III – (Biological and Physical Sciences)**</b>	<b>11 Credits</b>																		
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Course No.	Title	Credits																		
PHYS 121	General College Physics I	3																		
PHYS 123	General College Physics I Lab	1																		
PHYS 122	General College Physics II	3																		
PHYS 124	General College Physics II Lab	1																		
BIOL 101	Biological Science	3																		
<b>D.</b>	<b>Curriculum Area IV – (Mathematics)**</b>	<b>6 Credits</b>																		
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Course No.	Title	Credits																		
MATH 109	College Algebra	3																		
MATH 110	Trigonometry and Analytic Geometry	3																		
<b>E.</b>	<b>Curriculum Area V – (English Composition)**</b>	<b>9 Credits</b>																		
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ENGL 102	Basic Composition II	3																		
ENGL 305	Technical Writing	3																		
ENGL 001	English Proficiency	0																		
<b>F.</b>	<b>Curriculum Area VI - Emerging Issues</b>	<b>1 Credit</b>																		
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Course No.	Title	Credit																		
GNST 101	First Year Experience Seminar	1																		

\*Course Requirements other than those listed above should be selected in consultation with the advisor or Department Chairman.

\*\*Students are required to receive a grade of C or better in these courses.

<b>II.</b>	<b>Program Core Courses</b>	<b>42 Credits</b>															
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Course No.	Title	Credits															
EDTE 111	Technology and Society	3															
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EDTE 132	Computer-Assisted Drawing and Design II (CAD-II)	3															
EDTE 211	Electrical and Electronics Technologies I	3															

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CMTE 230	Construction Materials	3
EDTE 232	Information and Communication Technologies	3
EDTE 341	Transportation Technologies	3
EDTE 342	Energy and Power Technologies	3
EDTE 351	Construction Technologies	3
ETME 356	Manufacturing Processes	3
EDTE 361	Manufacturing Technologies	3
EDTE 467	Instructional Analysis and Curriculum Development	3
EDTE 481	Facilities Organization and Management	3
EDTE 483	Core Technologies II	3

**III. Professional Education Courses 42 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDCI 200	Introduction to Contemporary Education	3
EDSP 200	Introduction to Special Education	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 400	Senior Seminar	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in the Content Areas: Part I	3
EDCI 410	Teaching Reading in the Content Areas: Part II	3
EDCI 425D	Curriculum and Instructional Methods in Technology Education	3
EDCI 460/470D	Teaching Internship	12

**TOTAL PROGRAM REQUIRED CREDITS 126**



**UMES Greenhouse**

**TECHNOLOGY EDUCATION**  
**Recommended Course Sequence**

**FRESHMAN YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDTE	111	Technology and Society	3
EDTE	131	Computer-Assisted Drawing and Design I (CAD-I)	3
ENGL	101	Basic Composition I	3
MATH	109	College Algebra	3
GNST	100	First Yr. Experience Seminar	1
ARTS	101	Exploration of the Visual Arts	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
MATH	110	Trig. and Analytic Geometry	3
EDTE	132	Computer-Assisted Drawing and Design II (CAD-II)	3
ENGL	102	Basic Composition II	3
EDCI	200	Introduction to Education	3
BIOL	101	Biological Science	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SOPHOMORE YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
SOCI	201	Social Problems	3
ECON	201	Principles of Economics I	3
PHYS	121	Gen. College Physics I	3
PHYS	123	Gen. College Physics I Lab	1
ENGL	203	Fund. of Contemporary Speech	3
EDSP	200	Intro. to Special Education	<u>3</u>
<b>Semester Total</b>			<b>16</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDTE	211	Electrical and Electronics Tech I	3
CMTE	230	Construction Materials	3
EDTE	232	Info & Communications Tech	3
PHYS	122	Gen. College Physics II	3
PHYS	124	Gen. College Physics II Lab	1
PSYC	305	Developmental Psychology	<u>3</u>
<b>Semester Total</b>			<b>16</b>

**JUNIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
ETME	356	Manufacturing Processes	3
EDTE	341	Transportation Technologies	3
EDTE	351	Construction Technologies	3
PSYC	307	Educational Psychology	3
ENGL	305	Technical Writing	3
ENGL	328	World Literature I	<u>3</u>
<b>Semester Total</b>			<b>18</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	409	Teaching Reading: Part I	3
EDTE	361	Manufacturing Technologies	3
EDTE	467	Instru. Analysis Curr. Devel.	3
EDTE	342	Energy and Power Tech.	3
EDCI	406	Classroom Management	<u>3</u>
<b>Semester Total</b>			<b>15</b>

**SENIOR YEAR**

<b>FALL SEMESTER</b>			<b>HOURS</b>
EDCI	410	Teaching Reading: Part II	3
EDTE	481	Facilities Org. & Management	3
EDTE	483	Core Technologies II	3
EDCI	425D	Curric. & Instruct Tech Ed	3
EDCI	311	Comprehensive Assessment	<u>3</u>
<b>Semester Total</b>			<b>15</b>

<b>SPRING SEMESTER</b>			<b>HOURS</b>
EDCI	400	Senior Seminar	3
EDCI	460	Teaching Internship	6
EDCI	470	Teaching Internship	<u>6</u>
<b>Semester Total</b>			<b>15</b>
<b>Total Credits Required</b>			<b>126</b>



## MINOR PROGRAMS

In order to minor in Construction Management Technology, it is recommended that the Department Chairman be contacted as early as possible. A minor advisor will be assigned by the chairman. All prerequisites for departmental courses must be met before enrolling in the courses to satisfy the minor sequence.

Two suggested minors in Construction Management Technology are outlined below, one for those interested in technical applications and one for those interested in management applications. Upon justification by the student, limited substitution of courses can be made upon approval by the Department Chairman.

### TECHNICAL

Students interested in a minor in Construction Management Technology and in technical applications should complete the following courses, totaling **25 credits**:

Course No.	Title	Credits
EDTE 131	Computer-Assisted Design and Drawing I (CAD-I)	3
EDTE 132	Computer-Assisted Design and Drawing II (CAD-II)	3
CMTE 230	Construction Materials	3
CMTE 201	Architectural Drawing	3
CMTE 211	Statics	3
CMTE 212	Strength of Materials	4
CMTE 214	Construction Surveying	3
CMTE 300-400	Level Course	3

### MANAGEMENT

Students interested in a minor in Construction Management Technology and in management applications should complete the following courses, totaling **24 credits**:

Course No.	Title	Credits
EDTE 131	Computer-Assisted Drawing and Design I (CAD)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD)	3
CMTE 201	Architectural Drawing	3
CMTE 230	Construction Materials	3
CMTE 311	Construction Methods I	3
CMTE 342	Construction Estimating I	3
CMTE 445	Construction Estimating II	3
CMTE 425	Construction Management I	3

### MECHANICAL ENGINEERING TECHNOLOGY

Students interested in a minor in Mechanical Engineering Technology should complete the following courses, totaling **25 credits**:

Course No.	Title	Credits
EDTE 131	Computer-Assisted Drawing and Design I (CAD)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD)	3
CMTE 211	Statics	3
CMTE 212	Strength of Materials	4
ETME 301	Thermodynamics & Heat Power	3
ETME 303	Machine Design I	3
ETME 356	Manufacturing Processes	3
ETME 423	Heating, Ventilating & Air Conditioning	3

**TECHNOLOGY EDUCATION  
Teacher Certification**

Students interested in a minor in Technology Education may pursue one of two tracks depending on their career objective. A sequence of courses has been designed for both Technology Education Teacher Certification and Technical Applications in industry. The Technology Education Teacher Certification sequence (based on established state requirements) may be pursued by education majors who also desire certification in Technology Education. Students must meet all departmental prerequisites and receive a grade of C or better in required courses.

**Manufacturing and Construction Technology**

**39 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
CMTE 230	Construction Materials	3
EDTE 351	Construction Technologies	3
ETME 356	Manufacturing Processes	3
EDTE 361	Manufacturing Technologies	3
EDTE	Technical Elective	3

**Design and Communication Technology**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDTE 131	Computer-Assisted Drawing and Design I (CAD-I)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD-II)	3
CMTE 201	Architectural Drawing	3
EDTE 232	Information and Communication Technologies	3

**Energy and Transportation Technology**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDTE 211	Electrical and Electronics Technologies I	3
EDTE 212	Electrical and Electronics Technologies II	3
EDTE 341	Transportation Technologies	3
EDTE 342	Energy and Power Technologies	3

Six additional semester hours to include:

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDTE 499	Research and Experimentation in Technology Education I	3
EDTE 481	Facilities Organization & Mgt.	3

Additional professional education courses, as listed below for Career and Technology Education, and student teaching may also be required by the State for certification.

**Technical Applications For Industry**

**27 Credits**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>
EDTE 131	Computer-Assisted Drawing and Design I (CAD-I)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD-II)	3
CMTE 230	Construction Materials	3
ETME 356	Manufacturing Processes	3
EDTE 361	Manufacturing Technologies	3
EDTE 351	Construction Technologies	3
EDTE 211	Electrical and Electronics Technologies I	3
EDTE 212	Electrical and Electronics Technologies II	3
Elective	Technical	3

## CAREER AND TECHNOLOGY EDUCATION CERTIFICATION

The University of Maryland is designated as one of the institutions which shall offer the "Trade and Industrial" certification courses. The courses which are offered are those required for certification in Maryland. To become certified as a trade-industrial and service occupations teacher in the State of Maryland, a person must successfully complete 18-21 credit hours of instruction.

