

UNIVERSITY OF MARYLAND EASTERN SHORE

UNDERGRADUATE CATALOG 2013 – 2015

Table of Contents

General Information	4
The University Of Maryland Eastern Shore	4
Mission, Purpose And Goals Of The University	6
Objectives And Outcomes	7
Vision	8
Institutional Core Values.....	8
Institutional Capabilities.....	8
Nondiscrimination Policy And Integration Statement	8
Organization Of The University	9
The University System Of Maryland.....	9
Officers Of Administration.....	9
Governance Of The University System Of Maryland.....	9
Umes Board Of Visitors	10
Officers Of Administration.....	11
Academic Affairs	11
Administrative Affairs	11
Institutional Advancement.....	12
Student Affairs And Enrollment Management	12
Research And Economic Development	12
Location.....	13
Facilities	13
Office Of The President	15
Department Of Intercollegiate Athletics.....	15
Institutional Research, Planning, And Assessment.....	15
Title III Programs	16
Academic Affairs	17
Schools, Departments, Centers And Programs	17
Accreditation And Professional Memberships	17
The Honors Program	18
Undergraduate Degree Programs.....	19
The Frederick Douglass Library	25
Center For Instructional Technology.....	25
Child And Family Development Center	25
International Development Programs	26
Office Of The Registrar.....	26
Outreach Programs	29
Research Environment.....	30
Administrative Affairs	31
Tuition, Fees, And Expenses	31
Full-Time Tuition And Fees	31
Part-Time Tuition And Fees	32
General Regulations Regarding Payment Of Fees And Expenses	34
In-State Status	34
Auxiliary Enterprises.....	38
Hawk Center.....	38
Services Available.....	38
Financial Aid	40
How To Apply For Financial Assistance.....	40

Neebo Bookstore	40
Cash For Books	40
Public Safety	40
Student Employment Opportunities.....	41
Institutional Advancement	42
Discover UMES	42
Research And Economic Development	42
Research	43
School Of Graduate Studies	44
Economic Development	44
Student Affairs And Enrollment Management	45
Student Services Center.....	45
Admissions And Recruitment.....	45
Freshman Admissions Requirements	45
Categories Of Undergraduate Admissions.....	47
Career Services/Cooperative Education	48
The Center For Access And Academic Success (Caas).....	50
Center For International Education	50
Counseling Services	51
Disability Statement	51
Health Center.....	52
Student Code Of Conduct.....	52
Important University Regulations Which Apply To Students	54
Campus Life	55
Information And Procedures	56
University Housing/Residence Life.....	58
Scholarships	59
Office Of Financial Aid.....	59
Scholarships, Grants, And Loan Opportunities	59
Honors Program	60
Institutional Advancement.....	60
Academic Information And Procedures	61
Academic Clemency.....	61
Academic Honesty Policy For Graduate And Undergraduate Studies.....	61
Academic Dishonesty Procedures	62
Academic Dismissal And Reinstatement.....	65
Academic Standing.....	66
Academic Probaton And Dismissal	66
Alleged Arbitrary And Capricious Grading.....	67
(Procedures For Review - Campus Policy #Iii-1.20 (A) 1-1-92).....	67
Alternative Credits	69
Auditing Of Courses.....	69
Catalog Governing Graduation Requirements.....	69
Class Attendance	70
Change Of Grades	72
Credit By Examination	72
Class Delivery	73
Credit Unit And Load.....	74
Disruptive Behavior In Academic And Social Settings.....	74
English Proficiency Exam	77
Final Examinations.....	77
Grades And Quality Points.....	77
Incomplete Grades.....	77
Non-Traditional Learning.....	78

Registration	78
Withdrawals	79
Withdrawal And Refund Of Fees	79
Registration At Other Institutions.....	81
Readmission After Voluntary Withdrawal	81
Reinstatement Following Academic Dismissal	81
Repeating Of Classes.....	82
Selecting A Major	82
Transfer Credit	83
Winter Session And Summer School.....	83
General Requirements For Academic Majors And Minors.....	86
Major Core Requirements	86
Supporting Area Requirements.....	86
General Education Requirements	86
Department Of Agriculture, Food And Resource Sciences.....	89
Department Of Human Ecology.....	131
Department Of Natural Sciences.....	182
Department Of Criminal Justice.....	294
Department Of Education	305
Department Of English & Modern Languages	321
Department Of Fine Arts.....	344
Department Of Social Sciences.....	384
Department Of Business, Management And Accounting.....	416
Department Of Engineering And Aviation Sciences	465
Department Of Hotel And Restaurant Management	499
PGA Golf Management.....	513
Department Of Mathematics And Computer Science.....	526
Department Of Technology	556
Department Of Exercise Science	588
Department Of Rehabilitation.....	599

GENERAL INFORMATION

www.umes.edu

THE UNIVERSITY OF MARYLAND EASTERN SHORE

Situated in the historic town of Princess Anne, the University of Maryland Eastern Shore (UMES) 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.