The following courses will satisfy the Standard (SPC) Certification Requirements:

<b>Course No.</b>	<b>Title</b>
EDSP 200	Introduction to Special Education
EDTE 368	Curriculum Development and Methods of Teaching I
EDTE 370	Curriculum Development and Methods of Teaching II
EDTE 437	Student Performance Assessment
EDCI 409	Teaching Reading in the Content Areas: Part I
EDCI 410	Teaching Reading in the Content Areas: Part II
EDTE 440	Integrating Math and Science in Occupational and Technical Education

## COURSE DESCRIPTIONS

### Construction Management Technology

**CMTE 201 Architectural Drawing** 3 crs.  
This is an introductory course in architectural planning and blue print reading utilized by architects and builders of residential, commercial, and light industrial properties throughout the construction industry. Students utilize CAD drafting skills and sketches to produce plans, details, and sections used in field and office operations. Lecture one hour, laboratory four hours. Prerequisite: EDTE 131.

**CMTE 205 Computer Applications in Construction** 3 crs.  
This course develops a solid understanding of micro-computers, the Windows operating system, and Internet usage. Students develop proficiency in the use of various commercially available software packages, such as word processing, presentation, spreadsheet, and database management. A variety of construction specific software programs in estimating, scheduling, and construction project management are introduced. Lecture two hours; laboratory two hours. Prerequisite: Sophomore standing.

**CMTE 211 Statics** 3 crs.  
This course covers the composition and resolution of forces, equilibrium of force systems; application of the principles of statics to problems, including force analysis of simple structures; centroids; and moments of inertia. Lecture three hours. Prerequisites: MATH 110 and PHYS 121.

**CMTE 212 Strength of Materials** 4 crs.  
This course covers the behavior of materials subjected to tension, compression, shear, and bending; design of beams and columns; tests to determine the physical properties of various structural materials, including steel, wood, and aluminum; and analysis and interpretation of test data. Lecture three hours; laboratory two hours. Prerequisites: CMTE 211 and MATH 112.

**CMTE 214 Construction Surveying** 3 crs.  
This course covers coordinates, directions, distances and elevations. The course includes traverses, boundary surveys leveling, national rectangular coordinate systems, property description, public land subdivision, metes and bounds, and topographic surveys. Lecture one hour; laboratory four hours. Prerequisite: MATH 110 or MATH 111.

**CMTE 230 Construction Materials** 3 crs.  
The properties of various materials used in construction, such as wood, steel, clay products, concrete, plastic, glass, concrete products, soils, and other materials are covered in this course. Lecture two hours; laboratory two hours.

**CMTE 286 Construction Planning & Scheduling** 3 crs.  
The focus of this course is on the application of planning and scheduling techniques to a construction project. The use of bar charts and critical path method (CPM) are emphasized, as well as cost allocation, resource leveling, scheduling

updating, and microcomputer application. Lecture two hours; laboratory two hours. Prerequisite: CMTE 201.

### **CMTE 295 Construction Management Internship I** 2 crs.

This course is designed to provide students with work experience as interns under supervision of construction professionals. Students become familiar with many phases of construction under actual job conditions, which may include estimating, field engineering, inspecting, scheduling, and supervision. Students must register for the course during summer school and work a minimum of 40 hours per week for six (6) weeks to receive credit for the course. Students enrolled in the Military Reserve Officer Training Corps may receive credit for (1) summer camp experience under this course listing (while enrolled at UMES). Prerequisites: Completion of Sophomore year and permission of instructor.

**CMTE 311 Construction Methods I** 3 crs.  
The study and analysis of job planning, work methods, materials, equipment, and power tool and equipment safety methods employed on residential construction projects are covered in this course. Lecture one hour; laboratory four hours. Prerequisites: CMTE 201, CMTE 230, and MATH 110 or MATH 111.

**CMTE 312 Construction Methods II** 3 crs.  
This course is a continuation of Construction Methods I as applied to commercial, institutional, and industrial construction projects. Integration of OSHA and MOSHA safety standards for personal safety are covered in this course. Lecture one hour; laboratory four hours. Prerequisite: CMTE 311.

**CMTE 313 Structural Design I** 3 crs.  
This course covers theory and principles of the design of steel and timber structural elements and connections and their applications in construction. Lecture three hours. Prerequisite: CMTE 212.

**CMTE 314 Structural Design II** 3 crs.  
This course covers the theory and principles of the design of reinforced concrete and masonry structural elements and their applications in construction. Lecture three hours. Prerequisite: CMTE 212.

**CMTE 315 Environmental Technology I** 3 crs.  
This course covers heat loss, heat gain, and humidity control; the control of temperature and humidity in buildings; basics of designing heating, ventilation, and air conditioning systems; sizing of pipes and ducts, and selection of HVAC equipment. Principles of water services, drainage, waste and vent, and fire protection systems will also be covered. Lecture two hours; laboratory two hours. Prerequisites: Junior standing, CMTE 201, ENGL 305, MATH 112, and PHYS 121.

**CMTE 316 Environmental Technology II 3 crs.**  
This course covers the principles and practices of electrical systems, lighting systems, vertical transportation for buildings, sound control, and year-round climate control in buildings. The course also includes code provisions and cost estimation. Lecture one hour; laboratory four hours. Prerequisites: CMTE 201, ENGL 305, PHYS 121, PHYS 122, and MATH 112.

**CMTE 317 Soils In Construction 3 crs.**  
This course covers the identification and properties of soils with emphasis on laboratory and field testing. The influence of soil material in certain construction operations and in the construction contract are emphasized. Lecture one hour. Laboratory four hours. Prerequisites: CMTE 212 and CMTE 230.

**CMTE 342 Construction Estimating I 3 crs.**  
The classification of work, quantity survey techniques, as well as cost estimating of labor, material, and equipment used in the completion of construction projects are covered in this course. Lecture two hours; laboratory two hours. Prerequisites: CMTE 311, MATH 110 or MATH 111.

**CMTE 395 Construction Management Internship II 2 crs.**  
This course is designed to provide students with work experience as interns under supervision of construction professionals. Students become familiar with many phases of construction under actual job conditions, which may include estimating, field engineering, inspecting, scheduling, and supervision. Students must register for the course during summer school and work a minimum of 40 hours per week for six (6) weeks to receive credit for the course. Students with verifiable construction experience of three (3) years or more may receive credit under this course listing. Verification will be through letters of recommendation from employer(s) on company letterhead and documented payroll receipts. Junior college transfer students who have completed an Associate Degree Program are required to complete one internship course.

**CMTE 425 Construction Management I 3 crs.**  
This course covers construction industry organization and ethics; contract documents, their relationships, meanings and significance in construction; human relations and communications. Safety, health, and risk control are topics that are also included in this course. Lecture three hours. Prerequisite: CMTE 312.

**CMTE 426 Construction Management II 3 crs.**  
This course covers the effective management and control to complete a construction project in accordance with the contract documents, within budget, on time, and safely. Topics discussed include professional ethics, project management principles, effective communications, cost engineering, management accounting, procurement, change orders, claims, value engineering, safety management, and computer applications. Lecture three hours. Prerequisites: CMTE 286, CMTE 425, and CMTE 445.

**CMTE 445 Construction Estimating II 3 crs.**  
This course covers the analysis and determination of costs of construction operations, including all the normal bid-preparation activities that take place in a constructor's estimating section. This course also includes construction cost accounting and control, microcomputer applications, and professional ethics. Lecture three hours. Prerequisites: CMTE 205 and CMTE 342.

**CMTE 454 Site Development 3 crs.**  
This course covers market analysis and search, site selection criteria, zoning, deed restrictions, physical influences on land, use of information coming from personal interviews and printed information from city and county offices, and preliminary layout and design of selected projects. Lecture two hours; laboratory two hours. Prerequisites: CMTE 201, CMTE 214, and CMTE 312.

**CMTE 458 Senior Seminar 2 crs.**  
This course covers selected construction problems by individuals or project teams. The course includes presentation of selected topics by students and construction industry representatives. Laboratory four hours. Prerequisite: Senior standing in Construction.

**CMTE 499 Undergraduate Research in Construction Management Technology 1-3 crs.**  
This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. Credits and hours may be arranged for either or both semesters and require the consent of the instructor and approval of the Department Chairman.

### TECHNOLOGY EDUCATION

**EDTE 111 Technology and Society 3 crs.**  
This course examines the nature of technology, its meaning, application, significance, historical role, and importance in today's technological society. Course content focuses on the characteristics and scope of technology; core concepts of technology; relationships and connections between technology and other fields; the cultural, social, economic, and political effects of technology; the effects of technology on the environment; and the role of society in the development and use of technology. Lecture three hours.

**EDTE 131 Computer-Assisted Drawing and Design I (CAD-I) 3 crs.**  
This course covers the attributes of design. Engineering design and the basics of technical drawing are covered in this course. The design process is utilized to solve problems. Basic technical drawing skills are developed, such as sketching, coordinate systems, the principles and theory of visualization, shape description, orthographic projection, isometric views, dimensioning, sectional views, and auxiliary views. Students use and apply Computer-Assisted Drawing and Design (CAD) software to produce basic technical drawings. Lecture two hours; and laboratory two hours.

**EDTE 132 Computer-Assisted Drawing and Design II (CAD) 3 crs.**

In this course advanced computer-assisted drawing and design software is used to produce three-dimensional drawings. Engineering design and problem solving are used to research and develop renderings and animated wire-frame, surface, and solid three-dimensional models. The use of libraries of pre-drawn materials is also covered. Lecture two hours; and laboratory two hours. Prerequisite: EDTE 131 or permission of instructor.

**EDTE 211 Electrical and Electronics Technologies I 3 crs.**

This course covers the fundamental principles of DC and AC circuits. Ohm's Law, series and parallel circuits, semi-conductors, circuit symbols, magnetism, SI units, and test equipment are also studied. Lecture two hours; and two laboratory hours. Prerequisites: MATH 110 and PHYS 121.

**EDTE 212 Electrical and Electronics Technologies II 3 crs.**

This course provides an advanced study of AC circuits, inductance, capacitance, and resonance applied to communication devices such as computers. Emphasis is placed on power supplies, amplifiers, oscillators, receivers, and test equipment. Lecture two hour;. laboratory two hours. Prerequisite: EDTE 211.

**EDTE 232 Information and Communication Technologies 3 crs.**

This course covers various information and communication systems. It examines how information can be encoded, transmitted, and received. Graphic communications, television, radio, computer networks, computer graphics, the Internet, telephone, and other systems and subsystems are also examined. The symbols, design, and language of information and communication are discussed. Lecture two hours; laboratory two hours. Prerequisite: EDTE 132.

**EDTE 314 Biotechnology 3 crs.**

This course covers techniques that use living organisms or parts of an organism to make or modify products to improve plants or animals, including humans. Developing micro-organisms for specific uses is emphasized. Lecture two hours; laboratory two hours. Prerequisite: BIOL 101.

**EDTE 341 Transportation Technologies 3 crs.**

This course covers transportation systems used to transport people and goods. The design and operation of transportation systems and subsystems, governmental regulations, care of products and systems, design and operation of transportation systems, and the impact of transportation systems on society are studied. Lecture two hours, laboratory two hours. Prerequisite: Junior standing.

**EDTE 342 Energy and Power Technologies 3 cr.**

The use and impact of energy and power systems in society are examined in this course. Such areas as power efficiency and conservation, energy sources, thermodynamics, renewable and non-renewable forms of energy, and alternate energy are studied. Technical aspects of systems design and

development for solar energy, nuclear energy, wind energy, geothermal energy, hydro-energy and other sources are also examined. Lecture two hours; laboratory two hours. Prerequisite: EDTE 341.

**EDTE 351 Construction Technologies 3 crs.**

The structures, systems, processes, and procedures of construction technologies are examined in this course. Principles of construction, personnel management and organization, the design process, methods, materials, tools, and equipment used in building structures are studied. Prefabricated materials, infrastructures and renovation are additional topics covered. Lecture two hours; laboratory two hours. Prerequisite: Junior Standing.

**EDTE 361 Manufacturing Technologies 3 crs.**

This course is a study of the principles of manufacturing goods, processes, and systems. Personnel management, organizational structures, durable and non-durable goods, product design, interchangeability, and product marketing are covered. Students research and select products suitable for mass-production using an enterprise system. Emphasis is placed on the manufacturing design process. The social, cultural and economic problems and benefits are examined. Lecture two hours; laboratory two hours. Prerequisite: ETME 356.

**\*EDTE 368 Curriculum Development and Methods of Teaching I 3 crs.**

This course focuses on identifying course content, developing instructional plans, writing objectives, designing instructional strategies, and developing instructional materials for career and technology education courses. State and national content standards are used as a basis for curriculum design. This is the first of a two-course sequence which utilizes competency-based materials and authentic teaching experiences. Lecture three hours. Prerequisite: Permission of instructor.

**\*EDTE 370 Curriculum Development and Methods of Teaching II 3 crs.**

A field-based internship in a public school under the supervision of an experienced mentor teacher and a university teacher educator is the basis for this course. Beginning teachers plan, develop, deliver, and assess competency-based instruction in their assigned area of teaching. Laboratory six hours. Prerequisite: EDTE 368.

**EDTE 415 History and Principles of Career and Technology Education 3 crs.**

The history, purpose, goals, principles, and concepts of career and technology education are discussed in this course. Other topics include federal legislative acts, definition of terms, instructional programs, career clusters, administration of programs, and current trends. Lecture three hours. Prerequisite: Permission of instructor.

**\*EDTE 437 Student Performance Assessment 3 crs.**  
 This course teaches how to identify and utilize appropriate performance criteria to measure student achievement in the cognitive, psychomotor, and affective domains. A variety of assessment instruments is developed to document student mastery of instructional objectives. Topics covered include performance tests, rating scales, checklists, rubrics, student portfolio assessment, and grading systems. Lecture three hours. Prerequisite: Permission of instructor.

**\*EDTE 440 Integrating Math and Science in Occupational and Technical Education 3 crs.**

The purpose of this course is to provide teachers with techniques and methods to assist students in improving their math and science skills. Techniques and problem application will be covered for specific occupational/technical areas. Lecture three hours. Prerequisite: Permission of instructor.

**EDTE 445 American Industry and Global Competition 3 crs.**

This course is an examination of American business and industry in relation to current and future global economy trends. All aspects of the industry are covered, including planning, management, finance, technical and production skills, principles of technology, labor issues, community issues, and health, safety, and environmental issues. Lecture three hours. Prerequisite: Permission of instructor.

**\*EDTE 450 Mentoring: Expectations and Responsibilities 3 crs.**

Introduction to mentoring, selecting mentors, mentor/teacher responsibilities, teacher observation, problems of beginning teachers, mentoring techniques, assessment, and portfolio development are covered in this course. This course is designed to prepare experienced teachers that are interested in becoming mentors in their school system. Lecture three hours. Prerequisite: Permission of instructor.

**EDTE 467 Instructional Analysis and Curriculum Development 3 crs.**

This advanced curriculum design course covers methods of conducting an instructional analysis in a content area in order to develop curriculum materials. Emphasis is placed on the integration and utilization of national and state content standards. Based on these standards, goals, objectives, indicators, expectancies, student learning activities, instructional materials, and assessment limits and instruments are designed. Lecture three hours. Prerequisite: Permission of instructor.

**EDTE 481 Facilities Organization and Management 3 crs,**

Basic elements of organizing and managing career and technology education facilities comprise the core of this course. Selection of instructional tools, equipment, and supplies; safety; state and federal laws; facility layout arrangements, and classroom management are studied. Lecture three hours. Prerequisite: Senior standing.

**EDTE 482 Core Technologies I 3 crs.**

This course covers the core technologies that are the building blocks of all technology systems. Mechanical and structural technologies are examined with regard to common components, simple controls, basic system design, safety, and applications. An overview of materials technology include an examination of ferrous and non-ferrous materials, common industrial forms, and the primary and secondary processing of industrial materials. Topical investigations and modular activity packages are utilized to enhance understanding of the core technologies. Lecture two hours. Laboratory two hours. Prerequisite: Senior standing or permission of instructor.

**EDTE 483 Core Technologies II 3 crs.**

The core technologies that are the building blocks of all technology systems are covered in this course. Electrical, electronic, optical, fluid, and thermal technologies are examined with regard to common components, simple controls, basic system design, safety, and applications. The context for the study of these core technologies is the design and development of technology systems to solve practical problems. Communication skills are developed through the documentation of the design and development process. Topical investigations and modular activity packages are utilized to enhance understanding of the core technologies. Lecture two hours; laboratory two hours. Prerequisite: Senior standing or permission of instructor.

**EDTE 484 Information Systems 3 crs.**

This course provides students with knowledge and skills related to communication systems, application of computers, computer controlled robots and machines, imaging, publishing, audio systems, video systems, and telecommunications. The focus of the course is on integrating instruction on information systems into the technology/learning strategies used in technology education. These strategies include: (1) Ingenuity Challenges, (2) Topical Investigations, (3) Product Generation, (4) Modular Activity Packages, (5) Research and Experimentation, and (6) Engineering Design and Development. Lecture two hours; laboratory two hours. Prerequisite: Senior standing or permission of instructor.

**EDTE 485 Safety Programs in Education and Occupational Settings 3 crs.**

This course is a study of exemplary safety practices through conference discussions, group demonstrations, and development of written safety programs for occupational education facilities. Organized plant visits and industrial safety programs are studied. Lecture three hours. Prerequisite: Senior standing or permission of instructor.

**EDTE 486 Instructional Technology and Media Development 3 cr.**

The study of various instructional technology commonly used as learning tools to assist with instructional delivery is the focus of this course. Computers, software, hardware, the Internet, web-page design, e-portfolios, video and audio resources, and other multimedia devices are covered. Lecture two hours; laboratory two hours. Prerequisite: Senior standing or permission of instructor.

**EDTE 499 Research and Experimentation Technology Education 1-3 crs.**

This advanced course focuses on solving technological issues through the problem solving method. Students identify a technological problem, determine possible solutions, design or utilize test apparatus, collect data, write a research report, and present their findings. Emphasis is placed on inquiry, utilizing resources, analyzing and synthesizing data, and developing solutions. Credit hours arranged. Prerequisite: Permission of instructor.

**\*Career and Technology Education Certification courses****ELECTRICAL/ELECTRONICS  
ENGINEERING TECHNOLOGY****ETEE 303 Circuit Technology III 3 crs.**

This course covers advanced network analysis and provides an introduction to the use and applications of Laplace and Fourier transforms, filter theory, and computer applications. Lecture two hours. Laboratory two hours. Prerequisites: Junior Standing., CSDP 220 and MATH 211.

**ETEE 314 Electric Power and Machinery 3 crs.**

This course focus on the generation, transmission and distribution of electrical energy, theory and operation of transformers, DC machines, and AC machines including three phase synchronous, asynchronous, single phase and their equivalent circuits and performance analysis. Lecture two hours; laboratory two hours. Prerequisites: Junior standing and ETEE 202.

**ETEE 335 Logic and Switching Circuits 3 crs.**

This course will focus on the principles and application of asynchronous logic, encoder and decoder, control and programmable logic, multiplexer, demultiplexer, PLA, memory latches, systems and codes, counters, shift registers, computer arithmetic circuits, memory systems, static and dynamic RAM and ROMS, and interfacing. Lecture two hours; laboratory two hours. Prerequisites: Junior standing and ETEE 216.