UMES is the only research and doctoral degree granting institution of the University System of Maryland 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, the program offerings, and opportunities afforded by the University of Maryland Eastern Shore provide a fitting atmosphere for study and growth for its students who represent all ages, professions and experiential training, (e.g., traditional young-adult students, graduate students, workforce professionals, senior-citizens, etc.).

Almost 60 percent of the students live on campus. The oval shaped mall is the hub of campus academic and residential activity. The students, faculty, and staff walk together to and from their daily activities in the classrooms, administrative departments, student activities, 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 and the Swine Research Center, which is 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 over 50 nations that wave at the campus entrance around the federal, state, and University flagpoles. These flags symbolize the 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 around the flagpole oval 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 Kiah Hall.

The Past

Founded under the auspices of the Delaware Conference of the Methodist Episcopal Church, the University of Maryland Eastern Shore (UMES) opened with nine students and one faculty members as the Delaware Conference Academy in Princess Anne on September 13, 1886.

Historical documents reveal that 37 students were enrolled by the end of the first year. Soon its title was changed to the Industrial Branch of Morgan State College, still under the influence of the Delaware Conference. Later it became known as Princess Anne Academy, but continued to be operated by Morgan State College under the control of the Methodist Church.

The State of Maryland, in operating its Land-Grant program at the Maryland Agricultural College at College Park, which did not admit African-Americans students, sought to provide a Land-Grant program for African-Americans. In 1919 the State of Maryland assumed control of the Princess Anne Academy and renamed it the Eastern Shore Branch of the Maryland Agricultural College.

In 1926, the College passed into complete control and ownership by the State of Maryland, 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, officially became Maryland State College, a Division of the University of Maryland. On July 1, 1970, Maryland State College became the University of Maryland Eastern Shore.

Past Presidents

Thirteen chancellors/presidents have served the institution since it was founded in 1886. They are as follows: Benjamin Oliver Bird, *1886-1897*, Portia E. Lovett Bird, *1897-1899*, Dr. Pezavia O'Connell, *1900-1902*, Frank J. Trigg, *1902-1910*, Thomas Kiah, *1910-1936*, Robert A. Grigsby, *1936-1947*, Dr. John Taylor Williams, *1947-1970*, Dr. Howard Emery Wright, *1970-1971*, Dr. Archie L. Buffkins, *1971-1975*, Dr. William P. Hytche, Sr., *1975-1997*, Dr. Dolores R. Spikes, *1997-2000*, Dr. Jackie Thomas, *2001-2002* (Interim President), and Dr. Thelma B. Thompson, *2002-2011*, Dr. Mortimer Neufville, *2011-2012* (Interim President), Dr. Juliette B. Bell, *2012 - present*.

The Present

From its original campus building known as "Olney," which was constructed in 1798 during the era of President George Washington, the University has grown to over 745 acres with 32 major buildings and 43 other units. The student population has increased to 4,500. With the strong support of the University System of Maryland Board of Regents, 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 22 degree-granting programs to its academic roster. Graduates of these programs secure positions throughout the global community. However, many graduates 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 40 disciplines in the arts and sciences, professional studies, and agricultural sciences. In addition, UMES offers 12 teaching degree programs and two pre-professional programs, as well as an Honors Program to prepare students for professional school study.

Today the University offers a variety of well-constructed and outstanding 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 and tomorrows global society.

Additional 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 grows and evolves during its second century, it proceeds with even greater vigor; the apexes of progress and quality continue to expand. Long-term plans include the expansion of the curricula for undergraduate, graduate and professional 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 undergraduate and graduate programs.

MISSION, PURPOSE AND GOALS OF THE UNIVERSITY

Mission

University of Maryland Eastern Shore (UMES), the State's Historically Black 1890 Land-Grant institution, emphasizes baccalaureate and graduate programs in the liberal arts, health professions, sciences, engineering and technology, and teacher education. In keeping with its land-grant mandate, the University's purpose and uniqueness are grounded in distinctive learning, discovery, and engagement opportunities in agriculture, human ecology, marine and environmental sciences, technology, engineering and aviation sciences, health professions, business, and hospitality management. Degrees are offered at the bachelor's, master's and doctoral levels.