**ETEE 346 Control Circuits 3 crs.**

This course will focus on the study of open and closed loop control systems, principles of feedback control, analysis of system response and criteria of system stabilities and compensation. Lecture two hours. Laboratory two hours. Prerequisite: ETEE 303.

**ETEE 355 Advanced Electronic and Computer Networks 3 crs.**

This is an introductory course in electronic circuits for computers that covers number systems, computer organization, assembly language programming, micro-processors, system components and interfacing concepts. Lecture two hours; laboratory two hours. Prerequisite: ETEE 335.

**ETEE 421 Instrumentation and Measurements 4 crs.**

This course will focus on the fundamental concepts of mechanical and electronic measurement of distance, velocity, acceleration, time, pressure, force, strain. Introduction to development of measuring systems and calibration of these systems and the application of measuring systems to **industrial technology**. Lecture two hours; laboratory four hours. Prerequisites: Senior standing, CSDP 220, ETEE 202 and MATH 112.

**ETEE 425 Communication and Microwave Technology 3 crs.**

The course will cover the basics of electronic communication technology, digital communication, codes, serial interfaces, error detection, data link control, protocol, networking and network topology. Lecture two hours. Laboratory two hours. Prerequisites: Permission of instructor and MATH 211.

**ETEE 474 Nuclear Fundamentals 3 crs.**

This course will focus on the basic theory related to the nuclear energy complex, nuclear reactor design, isotopic and chemical separations and computer applications in problem **olving**. Lecture three hours. Prerequisites: Permission of the instructor and Senior standing.

**ETEE 485 Design Technology I 3 crs.**

This course will focus on the design process, including creativity, analysis, synthesis, and decision-making. It will also **cover** applications of analytical techniques, experimental results and individual or group design projects, emphasizing the synthesis of a design solution to meet performance **specifications**. Lecture three hours. Prerequisites: ETEE 335, ETEE 421 and Senior standing.

**ETEE 486 Design Technology II 3 crs.**

This course will focus on individual or group design projects requiring the synthesis of analytical, experimental and manufacturer's data for the development of an electronic system. The course will require execution of the design in sufficient detail to permit construction and testing or evaluation of a prototype, model, or mock-up and consideration of reliability, safety, human factors, and economics of **production**. Computer applications will be required. Lecture one hour; laboratory four hours. Prerequisites: CSDP 220 and ETEE 485.



**ETEE 499 Undergraduate Research in Electrical Engineering Technology** 1-3 crs.

This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. Credits and hours may be arranged for either or both semesters and require the consent of the instructor and approval of the Department Chairman.

**MECHANICAL ENGINEERING TECHNOLOGY**

**ETME 301 Thermodynamics and Heat Power** 3 crs.

This course covers the basic laws of thermodynamics, properties of fluids. **Applications** of the first and second laws of thermodynamics in the analysis of basic heat engines and their cycles used in power generation will **also** be covered. Lecture three hours. Prerequisites: CHEM 111, MATH 211 and PHYS 122.

**ETME 303 Machine Design I** 3 crs.

This course covers design and selection of machine elements, power transmissions, shafts, couplings, keys, threaded fasteners, belts, rivets, welding, lubrication, sleeve bearings with roller bearings. Lecture three hours. Prerequisites: CMTE 212 and MATH 112.

**ETME 304 Machine Design II** 3 crs.

This course covers the design and selection of machine elements, including chain drives, hoists and conveyors, brakes, clutches, power screws, gears, cams, springs, and fly wheels. Lecture three hours. Prerequisites: ETME 303 and MATH 112.

**ETME 318 Applied Dynamics** 3 crs.

This course covers systems of heavy particles and rigid bodies at rest and in motion, rectilinear motion, curvilinear motion, rotation, plane motion, work, energy, power, impulse, and momentum. Lecture three hours. Prerequisites: CMTE 211 and MATH 211.

**ETME 325 Engineering Materials** 3 crs.

This course covers the nature, properties, and behavior of materials used in engineering applications. Materials studied include metals, plastics, polymers, and composites. The production of metals, heat treatment, and powder metallurgy will also be covered. Lecture three hours. Prerequisites: CHEM 111, MATH 112, and PHYS 122.

**ETME 342 Fluid Mechanics** 3 crs.

This course covers fluid flow concepts and basic equations, laminar and turbulent flow, flow in pipes and open channels, energy and momentum equations, Bernoulli's equation, principles of flow measurements and instrumentation, fluid power, and machinery. Lecture two hours; laboratory two hours. Prerequisites: CMTE 211 and MATH 211.

**ETME 356 Manufacturing Processes** 3 crs.

This course covers modern industrial metal working and fabrication processes. Machines and tools used in these processes are also covered. Additionally, study includes casting, welding, cold and hot working, metal cutting

processes, and quality control. Lecture two hours; laboratory two hours. Prerequisites: MATH 110 and PHYS 122.

**ETME 360 CNC Machines and Programming** 3 crs.

This course covers principles of numerical control, Computer Numerically Controlled (CNC) machines used in production, CNC machine capabilities, and point to point programming using G-codes and auxiliary machine control functions. Computer assisted design and computer assisted CNC machine programming are also studied. Lecture two hours; laboratory two hours. Prerequisites: CSDP 220, ETME 356 and MATH 110.

**ETME 381 Instrumentation and Measurements** 4 crs.

This course covers the fundamental concepts of mechanical and electronic measurements of distance, velocity, acceleration, time, pressure, temperature, force, strain, and flow. Measurement systems, and application of selected instruments, with emphasis on interpretation of results are also studied. Lecture three hours; laboratory two hours. Prerequisites: CSDP 220, ETEE 202 and MATH 112.

**ETME 395 Industrial Practice** 3 crs.

This course requires work experience practice in a Mechanical Engineering Technology related field. A minimum of 10 weeks of employment is required. The supervisor of the student must submit a confidential performance evaluation letter for the work done by the student to the faculty advisor. Students must register for the course before commencement of industrial practice for proper credit. Prerequisite: Prior approval of the faculty advisor.

**ETME 423 Heating, Ventilating, and Air Conditioning** 3 crs.

This course covers heat loss, heat gain, the control of temperature and humidity in buildings, and the basics of designing heating, ventilating and air conditioning systems, including sizing of pipes and ducts. Selection of HVAC equipment is also covered. Lecture two hours; laboratory two hours. Prerequisites: EDTE 132, ENGL 305, MATH 112 and PHYS 122.

**ETME 445 Computer Integrated Manufacturing** 3 crs.

This course covers principles of computer integrated manufacturing, system integration and architecture, data base development, interfaces, hardware and software requirements, communication protocols and programming. Lecture three hours. Prerequisites: CSDP 220 and ETME 356.

**ETME 475 Mechanical Systems Design I** 3 crs.

This course covers the design process; creativity, analysis, synthesis, and decision making, applications of analytical techniques and experimental results, individual or group projects emphasizing the synthesis of a design solution to meet performance specifications. Use of computers in design and drafting will be required. Lecture two hours. Laboratory two hours. Prerequisites: Senior standing, CSDP 220, ETME 303 and MATH 211.

**ETME 476 Mechanical Systems Design II 3 crs.**

This course covers advanced individual or group design projects requiring the synthesis of analytical, experimental, and manufacturer's data for development of the design in sufficient detail to permit construction and testing or evaluation of prototype, model, or mock-up. Consideration of reliability, safety, human factors, and economics of construction. Use of computers in design and drafting will be required. Lecture two hours. Laboratory two hours. Prerequisite: ETME 475.

**ETME 499 Undergraduate Research in Mechanical Engineering Technology 1-3 crs.**

This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. Credits and hours may be arranged for either or both semesters and requires the consent of the instructor and approval of the Department Chairman. A written contract must be signed within the first week of the semester.

**FACULTY****Copeland, Sr. Leon L.**

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M.Ed., Virginia State University  
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Professor  
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Ph.D., University of Michigan, Ann Arbor



**Dr. Theodosia Shields, Dean, Library Services and a visitor from Border Technikon, South Africa**

- Appendix 1**      General Education and Transfer Information (Title 13B Maryland Higher Education Commission)
- Appendix 2**      Arbitrary and Capricious Grading Policy
- Appendix 3**      The Honors Program
- Appendix 4**      Title II
- Appendix 5**      Maryland Cooperative Extension Service

## Appendix 1



## Title 13B MARYLAND HIGHER EDUCATION COMMISSION

*Subtitle 06 GENERAL EDUCATION AND TRANSFER***Chapter 01 Public Institutions of Higher Education****Authority: Education Article, § 11-201—11-206, Annotated Code of Maryland****.01 Scope and Applicability.**

This chapter applies only to public institutions of higher education.

**.02 Definitions.**

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

(1) "Area of concentration" means a sequential arrangement of courses within a program which at the:

- (a) Undergraduate level exceeds 24 semester credit hours;
- (b) Master's level exceeds 12 semester credit hours; and
- (c) Doctorate level exceeds 18 semester credit hours.

(2) "Articulated system (ARTSYS)" means a computerized data information system created to facilitate the transfer of students from Maryland community colleges to the University of Maryland System and other participating institutions.

(3) "Associate of Applied Science (A.A.S.);" means a degree which recognizes a mastery of vocational-technical occupational skills (law enforcement, computer technology, engineering technology, etc.). The program is intended for those seeking immediate employment opportunities. However, the program does not preclude a student from transferring to a technical baccalaureate degree program such as a bachelor's degree in technology or a bachelor's degree in technical or professional studies, or from transferring non-technical courses to a 4-year institution.