UMES is committed to providing access to high quality, values-based, educational experiences, including individuals who are first-generation college students of all races, while emphasizing multicultural diversity and international perspectives. In addition, the University serves the education and research needs of businesses, industries, government and non-government organizations. The University is committed to meeting the economic development needs on the Eastern Shore; workforce development needs of the State; international development priorities of the nation; and commercialization and entrepreneurial ventures of the University, through engagement activities, and partnerships.

UMES is a teaching/research institution that nurtures and launches globally competent citizens. It will continue to embrace its interdisciplinary curriculum, sponsored research initiatives, rural and economic development priorities, and community engagement. UMES will continue to expand its partnerships and collaborative arrangements with the University System of Maryland Institutions, other universities, community colleges, public schools, government, and other external agencies and constituencies.

Institutional Identity

The University of Maryland Eastern Shore (UMES), the State's Historically Black 1890 Land-Grant Institution, is a teaching, research, and doctoral degree granting institution that nurtures and launches leaders in a student-centered environment, particularly from among ethnic minorities. Committed to providing high quality programs in an ethnically diverse environment, the University prepares students who will serve and shape the global economy. UMES is a growing, primarily residential university with learning, discovery, and engagement missions. The University values the scholarship of faculty in discovering knowledge, disseminating new knowledge, and applying that knowledge to the extended community. The University recognizes its responsibility for developing human potential, enriching cultural expressions, and sharing its expertise with individuals, businesses, educational, governmental, and non-governmental organizations. The learning, discovery, and engagement foci are in accordance with UMES' legacy and mission as Maryland's 1890 Land-Grant Institution. UMES is proud of its 128 years of continuous educational service, initially under the auspices of the Methodist Church.

One of the original purposes of the land-grant institutions, the education of citizens for life in the American economy (then, largely agrarian, but now more diverse), includes the disciplines of agriculture, home economics, and mechanical arts. UMES continues to embrace the original

purposes, as well as, its current expansions to include the liberal arts, scientific, business, technological, and professional programs that extend to urban and international settings. The expansion of the land-grant missions reflects the changes in both internal and external environments which include cultural diversity; global interdependence; changes in local, state, and national economy; climate change; and the exponential growth of information communication technology. Just as the focus on agriculture, home economics, and the mechanical arts was appropriate in the 1890's, the wide range of instructional, research, and public service commitments that now characterize this university is vital today.

International perspective in higher education is crucial to the development of leaders who are sensitive to the role America plays in shaping the national and international agendas. UMES is committed to providing an array of undergraduate and graduate programs in an environment that is responsive to global perspectives in education. The University aims to imbed internationalism in some curricula and to extend its concept of international education through continuing education and cooperative ventures with foreign universities, governmental and non-governmental organizations, and private industries.

Through the Maryland Cooperative Extension Service and the Agricultural Experiment Station, UMES works collaboratively with the University of Maryland, the 1862 land-grant institution, and various USDA agencies. The University's expanding instructional technology infrastructure supports the increasing externally funded research grants generated by campus personnel.

OBJECTIVES AND OUTCOMES

University progress depends upon the success of its accountability practices; therefore, strategic planning, assessment and evaluation are key to measuring an institution's success. The University's strategic planning process ensures that we use a systematic process to engage in ongoing, dynamic and comprehensive assessment of the annual UMES Strategic & Operations Plan. Goals are carefully tracked and reports are regularly disseminated to assist faculty, students and administrators in using data-based decision-making to map progress.

- Goal I:** UMES will continue to develop, strengthen, and implement academic programs that are responsive to the UMES mission and are systematically reviewed for sustained quality, relevance and excellence to meet the challenges of a highly competitive and global workforce.
- Goal II:** UMES will enhance university infrastructure to advance productivity in research, economic development, technology development and transfer; contribute to an enhanced quality of life in Maryland; and facilitate sustainable domestic and international economic development and competitiveness.
- Goal III:** UMES will transform and sustain a campus environment that supports a high quality of life and learning that positively impacts retention through graduation and produces knowledgeable and culturally competent citizens able to effectively lead and compete globally.
- Goal IV:** UMES will enhance academic and administrative systems to facilitate learning, discovery and community engagement to gain national and international eminence.
- Goal V:** UMES will efficiently and effectively manage the resources of the University and aggressively pursue public and private resources to support the enterprise.

VISION

UMES aspires to be a Doctoral Research University, and a national model for producing Globally Competent Citizenry in the 21st Century through:

- Providing access to high quality values-based educational experiences, especially to individuals who are first generation college students of all races, while emphasizing multicultural diversity and international perspectives;
- Recruiting and retaining outstanding students, faculty, and staff who will learn, work and conduct world class research and development engagements that address the challenges of the future; and
- Creating a culture to develop systematic approach to successfully close the achievement gap.

INSTITUTIONAL CORE VALUES

- Providing high quality undergraduate and graduate programs that will equip students with 21st Century knowledge and skills necessary for the challenges of America and the world.
- Affirming its role as the State's 1890 land-grant institution by providing citizens with opportunities and access that will enhance their lives and enable them to develop intellectually, economically, socially, and culturally.
- Demonstrating shared-governance through recognition of the viewpoints that various members of the university community contribute to the institution.
- Appreciating diversity in its student body, faculty, staff and administration through civility, commitment to tolerance, freedom of expression, and celebration of other cultures.
- Adhering to the highest standards of honesty, fairness, trust and integrity in both personal and professional behavior.
- Promoting student-centeredness as the heart of the educational enterprise.
- Focusing on character development through learning and leadership experiences.

INSTITUTIONAL CAPABILITIES

UMES views with pride its achievements regarding the provision of high-quality academic programs and services for ethnically and culturally diverse students. The University offers programs and assistance that attract, serve, retain, and graduate first-generation college students, nationally-recognized scholars, and international clientele as part of its core mission. The University is impressively diverse, as students originate from over 70 different countries. At the faculty level, the number of full-time, non-African-American faculty exceeds the number of those of African-American descent.

Research and development activities focus on information technology; agricultural, biomedical engineering, environmental, and natural resource sciences; and international development. UMES plays a pivotal role in responding to local, state, and international priorities through the following unique initiatives.

NONDISCRIMINATION POLICY AND INTEGRATION STATEMENT

The University of Maryland Eastern Shore is committed to providing equal opportunity through its employment practices, educational programs, admissions and the many services it offers to the community. It is the policy of the University that no person shall be discriminated against on the basis of race, sex, color, religion, national origin or ancestry, age, marital status or handicap.

ORGANIZATION OF THE UNIVERSITY
Board of Regents
The University System of Maryland
2013 - 2014 Members

JAMES L. SHEA, *Chair*
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* Term expires 6/30/2014

THE UNIVERSITY SYSTEM OF MARYLAND
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Chancellor

MS. KATHLEEN M (KATIE) RYAN
Senior Advisor to the Chancellor

MS. JANICE DOYLE
Chief of Staff

DR. JOANN BOUGHMAN
Vice Chancellor
Academic Affairs

MR. JOSEPH VIVONA
COO/Vice Chancellor
Administration and Finance

MR. LEONARD R. RALEY
Vice Chancellor
Advancement

GOVERNANCE OF THE UNIVERSITY SYSTEM OF MARYLAND

Since its formation in 1988, the University System of Maryland has focused on the vision of national eminence described in the System's founding legislation. This vision has guided in the pursuit of its broadest goal: to serve Marylanders' educational needs through teaching, research, and public service.

Specific missions are central to UMES' success as a family of thirteen diverse and complementary institutions. They enable UMES to balance its broad educational mission with its responsibility for prudent allocation of resources. These mission statements reflect efforts to meet these obligations as UMES works to build a higher education system marked by quality, access, and accountability.

The mission statements also provide a comprehensive glimpse of the University System of Maryland. Each of the institutions has brought its unique history and strengths to the formulation of its mission. Each has also reflected on its identity, constituencies, and priorities. These statements were not developed in isolation; each USM institution refined its statement as part of a collegial process involving sister USM institutions, under the guidance of the Board of Regents and with input from the System Office and the Maryland Higher Education Commission. The resulting "family portrait" captures both the institutional diversity that is a USM hallmark and the synergy that is at the heart of the University System of Maryland: the creative interaction that produces a strong and vibrant academic enterprise.

UMES BOARD OF VISITORS

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President and CEO
Peninsula Regional Medical Center

MR. ALPHONSO CORNISH
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Norton Healthcare

MS. SHARON R. PINDER
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The Pinder Group, LLC

MR. AUSTIN COX
Chief Executive Officer
Cox Heating & Air Conditioning

MR. STEPHEN POWELL
President / CEO
Powell Steel Corp.

MR. MARK GARTH
Sr. Vice President & CFO
Perdue Farms, Inc.