(4) "Associate of Arts (A.A.);" means a degree which recognizes a mastery in the liberal arts (social sciences, humanities, and similar subjects) and in the fine arts (music, art, etc.). The program is intended for transfer to an equivalent Bachelor of Arts degree program at 4-year institutions.

(4-1) "Associate of Art in Teaching (A.A.T.);" means a degree which recognizes a mastery in teacher education which:

- (a) Meets the lower-level degree academic content, outcomes, and requirements for teacher education, similar to the first 2 years of a baccalaureate program in teacher education;
- (b) Requires a passing score on Praxis I;
- (c) Requires a cumulative grade point average of 2.75 on a 4.00 scale; and
- (d) If achieved, transfers in total without further review by Maryland public and independent four-year institutions.

(5) "Associate of Fine Arts (A.F.A.);" means a degree which recognizes a mastery in the professional arts in programs which:

- (a) Have as a primary goal transfer to a B.F.A. degree program;
- (b) Are similar to the first 2 years of a B.F.A. degree program; and
- (c) Require at least 60 percent of the course credit to be in studio work and related areas.

(6) "Associate of Science (A.S.)" means a degree which recognizes a mastery in science or technology (engineering, agriculture, the natural sciences) with a heavy emphasis on undergraduate mathematics or science. The program is intended for transfer to a Bachelor of Science degree program at 4-year institutions.

(7) "Bachelor of Arts/Bachelor of Science (BA/BS)" means a degree awarded for successful completion of a program of 120 or more undergraduate semester credit hours.

(8) "Bachelor of Technical or Professional Studies" means a degree awarded for the successful completion of an A.A.S. degree, an advanced program of study in the designated area of concentration, and a 12-credit internship or field placement related to the program of study.

(9) "Certificate of advanced study" means a certificate awarded for successful completion of at least 30 semester credit hours of graduate study or the equivalent beyond the master's degree.

(10) "Commission" means the Maryland Higher Education Commission.

(11) "Directed technology certificate" means a certificate awarded for successful completion of a specialized learning program which:

(a) Meets employer training needs; and

(b) Consists of at least 12 credits but not more than 24 credit hours at the freshman or sophomore levels, or both.

(12) "Doctoral degree" means a degree awarded for successful completion of at least 2 years of study beyond the master's level, including completion of a thesis or dissertation.

(13) "First professional degree" means a degree awarded for successful completion of all institutional requirements for becoming a practitioner in a field such as law, medicine, dentistry, pharmacy, theology, or nursing.

(14) "Formal award" means a certificate, diploma, or degree granted in recognition of successful completion of the requirements of a program. These official awards are conferred by the faculty and ratified by the institution's governing board.

(15) "Full-time equivalent faculty (FTEF)" means the number of full-time faculty plus the number of course credit hours taught by part-time faculty during the fall and spring semesters, divided by 24 for teaching 4-year institutions and divided by 18 for research institutions. For community colleges, the number of course credit hours eligible for State aid and taught by part-time faculty during a given fiscal year would be divided by 30 and added to the number of full-time faculty.

(16) "Instructional program" means a course of study, requiring the completion of a specified number of course credits from among a prescribed group of courses, which leads to a formal award.

(17) "Internship" means a supervised work experience or field placement directly related to the student's program.

(18) "Joint degree" means a single degree offered by two or more institutions bearing the name and seal of each in which all participants are substantively involved in required course work, faculty exchange, and shared use of facilities.

(19) "Lower-division certificate" means a certificate awarded for successful completion of a minimum of 12 semester hours at the freshman or sophomore levels, or both.

(20) "Master's degree" means a degree awarded for successful completion of at least 30 semester credit hours or the equivalent of graduate-level courses.

(21) Off-Campus Program.

(a) "Off-campus program" means:

(i) A program in which more than 1/3 of the required course work in a major field of study leading to a certificate beyond the bachelor's level or leading to an undergraduate or graduate degree is offered by an approved or chartered institution at a location other than the principal location of the sponsoring institution during any 12-month period; or

- (ii) Course work offered at a location other than the principal location of an approved or chartered institution that is advertised as leading to an undergraduate or graduate degree or to a certificate beyond the bachelor's level at that location, regardless of the portion of a program offered at that location.
- (b) "Off-campus program" for community colleges means an activity or activities offered outside the community college service area.
- (22) "Parallel program" means a program of study, or courses, at one institution of higher education which has comparable objectives to those at another higher education institution. For example, a transfer program in psychology in a community college is defined as a parallel program to a baccalaureate psychology program at a 4-year institution of higher education.
- (23) "Post-baccalaureate certificate" means a certificate awarded for successful completion of at least 12 semester credit hours of college-level work, the majority of which is at the master's level.
- (24) "Primary degree" means a single degree offered by one institution having responsibility for at least 2/3 of the course requirements in which cooperating institutions participate by the appropriate and complementary addition of courses, faculty, and facilities intended to complete the degree requirements of the primary institution.
- (25) "Professional certificate" means a certificate awarded for successful completion of the number of courses required by the appropriate national professional association.
- (26) "Recommended transfer program (RTP)" means a planned program of courses, including both general education and courses in the major, taken at the community college which is:
- (a) Applicable to a baccalaureate at a receiving institution; and
  - (b) Ordinarily the first 2 years of the baccalaureate degree.
- (27) "Secretary" means the Secretary of Higher Education.
- (28) "Segment" means the University of Maryland System, Morgan State University, St. Mary's College of Maryland, the Maryland Independent Colleges and Universities Association, and the Maryland Association of Community Colleges.
- (29) "State Plan" means the document entitled State Plan for Higher Education.
- (30) "Undergraduate major" means, varying by degree program and subject area:
- (a) Minimum of 30 semester hours (1/2 of which must be upper-divisional credit) in one field or in an interdisciplinary or multidisciplinary field; and
  - (b) Coherent, sequential, and integrated academic program of study-in-depth which is intended to provide:
    - (i) A body of knowledge,
    - (ii) Methods of study, and
    - (iii) Practice appropriate to a subject area.
- (31) "Upper-division certificate" means a certificate awarded for successful completion of at least 12 semester credit hours at the junior or senior levels, or both.

#### **.02-1 Admission of Transfer Students to Public Institutions.**

##### **A. Admission to Institutions.**

- (1) A student attending a public institution who has completed an A.A., A.A.S., or A.S. degree or who has completed 56 or more semester hours of credit, may not be denied direct transfer to another public institution if the student attained a cumulative grade point average of at least 2.0 on a 4.0 scale or its equivalent in parallel courses, except as provided in §A(4) of this regulation.

- (2) A student attending a public institution who has not completed an A.A., A.A.S., or A.S. degree or who has completed fewer than 56 semester hours of credit, is eligible to transfer to a public institution regardless of the number of credit hours earned if the student:
  - (a) Satisfied the admission criteria of the receiving public institution as a high school senior; and
  - (b) Attained at least a cumulative grade point average of 2.0 on a 4.0 scale or its equivalent in parallel courses.
- (3) A student attending a public institution who did not satisfy the admission criteria of a receiving public institution as a high school senior, but who has earned sufficient credits at a public institution to be classified by the receiving public institution as a sophomore, shall meet the stated admission criteria developed and published by the receiving public institution for transfer.
- (4) If the number of students seeking admission exceeds the number that can be accommodated at a receiving public institution, admission decisions shall be:
  - (a) Based on criteria developed and published by the receiving public institution; and
  - (b) Made to provide fair and equal treatment for native and transfer students.

**B. Admission to Programs.**

- (1) A receiving public institution may require higher performance standards for admission to some programs if the standards and criteria for admission to the program:
  - (a) Are developed and published by the receiving public institution; and
  - (b) Maintain fair and equal treatment for native and transfer students.
- (2) If the number of students seeking admission exceeds the number that can be accommodated in a particular professional or specialized program, admission decisions shall be:
  - (a) Based on criteria developed and published by the receiving public institution; and
  - (b) Made to provide fair and equal treatment for native and transfer students.
- (3) Courses taken at a public institution as part of a recommended transfer program leading toward a baccalaureate degree shall be applicable to related programs at a receiving public institution granting the baccalaureate degree.

**C. Receiving Institution Program Responsibility.**

- (1) The faculty of a receiving public institution is responsible for development and determination of the program requirements in major fields of study for a baccalaureate degree, including courses in the major field of study taken in the lower division.
- (2) A receiving public institution may set program requirements in major fields of study which simultaneously fulfill general education requirements.
- (3) A receiving public institution, in developing lower division course work, shall exchange information with other public institutions to facilitate the transfer of credits into its programs.