MS. LAUREN C. TAYLOR
Business Owner
Santa Maria Model

MR. MICHAEL GERSHENFELD
President
Lankford-Sysco, Inc.

MR. THOMAS L. TRICE, IV
Certified Public Accountant
Trice Geary & Myers, LLC

MS. GLADYS B. GOSLEE
Educator (Retired)
Wicomico County Public Schools

MR. JEFFREY TURNER
Retired President
Peninsula Bank

MRS. ALICIA HOFFMAN
Senior Executive (Retired)
U. S. Department of Education

MR. JESSE T. WILLIAMS, SR.
Retired Vice President
Goodyear Tire & Rubber Company

DR. BRYANT C. MITCHELL
President
UMES National Alumni Association
As of July 1, 2013

DR. JULIUS D. ZANT
Neurosurgeon
Peninsula Neurological Associates

Emeritus Status

MR. C. PAYNE LUCAS (RETIRED)
President AFRICARE

REVEREND CHARLOTTE NICHOLS
District Superintendent
The United Methodist Church

MR. ARMSTEAD WARD
Sr. Vice President Human Resources
The Deluxe Corporation

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*Vice President
Administrative Affairs*

DR. DALE G. WESSON
*Vice President
Research and
Economic Development*

MR. STEPHEN L. MCDANIEL, CFRE
*Interim Vice President
Institutional Advancement*

DR. RONALD A. NYKIEL
*Provost/Vice President
Academic Affairs*

DR. ANTHONY L. JENKINS
*Vice President
Student Affairs & Enrollment
Management*

DR. STANLEY NYIRENDA
*Director
Institutional Planning &
Assessment*

MR. KEITH DAVIDSON
*Director
Athletics*

DR. FRANCES MCKINNEY
*Director
Title III Programs*

ACADEMIC AFFAIRS

DR. RONALD NYKIEL
Provost, Vice President

DR. BERNITA SIMS-TUCKER
*Associate Vice
President*

DR. MOSES KAIRO
*Dean
School of Agricultural &
Natural Sciences*

DR. RAY DAVIS
*Dean
School of the Arts &
Professions*

DR. AYODELE ALADE
*Dean
School of Business &
Technology*

DR. NICHOLAS BLANCHARD
*Dean
School of Pharmacy &
Health Professions*

DR. ELLIS BETECK
*Dean
Library Services*

DR. WILLIAM TALLEY
*Acting Assistant Dean
School of Pharmacy
& Health Professions*

DR. EMMANUEL T. ACQUAH
*Director
International Programs*

MS. CHERYL DUFFY
Registrar

DR. NICOLE GALE
*Director
Upward Bound Program*

VACANT
*Director
Instructional Technology*

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Vice President

MR. ALVERNE CHESTERFIELD
*Assistant Vice President &
Director of Auxiliary
Enterprise & Director
of Budget*

MRS. NELVA WHITE
Assistant Vice President

MRS. MARIE BILLIE
*Director
Human Resources Management*

MR. LEON BIVENS
*Director
Physical Plant*

MRS. CATHERINE BOLEK
*Director
Sponsored Programs*

MR. COREY BOWEN
*Director
The Richard A. Henson Center*

MS. BONITA BYRD
Comptroller

MS. JACAQUELINE COLLINS
*Director
Procurement Officer*

MR. JAMES KELLAM
Director
Financial Aid

MR. DAVID SCOTT
Director
Dining Services

MR. ERNEST LEATHERBURY, JR.
Director
Office of Public Safety

MS. BEATRICE WRIGHT
Budget Analyst

INSTITUTIONAL ADVANCEMENT

MR. STEPHEN L. MCDANIEL
Interim Vice President

DR. VERONIQUE DIRIKER
Director
Development

MS. CHENITA REDDICK
Director
Advancement Services

VACANT
Director Alumni Affairs and
Planned Giving

STUDENT AFFAIRS AND ENROLLMENT MANAGEMENT

DR ANTHONY L JENKINS
Vice President

DR. JAMES WHITE
Associate Vice President

MRS. CHERYLL COLLIER-MILLS
Assistant Vice President

MR. MARVIN JONES
Director
Residence Life

MR. TYRONE YOUNG
Director
Admissions and
Recruitment

MRS. SHARONE GRANT.
Director
Student Health Center

DR. SARAH ACQUAH
Director
Center for International Education

MS. STEPHEN WILLIAMS
Manager
WESM Radio Station

MR. JAMES LUNNERMON, II
Director
Campus Life

MS. THERESA QUEENAN
Director
Career Services &
Cooperative Education

MS. STEPHANIE KRAH
Director
Center for Access &
Academic Success

DR. RONNIE MCLEAN
Director
Counseling Services

MR. MICHAEL HALL
Fitness Coordinator

RESEARCH AND ECONOMIC DEVELOPMENT

DR. DALE G. WESSON
Vice President

DR. JENNIFER KEANE-DAWES
Dean
School of Graduate Studies

MR. PHILLIP TAYLOR
Director
Information Technology

MR. KENNETH GASTON
Director
Administrative Computing

MR. MARSHALL CROPPER
Director
Golf Academy

LOCATION

UMES is located in the small town of **Princess Anne** on the **Eastern Shore** of Maryland. The town dates back to 1733 and has many buildings and landmarks of historic interest. The quiet community environment is excellent for learning, yet it is only 3 hours by car from the abundant cultural and recreational facilities of Washington, D.C., Baltimore, Philadelphia, and Virginia Beach. The state's famous seaside resort, Ocean City, is only 1 hour from the campus. The campus is located 13 miles south of the town of Salisbury, which provides shopping and recreational facilities.

FACILITIES

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.

University Buildings

Alumni House (Institutional Advancement)
Auxiliary Gym and Wellness Center
Charles R. Drew Building
Early Childhood Research Center
(Child Development Programs,
Graduate Studies and Sponsored Programs)
Frederick Douglass Library
Farm Machinery Building
Farm Shop House
Greenhouse Academic Building
Greenhouse Research Building
Hydroponics Facility
J. Milliard Tawes Gymnasium
Learning Resource Center
Lida Brown Building (Student Health Center)
MAES Poultry Office/Laboratory
MAES Poultry Environmental Research Laboratory
Marksman – East
Marksman – West
Physical Plant/Central Receiving
Poultry Technology Management House
Somerset Hall – Pharmacy
Swine Reproductive Facility
Swine Research Facility
WESM/91.3 FM Radio Station

Classroom and Laboratory Buildings

Access and Success Building
Charles Clinton Spaulding Hall
Crop and Aquaculture Swine Reproduction Facility
Ella Fitzgerald Center for the Performing Arts
Food Science and Technology Building
Frank Trigg Hall
George Washington Carver Hall
Henry O. Tanner Hall
Modulars 1-6
Richard Hazel Hall
Richard A. Henson Center
(Hotel and Restaurant
Management, University Extension,

Dormitories

Community Center/Office of Residential Life
Court Plaza Residence Hall
Harford Hall
Hawk's Landing Apartment
Murphy Hall & Murphy Hall Annex
Nuttle Hall
Plaza Residence Hall
Student Apartments 1-6
Student Residential Complex A-D & A- F
University Terrace
Wicomico Hall

Service Buildings

Benjamin Oliver Bird Hall (Human
Resources and Title III)
John T. Williams Hall (President; Vice
Presidents for Academic, Administrative and
Technology and Commercialization;
Institutional Planning and Assessment,
Senior Executive Assistant to the President)
Paul S. Sarbanes Coastal Ecology
Center
Public Safety Building
Richard A. Henson Center (conference
and hotel rooms)
SRC Laundry Facility

Classroom and Laboratory Buildings

Rural Development, and Human Ecology)
Temporary Classroom 1
Temporary Classroom 2
Theodore Briggs and Richard Thomas
Arts and Technology Center
Thomas R. Kiah Hall
William P. Hytche Athletic Center
Wilson Hall

Service Buildings (continued)

Student Apartment Laundry
Student Development, Cultural and
Recreation (Admissions and Recruitment,
Registrar, Comptroller, Student Financials,
Procurement, Accounts Payable, Counseling,
Center for Access and Academic Success)
Student Services Center (Dining Services
Auxiliary Enterprise, Vice President Student
Life and Enrollment Management, SGA,
Career Planning and Placement, Cooperative
Education, Student Activities and
Organizations, UMES Chapel, Post Office,
and Follett Bookstore)
Waters Hall (Administrative Computing,
Information Technology, Academic
Computing and Student Labs)

OFFICE OF THE PRESIDENT

www.umes.edu/

Under the administration of the President, the administrative organization of the campus is divided among five divisions: Academic Affairs, Administrative Affairs, Technology and Commercialization, Institutional Advancement, and Student Affairs and Enrollment Management. 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.

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

www.umes.edu/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). Athletic scholarships are available to qualified student-athletes in the following sponsored sports.