**.03 General Education Requirements for Public Institutions.**

A. While public institutions have the autonomy to design their general education program to meet their unique needs and mission, that program shall conform to the definitions and common standards in this chapter. A public institution shall satisfy the general education requirement by:

- (1) Requiring each program leading to the A.A. or A.S. degree to include not less than 30 and not more than 36 semester hours, and each baccalaureate degree program to include not less than 40 and not more than 46 semester hours of required core courses, with the core requiring, at a minimum, course work in each of the following five areas:
  - (a) Arts and humanities,



- (b) Social and behavioral sciences,
  - (c) Biological and physical sciences,
  - (d) Mathematics, and
  - (e) English composition; or
- (2) Conforming with COMAR 13B.02.02.16D(2)(b)----(c).
- B. Each core course used to satisfy the distribution requirements of §A(1) of this regulation shall carry at least 3 semester hours.
- C. General education programs of public institutions shall require at least:
- (1) One course in each of two disciplines in arts and humanities;
  - (2) One course in each of two disciplines in social and behavioral sciences;
  - (3) Two science courses, at least one of which shall be a laboratory course;
  - (4) One course in mathematics at or above the level of college algebra; and
  - (5) One course in English composition.
- D. Interdisciplinary and Emerging Issues.
- (1) In addition to the five required areas in §A of this regulation, a public institution may include up to 8 semester hours in a sixth category that addresses emerging issues that institutions have identified as essential to a full program of general education for their students. These courses may:
    - (a) Be integrated into other general education courses or may be presented as separate courses; and
    - (b) Include courses that:
      - (i) Provide an interdisciplinary examination of issues across the five areas, or
      - (ii) Address other categories of knowledge, skills, and values that lie outside of the five areas.
  - (2) Public institutions may not include the courses in this section in a general education program unless they provide academic content and rigor equivalent to the areas in §A(1) of this regulation.
- (E) General education programs leading to the A.A.S. degree shall include at least 20 semester hours from the same course list designated by the sending institution for the A.A. and A.S. degrees. The A.A.S. degree shall include at least one 3-semester-hour course from each of the five areas listed in §A(1) of this regulation.
- (F) A course in a discipline listed in more than one of the areas of general education may be applied only to one area of general education.
- (G) A public institution may allow a speech communication or foreign language course to be part of the arts and humanities category.
- (H) Composition and literature courses may be placed in the arts and humanities area if literature is included as part of the content of the course.
- (I) Public institutions may not include physical education skills courses as part of the general education requirements.
- (J) General education courses shall reflect current scholarship in the discipline and provide reference to theoretical frameworks and methods of inquiry appropriate to academic disciplines.
- (K) Courses that are theoretical may include applications, but all applications courses shall include theoretical components if they are to be included as meeting general education requirements.
- (L) Public institutions may incorporate knowledge and skills involving the use of quantitative data, effective writing, information retrieval, and information literacy when possible in the general education program.

- (M) Notwithstanding §A(1) of this regulation, a public 4-year institution may require 48 semester hours of required core courses if courses upon which the institution's curriculum is based carry 4 semester hours.
- (N) Public institutions shall develop systems to ensure that courses approved for inclusion on the list of general education courses are designed and assessed to comply with the requirements of this chapter.

**.04 Transfer of General Education Credit.**

- (A) A student transferring to one public institution from another public institution shall receive general education credit for work completed at the student's sending institution as provided by this chapter.
- (B) A completed general education program shall transfer without further review or approval by the receiving institution and without the need for a course-by-course match.
- (C) Courses that are defined as general education by one institution shall transfer as general education even if the receiving institution does not have that specific course or has not designated that course as general education.
- (D) The receiving institution shall give lower-division general education credits to a transferring student who has taken any part of the lower-division general education credits described in Regulation .03 of this chapter at a public institution for any general education courses successfully completed at the sending institution.
- (E) Except as provided in Regulation .03M of this chapter, a receiving institution may not require a transfer student who has completed the requisite number of general education credits at any public college or university to take, as a condition of graduation, more than 10----16 additional semester hours of general education and specific courses required of all students at the receiving institution, with the total number not to exceed 46 semester hours. This provision does not relieve students of the obligation to complete specific academic program requirements or course prerequisites required by a receiving institution.
- (F) A sending institution shall designate on or with the student transcript those courses that have met its general education requirements, as well as indicate whether the student has completed the general education program.
- (G) A.A.S. Degrees.
  - (1) While there may be variance in the numbers of hours of general education required for A.A., A.S., and A.A.S. degrees at a given institution, the courses identified as meeting general education requirements for all degrees shall come from the same general education course list and exclude technical or career courses.
  - (2) An A.A.S. student who transfers into a receiving institution with fewer than the total number of general education credits designated by the receiving institution shall complete the difference in credits according to the distribution as designated by the receiving institution. Except as provided in Regulation .03M of this chapter, the total general education credits for baccalaureate degree-granting public receiving institutions may not exceed 46 semester hours.
- (H) Student Responsibilities. A student is held:
  - (1) Accountable for the loss of credits that:
    - (a) Result from changes in the student's selection of the major program of study,
    - (b) Were earned for remedial course work, or
    - (c) Exceed the total course credits accepted in transfer as allowed by this chapter; and
  - (2) Responsible for meeting all requirements of the academic program of the receiving institution.

**.05 Transfer of Non-general Education Program Credit.**

- A. Transfer to Another Public Institution.
  - (1) Credit earned at any public institution in the State is transferable to any other public institution if the:
    - (a) Credit is from a college or university parallel course or program;

- (b) Grades in the block of courses transferred average 2.0 or higher; and
  - (c) Acceptance of the credit is consistent with the policies of the receiving institution governing native students following the same program.
  - (2) If a native student's "D" grade in a specific course is acceptable in a program, then a "D" earned by a transfer student in the same course at a sending institution is also acceptable in the program. Conversely, if a native student is required to earn a grade of "C" or better in a required course, the transfer student shall also be required to earn a grade of "C" or better to meet the same requirement.
- B. Credit earned in or transferred from a community college is limited to:
- (1) 1/2 the baccalaureate degree program requirement, but may not be more than 70 semester hours; and
  - (2) The first 2 years of the undergraduate education experience.
- C. Nontraditional Credit.
- (1) The assignment of credit for AP, CLEP, or other nationally recognized standardized examination scores presented by transfer students is determined according to the same standards that apply to native students in the receiving institution, and the assignment shall be consistent with the State minimum requirements.
  - (2) Transfer of credit from the following areas shall be consistent with COMAR 13B.02.02. and shall be evaluated by the receiving institution on a course-by-course basis:
    - (a) Technical courses from career programs;
    - (b) Course credit awarded through articulation agreements with other segments or agencies;
    - (c) Credit awarded for clinical practice or cooperative education experiences; and
    - (d) Credit awarded for life and work experiences.
  - (3) The basis for the awarding of the credit shall be indicated on the student's transcript by the receiving institution.
  - (4) The receiving institution shall inform a transfer student of the procedures for validation of course work for which there is no clear equivalency. Examples of validation procedures include ACE recommendations, portfolio assessment, credit through challenge, examinations, and satisfactory completion of the next course in sequence in the academic area.
  - (5) The receiving baccalaureate degree-granting institution shall use validation procedures when a transferring student successfully completes a course at the lower-division level that the receiving institution offers at the upper-division level. The validated credits earned for the course shall be substituted for the upper-division course.
- D. Program Articulation.
- (1) Recommended transfer programs shall be developed through consultation between the sending and receiving institutions. A recommended transfer program represents an agreement between the two institutions that allows students aspiring to the baccalaureate degree to plan their programs. These programs constitute freshman/sophomore level course work to be taken at the community college in fulfillment of the receiving institution's lower division course work requirement.
  - (2) Recommended transfer programs in effect at the time that this regulation takes effect, which conform to this chapter, may be retained.

#### **.06 Academic Success and General Well-Being of Transfer Students.**

##### A. Sending Institutions.

- (1) Community colleges shall encourage their students to complete the associate degree or to complete 56 hours in a recommended transfer program which includes both general education courses and courses applicable toward the program at the receiving institution.

- (2) Community college students are encouraged to choose as early as possible the institution and program into which they expect to transfer.
- (3) The sending institution shall:
  - (a) Provide to community college students information about the specific transferability of courses at 4-year colleges;
  - (b) Transmit information about transfer students who are capable of honors work or independent study to the receiving institution; and
  - (c) Promptly supply the receiving institution with all the required documents if the student has met all financial and other obligations of the sending institution for transfer.

**B. Receiving Institutions.**

- (1) Admission requirements and curriculum prerequisites shall be stated explicitly in institutional publications.
- (2) A receiving institution shall admit transfer students from newly established public colleges that are functioning with the approval of the Maryland Higher Education Commission on the same basis as applicants from regionally accredited colleges.
- (3) A receiving institution shall evaluate the transcript of a degree-seeking transfer student as expeditiously as possible, and notify the student of the results not later than mid-semester of the student's first semester of enrollment at the receiving institution, if all official transcripts have been received at least 15 working days before mid-semester. The receiving institution shall inform a student of the courses which are acceptable for transfer credit and the courses which are applicable to the student's intended program of study.
- (4) A receiving institution shall give a transfer student the option of satisfying institutional graduation requirements that were in effect at the receiving institution at the time the student enrolled as a freshman at the sending institution. In the case of major requirements, a transfer student may satisfy the major requirements in effect at the time when the student was identifiable as pursuing the recommended transfer program at the sending institution. These conditions are applicable to a student who has been continuously enrolled at the sending institution.

**.07 Programmatic Currency.**

- (A) A receiving institution shall provide to the community college current and accurate information on recommended transfer programs and the transferability status of courses. Community college students shall have access to this information.
- (B) Recommended transfer programs shall be developed with each community college whenever new baccalaureate programs are approved by the degree-granting institution.
- (C) When considering curricular changes, institutions shall notify each other of the proposed changes that might affect transfer students. An appropriate mechanism shall be created to ensure that both 2-year and 4-year public colleges provide input or comments to the institution proposing the change. Sufficient lead time shall be provided to effect the change with minimum disruption. Transfer students are not required to repeat equivalent course work successfully completed at a community college.

**.08 Transfer Mediation Committee.**

- (A) There is a Transfer Mediation Committee, appointed by the Secretary, which is representative of the public 4-year colleges and universities and the community colleges.
- (B) Sending and receiving institutions that disagree on the transferability of general education courses as defined by this chapter shall submit their disagreements to the Transfer Mediation Committee. The Transfer Mediation Committee shall address general questions regarding existing or past courses only, not individual student cases, and shall also address questions raised by institutions about the acceptability of new general education courses. As appropriate, the Committee shall consult with faculty on curricular issues.
- (C) The findings of the Transfer Mediation Committee are considered binding on both parties.