<u>Men</u>		<u>Women</u>	
Baseball	Basketball	Basketball	Bowling
Cross Country	Tennis	Cross Country	Softball
Track & Field	Golf	Tennis	Track & Field
		Volleyball	

MISSION

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-athletes' self-esteem and interpersonal skills. It is the philosophy of the Athletics Department that self-esteem is the key to success in any endeavor and should be fostered in all Departmental activities. Pride in one's self, 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.

INSTITUTIONAL RESEARCH, PLANNING, AND ASSESSMENT

The Office of Institutional Research and Assessment (OIRPA) is the official source of institutional objective data about the University of Maryland Eastern Shore (UMES). The office provides promptly and in clear format, accurate and consistent data/information needed by UMES to support its efforts for the continuous improvement of its programs and services. It supports and provides leadership for wide-ranging initiatives including the University's strategic planning process, student access and retention efforts, and the overall institutional environment by assessing and evaluating UMES' strategic initiatives and providing assessment of institutional effectiveness and assessment of student learning outcomes data/information to inform University policy.

The office also provides data/information to meet institutional accountability and informational needs of individuals and offices within the institution, the University System of Maryland, Maryland Higher Education Commission (MHEC), Federal, State, private and accreditation

agencies. In addition, OIRPA conducts focused studies on issues of critical importance to the University including environmental scans and student persistence. **For additional information contact the Office of Institutional Research and Assessment at 410-651-7530/6672 or smyvirenda@umes.edu.**

TITLE III PROGRAMS

The UMES Title III Office is to serve as the central administrative office for the management of the Title III funded activities. The office assists the university by ensuring planning, management, budgetary and administrative oversight and providing technical assistance and evaluation of each activity. These functions, when applied in concert with other campus administrative activities, strengthen the total infrastructure of UMES. Additionally, the office serves as a liaison between UMES and the U.S. Department of Education.

The Title III Office must mesh an institutional perspective and comprehension of the institution's mission, goals and objectives with the Strengthening of Historically Black Colleges and Universities (HBCUs) Program and the Strengthening of Historically Black Graduate Institutions (HBGIs) Program in order to affect long rang plans for utilization of Title III funding. **For additional information contact the UMES Title III Office at 410-651-6668 or fhmckinney@umes.edu**

ACADEMIC AFFAIRS

www.umes.edu/Academic/

SCHOOLS, DEPARTMENTS, CENTERS AND PROGRAMS AT THE UNIVERSITY OF MARYLAND EASTERN SHORE

The Division of Academic Affairs, administered by a Provost/Vice President and an Associate Vice President, includes four Schools and the Frederick Douglass Library. Each School is led by an academic Dean, who is responsible for the overall supervision of specific departments. The School of Agricultural and Natural Sciences houses the Departments of Agriculture, Food and Resource Sciences; Human Ecology; and Natural Sciences. The School of Arts and the Professions houses the Departments of Criminal Justice; Education; English and Modern Languages; Fine Arts and Social Sciences. The School of Business and Technology houses the Departments of Business, Management and Accounting; Engineering and Aviation Sciences; Hotel and Restaurant Management; Mathematics and Computer Science; and Technology. The School of Pharmacy and Health Professions houses the Departments of Exercise Science; Pharmacy; Physician Assistant, Physical Therapy and Rehabilitation Services. In concert with the overall mission of the University, each school achieves its specific mission and goals through its distinctive academic departments. Students select major programs of study leading towards an academic degree from one or more of the eighteen academic departments housed within the four degree-granting Schools.

The Division of Academic Affairs also includes the following academic support units: Agricultural Experiment Station, Instructional Technology, University of Maryland Cooperative Extension, 1890 Extension, 1890 Research, The Honors Program, International Program Development, Office of the Registrar, Rural Development, Study Abroad, Teacher Education, Library Services and Upward Bound--a pre-college educational program for local high school students.

ACCREDITATION AND PROFESSIONAL MEMBERSHIPS

The University of Maryland Eastern Shore (UMES) is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104. (267-284-5000). The Middle States Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. UMES is accredited by or hold membership in the following agencies:

1. Accreditation Review Commission on Education for the Physician Assistant (ARC-PA);
2. American Chemical Society Committee on Professional Training (ACSCPT);
3. American Council for Construction Education (ACCE);
4. The Association to Advance Collegiate Schools of Business (AACSB International);
5. Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association;
6. Commission on Accreditation in Physical Therapy Education (CAPTE);
7. Maryland State Department of Education (MSDE);
8. National Council for Accreditation of Teacher Education (NCATE);
9. National Council for Social Sciences (NCSS);
10. National Council on Rehabilitation Education (CORE);
11. National Science Teachers Association (NSTA); and,
12. Professional Golfers' Association of America;
13. Accreditation Commission on Programs in Hospitality Administration (ACPHA),
and

UMES recently received full accreditation from the Accreditation Council for Pharmacy Education (ACPE).