**.09 Appeal Process.**

- (A) Notice of Denial of Transfer Credit by a Receiving Institution.
- (1) Except as provided in §A(2) of this regulation, a receiving institution shall inform a transfer student in writing of the denial of transfer credit not later than mid-semester of the transfer student's first semester, if all official transcripts have been received at least 15 working days before mid-semester.
  - (2) If transcripts are submitted after 15 working days before mid-semester of a student's first semester, the receiving institution shall inform the student of credit denied within 20 working days of receipt of the official transcript.
  - (3) A receiving institution shall include in the notice of denial of transfer credit:
    - (a) A statement of the student's right to appeal; and
    - (b) A notification that the appeal process is available in the institution's catalog.
  - (4) The statement of the student's right to appeal the denial shall include notice of the time limitations in §B of this regulation.
- B. A student believing that the receiving institution has denied the student transfer credits in violation of this chapter may initiate an appeal by contacting the receiving institution's transfer coordinator or other responsible official of the receiving institution within 20 working days of receiving notice of the denial of credit.
- C. Response by Receiving Institution.
- (1) A receiving institution shall:
    - (a) Establish expeditious and simplified procedures governing the appeal of a denial of transfer of credit; and
    - (b) Respond to a student's appeal within 10 working days.
  - (2) An institution may either grant or deny an appeal. The institution's reasons for denying the appeal shall be consistent with this chapter and conveyed to the student in written form.
  - (3) Unless a student appeals to the sending institution, the written decision in §C(2) of this regulation constitutes the receiving institution's final decision and is not subject to appeal.
- D. Appeal to Sending Institution.
- (1) If a student has been denied transfer credit after an appeal to the receiving institution, the student may request the sending institution to intercede on the student's behalf by contacting the transfer coordinator of the sending institution.
  - (2) A student shall make an appeal to the sending institution within 10 working days of having received the decision of the receiving institution.
- E. Consultation Between Sending and Receiving Institutions.
- (1) Representatives of the two institutions shall have 15 working days to resolve the issues involved in an appeal.
  - (2) As a result of a consultation in this section, the receiving institution may affirm, modify, or reverse its earlier decision.
  - (3) The receiving institution shall inform a student in writing of the result of the consultation.
  - (4) The decision arising out of a consultation constitutes the final decision of the receiving institution and is not subject to appeal.

**.10 Periodic Review.**

- A. Report by Receiving Institution.
- (1) A receiving institution shall report annually the progress of students who transfer from 2-year and 4-year institutions within the State to each community college and to the Secretary of the Maryland Higher Education Commission.
  - (2) An annual report shall include ongoing reports on the subsequent academic success of enrolled transfer students, including graduation rates, by major subject areas.
  - (3) A receiving institution shall include in the reports comparable information on the progress of native students.
- B. Transfer Coordinator. A public institution of higher education shall designate a transfer coordinator, who serves as a resource person to transfer students at either the sending or receiving campus. The transfer coordinator is responsible for overseeing the application of the policies and procedures outlined in this chapter and interpreting transfer policies to the individual student and to the institution.
- C. The Maryland Higher Education Commission shall establish a permanent Student Transfer Advisory Committee that meets regularly to review transfer issues and recommend policy changes as needed. The Student Transfer Advisory Committee shall address issues of interpretation and implementation of this chapter.

**Administrative History**

**Effective date: December 4, 1995 (22:24 Md. R. 1901)**

**Regulation .02B amended effective July 1, 1996 (23:13 Md. R. 946)**

**Regulation .02-1 adopted effective April 6, 1998 (25:7 Md. R. 528)**

**Regulation .03 amended effective July 1, 1996 (23:13 Md. R. 946)**

**Regulation .05A amended effective July 1, 1996 (23:13 Md. R. 946)**

*Des.gened5.fin Note: These guidelines are subject to change by the Maryland Higher Education Commission (MHEC).*

## Appendix 2

### UMES Procedures for Review of Alleged Arbitrary and Capricious Grading

#### Campus Policy #III-1.20 (A) 1-1-92

##### A. Definitions

1. "Arbitrary and Capricious Grading":
  - a. The assignment of a course grade to a student on some basis other than performance in the course, or
  - b. The assignment of a course grade to a student by unreasonable application of standards different from standards that were applied to other students that were in that course, or
  - c. The assignment of a course grade by a substantial and unreasonable departure from the instructor's initially articulated standards.
2. "Student" refers to any individual registered and in attendance at UMES, and includes both undergraduate and graduate levels.
3. "Instructor" Instructor refers to any tenured or non-tenured teacher or any Graduate Assistant teaching a course and assigning grades at UMES.
4. "Day to Day" Refers to the normal working day at UMES.

##### B. Informal Procedures

5. A student who believes he or she has received an improper final grade in a course should inform the instructor promptly. The instructor shall meet with the student at a mutually convenient time and place within ten days of receipt of the information. The purpose of the meeting is to attempt to reach a resolution.
6. If the instructor has left the University, is on approved leave, or cannot be reached by the student, the student should contact the Department Chairperson. The Department Chairperson, or a designee, shall meet with the student as described above to solve the problem.

##### C. Formal Appeal

A formal appeal is available only upon a showing that the informal process has been exhausted.

7. General Requirements
  - a. An appeal must be made in writing, addressed to the appropriate dean, and contain the following: the course title and number, the instructor's name, a statement detailing why the grade is believed to be arbitrary and capricious as defined in this policy, and all relevant supporting evidence.
  - b. An appeal must be received in the Dean's Office within 20 (twenty) days of the first day of instruction of the next semester (excluding summer).
8. Procedures
  - a. Each school shall have a standing committee of two tenured professors and one senior level student for the undergraduate school or graduate student for the graduate school to hear appeals of arbitrary and capricious grading. The appeal shall be heard within the academic unit offering the course. If the instructor of the course is a member of the committee, that instructor shall be replaced by an alternate designated by the dean.
  - b. Each written appeal is to be reviewed by the entire committee for a decision by the majority. The committee shall either dismiss the appeal or move it forward.

- c. Grounds for dismissal: The student has submitted the same complaint to any other grievance procedure; the allegations, if true, would not constitute arbitrary and capricious grading; the appeal was not timely, or the informal process has not been exhausted.
- d. If the appeal is dismissed, the committee shall notify the student in writing within ten days of the decision, and include the reason or reasons for the dismissal.
- e. If the appeal is not dismissed, the committee shall submit a copy of the appeal to the instructor. The instructor must reply in writing to the committee within ten days.
- f. If, based on the instructor's reply, the committee feels there is a viable solution, that solution should be pursued with the student and the instructor.
- g. If no solution is reached, a fact-finding meeting with the student and the instructor shall be held promptly. It is to be non-adversarial and informal with neither party represented by an advocate. Witnesses may be asked to make a statement to the committee if the committee is informed prior to the meeting. The meeting shall not be open to the public.
- h. The committee shall meet privately at the close of the fact-finding meeting to decide whether a majority believes the evidence supports the allegation of arbitrary and capricious grading beyond a reasonable doubt.
- i. The committee shall notify the student, the instructor, and the Dean in writing of the decision within five days of the meeting.

#### **D. Authority of the Committee**

- 9. The committee has the authority to take any action it believes will bring about substantial justice, including but not limited to
  - a. directing the professor to grade the student's work anew;
  - b. directing the instructor to administer a new final exam or paper;
  - c. directing the cancellation of the student's registration in a course;
  - d. directing the award of a grade of "pass" in the course.
- 10. The committee does not have the authority to
  - a. assign a letter grade for the course, or
  - b. reprimand or take disciplinary action against the instructor.
- 10. The decision of the committee is final and binding on both parties. The decision may not be appealed to any other body with UMES or the University System of Maryland.

#### **E. Implementation**

The Dean shall be responsible for implementing the decision of the committee.



### Appendix 3

#### THE HONORS PROGRAM

##### **Mission**

The primary mission of the Honors Program at the University of Maryland Eastern Shore (UMES) is to prepare academically talented students for entry into graduate and professional schools. Facilitating the entry of those from professionally underrepresented groups within the State is a priority.

##### **The Honors Program Committee**

Faculty and administrators from UMES, the University of Maryland at Baltimore (UMB) and the Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM) comprise The Honors Program Committee.

The Committee is responsible for the organization and continued operation of the program. This cooperative venture allows the UMES undergraduate campus and the professional school campuses at UMB and VMRCVM to motivate students from the beginning of their undergraduate preparation with a holistic approach to their major subject area and to give more coherent direction to their training, while insuring them of a broad liberal arts background.

The admission of students, development of curricula, academic and personal advisement, guidance and counseling, and the evaluation of both students and program are at the discretion of The Honors Program Committee.

##### **COMPONENTS**

There is one honors program at UMES. However, students meeting admission requirements of the Honors Program may elect to pursue a course of study in one of three components of honors education:

**UMES-UMB Honors** is a cooperative effort between the Eastern Shore campus and the professional schools at Baltimore (UMB). Initiated in the fall of 1979, its purpose is to overcome under-representation in the professions among minority groups, students from rural areas, and women. Students interested in pursuing careers in allied health, dentistry, law, medicine, nursing, pharmacy, physical therapy, or social work are eligible for admission.

The UMES-UMB Honors component is designed so that students entering as freshmen or sophomores are simultaneously tracked to the appropriate professional school at the Baltimore campus. Students pursue a prescribed curriculum approved by The Honors Program Committee. Preference is given to Maryland residents. Once accepted into the program, students are required to maintain a 3.300 grade point average or better in all honors courses, as well as on a semester basis, and cumulatively for all courses taken. Before entering UMB, students must earn a satisfactory score on the professional school's entrance examination.

In cooperation with the Virginia-Maryland Regional College of Veterinary Medicine, in the fall of 1989, UMES began the **UMES-VMRCVM Honors** component. The program is designed for high ability Maryland students seeking to pursue a career in veterinary medicine. Entrance and performance requirements for students are similar to those applying for and admitted into the UMES-UMB Honors component. Acceptable GRE scores are also required.

The **General Honors** component is designed to complement almost any major area of study offered at UMES. The purpose of the component is to provide enriched programming at the baccalaureate level for academically talented students aspiring to attend graduate school. Preference is given to students who plan to enter a Ph.D. program immediately following graduation from UMES. Students are required to take a graduate school entrance examination and to make application for graduate study during the senior year.

##### **ADMISSION REQUIREMENTS**

Students who enter the Honors Program must have graduated from an accredited high school. Preference is given to Maryland residents. Successful academic preparation in the sciences, mathematics, and humanities is necessary to be competitive for admission, as are above average SAT scores. Normally, students are admitted at the beginning of the fall semester. Applications received prior to February 1 are given priority. Students are encouraged to apply for admission no later than March 1 of the year of desired admission.

Admission into the Honors Program is selective. In making application to any component of the Honors Program, the following procedures should be observed:

- The applicant should complete a University of Maryland Eastern Shore application and indicate at the top of the first page that admission into The Honors Program is sought. The application and a copy of an official transcript with SAT scores should be forwarded to the UMES Office of Admissions and Registration.
- At least two letters of recommendation are required from science, mathematics, or English teachers who have taught the applicant. The recommendations and a list of extracurricular activities, honors, and awards earned while in high school should be sent to The Honors Program office.
- The applicant should submit a personal essay to The Honors Program office indicating why the major area of study has been chosen and why admission into honors is desired. Any additional information the applicant wishes to be considered that is not included elsewhere in the application should also be included in the personal essay:

If the full and complete application indicates the applicant may qualify for the Honors Program, an interview at UMES may be scheduled. Applicants are notified by the director of the status of their acceptance into the program prior to April 15 of the year in which admission is sought.

### **HONORS SCHOLARSHIPS**

Students accepted into the Honors Program are automatically eligible for Honors Merit Scholarships. Maryland Distinguished Scholars, National Merit Finalists and National Achievement Finalists receive Merit-Plus Scholarship Awards. No separate application is required. Awards to entering freshmen are based strictly on merit and academic promise. Financial need is not considered. Scholarships vary in amount, but may include the full cost of room, board and tuition. Awards are renewable for three additional years provided good academic standing in the program is maintained. Applications should be submitted early for scholarship consideration.

## Appendix 4: Title II

### **Reference and Reporting Guide For Preparing State and Institutional Reports On the Quality of Teacher Preparation Title II, Higher Education Act April 19, 2000**

Excerpted from Appendix C: Institutional Questionnaire, pp. 46-47 for completing the 2001-2002 report.

**Section I: See Attached**

#### **Section II. Program Information:**

(A) Number of students in the regular teacher preparation program at your institution:

Please specify the number of students in your teacher preparation program during academic year **2001-2002**, including all areas of specialization.

1. Total number of students enrolled during **2001-2002**: 260

(B) Information about supervised student teaching:

2. How many students (in the regular program and any alternative route programs) were in programs of supervised student teaching during academic year **2001-2002**? 64

3. Please provide the numbers of supervising faculty who were:

7 Appointed full-time faculty in professional education: an individual who works full time in a school, college, or department of education, and spends at least part of the time in supervision of teacher preparation students.

13 Appointed part-time faculty in professional education and full-time in the institution: any full time faculty member in the institution who also may be supervising or teaching in the teacher preparation program.

20 Appointed part-time faculty in professional education, not otherwise employed by the institution: may be part time university faculty or pre-K-12 teachers who supervise prospective teachers. The numbers do not include K-12 teachers who simply receive a stipend for supervising student teachers. Rather, this third category is intended to reflect the growing trend among institutions of higher education to appoint K-12 teachers as clinical faculty, with the rights and responsibilities of the institution's regular faculty.

Supervising faculty for purposes of this data collection includes all persons who the institution regards as having faculty status and who were assigned by the teacher preparation program to provide supervision and evaluation of student teaching, with an administrative link or relationship to the teacher preparation program.

Total number of supervising faculty for the teacher preparation program during **2001-2002**: 45

4. The student/faculty ratio was (divide the total given in B2. by the number given in B3.): 6:5:1

5. The average number of hours per week required of student participation in supervised student teaching in these programs was: 40 hours. The total number of weeks of supervised student teaching required is 15. The total number of hours required is 600 hours.

(C) Information about state approval or accreditation of teacher preparation programs:

6. Is your teacher preparation program currently approved or accredited by the state?  
 Yes     No

7. Is your teacher preparation program currently under a designation as "low-performing" by the state (as per section 208 (a) of the HEA of 1998)?     Yes     No

**NOTE: See Appendix A of the guide for the legislative language referring to "low-performing" programs.**

### Section III. Contextual information (Optional)

Please use this space to provide any additional information that describes your teacher preparation program(s). You may also attach information to this questionnaire.

In 2001-2002 there were 11 different State approved programs in teacher preparation @ the University of Maryland Eastern Shore (UMES). They include Agriculture, Art, Biology, Business, Chemistry, English, Family and Consumer Sciences, Math, Music, Special Education and Teacher Education. Three of these programs (i.e., Agriculture, Family and Consumer Sciences, and Technology Education) are unique in that UMES is the only university in Maryland to offer them. In addition, Business is one of only two programs in the State, while Special Education is UMES' largest program in teacher preparation. Graduate students may also earn initial certification in each of these programs through either an M.Ed. (Special Education) or M.A.T. (Master of Arts in Teaching) in the other 10 areas.

### Section IV. Certification.

I certify that, to the best of my knowledge, the information in this report is accurate and complete and conforms to the definitions and instructions used in the *Reference and Reporting Guide for Preparing State and Institutional Reports on the Quality of Teacher Preparation*.

\_\_\_\_\_ (Signature)

Karen A. Verbeke Name of responsible institutional representative  
for teacher preparation program

Acting Director of Teacher Education Title

Certification of review of submission:

\_\_\_\_\_ (Signature)

Thelma B. Thompson Name of President/Chief Executive (or designee)

President Title

**Appendix 5:**  
Maryland Cooperative Extension  
1890 Component

- Almquist, Dave L.  
Senior Educator, 4-H and Youth, and Director, Cecil and Harford counties  
Queen Anne's County  
B.A. University of Virginia  
M.S., University of Maryland College Park
- Arnold, Conrad N.  
Senior Educator, 4-H and Youth, and Director, Dorchester County  
B.S., West Virginia University  
M.S., West Virginia University
- Bataille, Nichole  
Program Assistant, 4-H and Youth, Somerset County
- Brooks, Henry M.  
Administrator of 1890 Extension Programs, UMES  
B.S., Tuskegee University  
M.Ed., Tuskegee University  
Ph.D., Ohio State University
- Brooks, Okarsamaa  
Specialist, Farm Management, Southern Maryland  
B.S., North Carolina A&T State University  
M.S., North Carolina A&T State University
- Brown, Manami  
Educator, 4-H and Youth, Baltimore City  
B.S., Morgan State University  
M.S., The Johns Hopkins University
- Dennis, Lisa  
Educator, 4-H and Youth, Somerset County  
B.S., Salisbury State University
- Greene, Jean A.  
Principal Educator, 4-H, UMES  
B.S., North Carolina Central University  
M.S., University of Maryland College Park
- Handwerker, Thomas  
Specialist, Alternative Agriculture, UMES  
B.S., University of Tennessee  
M.S., Cornell University  
Ph.D., Cornell University
- Harting, Katherine A.  
Specialist, Media, UMES  
B.A., University of Michigan  
Nieman Fellow, Harvard University  
M.A., The George Washington University
- Holmes, Ingrid H.  
Senior Educator, Home Economics, and Director, Somerset County  
B.S., University of Maryland Eastern Shore  
M.Ed., Salisbury State University

Kuennen, Daniel S.

Senior Educator and Director, Rural Development Center, UMES  
A.B., St. Louis University  
M.S., Southern Illinois University

Jones, Lewis

Specialist, Farm Management, UMES  
B.S., University of Maryland Eastern Shore  
M.B.A., Wilmington College

Mason, Viola F.

Senior Educator, 4-H and Youth, Prince George's County  
B.S., University of Maryland Eastern Shore  
M.S., University of Maryland College Park

Mason-Jenkins, Gayle

Specialist, Home Economics/Seafood, UMES  
B.S., Bennett College  
M.A., Howard University

Rippen, Thomas

Principal Educator, Seafood Technology  
B.S., Michigan State University  
M.S., Michigan State University

Rosenkranz, Virginia L.

Faculty Assistant, Commercial Horticulture, Wicomico County  
A.A., Montgomery College  
B.A., University of Maryland College Park

Teffeau, K. Marc

Principal Agent, Community and Resource Development and Horticulture, Caroline County  
B.S., University of Maryland College Park  
M.S., University of Maryland College Park

Tubene, Stephan

Specialist, Farm Management, Southern Maryland  
B.S., Institut Facultaire des Sciences Agronomiques de Yangambi,  
Democratic Republic of the Congo  
M.S., Alcorn University  
Ph.D., Kansas State University

Whitley, Niki

Specialist, Swine and Small Ruminants  
B.S., University of Georgia  
M.S., University of Georgia  
Ph.D., Mississippi State University