The University is recognized by the University Aviation Association (UAA) and the Federal Aviation Administration (FAA). Membership is held by the University with the Maryland Higher Education Commission (MHEC), the National Council of Educational Opportunity Association (NCEOA), the National Association for Equal Opportunity in Higher Education (NAEOHE), the Association of Public and Land-Grant Universities (APLU), the American Council on Education (ACE), and the National American Association of Summer Sessions, the American Association for Teacher Education (AACTE), and the National Council for Science and the Environment (NCSE).

THE HONORS PROGRAM

Mission

The primary mission of the Honors Program at the University of Maryland Eastern Shore is to offer high achieving and motivated undergraduates the opportunity to participate in student-centered learning experiences that promote intellectual growth, cultural appreciation, professional focus, leadership development, and civic participation. Also, to serve the entire University by enhancing the intellectual life of the campus, helping students prepare for graduate and professions school, and serving as a locus for curricular experimentation.

Admission to and Retention in the Honors Program

Students may apply for admittance into the Honors Program as incoming freshmen, transfer students, or as a student already matriculated at the university. Interested students must complete an application to the program and submit all requested documents, including transcript(s), letters of recommendations, a résumé detailing leadership roles, service contributions, awards and honors earned, and co-curricular activities, and essay by posted deadlines. Students must also sign and return the Honors Contract Agreement Form. The Application Forms and Honors Contract Agreement may be obtained from the Honors Program office or the website at www.umes.edu/honors. Preference is given to Maryland residents and students with successful academic preparation in the sciences, mathematics, and humanities for competitive admission. All applicants admitted to the program are eligible and may apply for one of several merit-based scholarships. Application deadlines for program admission and scholarships are also posted on the website.

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, résumé, and essay 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.

Program Description

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. **For additional information, contact The Honors Program office at 410-621-3070 or melane@umes.edu.**

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).

UNDERGRADUATE DEGREE PROGRAMS

UMES offers the Bachelor of Science (B.S.), Bachelor of General Studies (B.G.S), and the Bachelor of Arts (B.A.) degrees in the programs listed. In addition there are many options and specialties which are described in the catalog sections pertaining to each academic program.

All four year degree programs at the University require a minimum of 120 semester hours, with the exception of Physician Assistant and Professional Golf Management, and excluding deficiency courses and remedial work and MATH 101 for the bachelor's degree. Semester hour requirements beyond 120 credits have already received prior approval from the USM Board of Regents.

Students who complete one or more of the courses of study offered by the University will be awarded the degree indicated.

School of Agricultural and Natural Sciences	
Department of Agriculture, Food and Resource Sciences	
Bachelor of Science	Option
Agribusiness	
General Agriculture	Agriculture Education Option Agricultural Studies Option Animal and Poultry Science Options <ul style="list-style-type: none"> • Option 1: Business/Technology • Option 2: Pre-Veterinary/Pre-Professional Plant and Soil Science Option
Urban Forestry	
Minors: Agribusiness; General Agriculture	
Graduate Degrees:	
<ul style="list-style-type: none"> • M.S. in Food and Agricultural Sciences • Ph.D. in Food Science and Technology 	
Department of Human Ecology	
Bachelor of Science	Concentration
Human Ecology	Child Development Dietetics Family & Consumer Sciences Family & Consumer Sciences Education Fashion Merchandising Fashion Merchandising Fit Advertising/Marketing Communications Nutrition
Minors: Clothing & Textiles; Fashion and Merchandising; Gerontology; Nutrition - Option 1- Nutritional Science, Option 2 – Food and Nutrition	
Upper Division Certificate – Family Financial Planning	
Department of Natural Sciences	
Bachelor of Science	Concentration or Track
Biochemistry	
Biology	
Biology Honors	Pre-Physical Therapy Pre-Medicine Pre-Dentistry
Biology Education	
Chemistry	(with ACS Certification)
Chemistry	(without-ACS Certification)
Chemistry Honors	Tracks: Pre-Medicine and Pre-Dentistry (with ACS Certification)
Chemistry Education	
Environmental Sciences	Marine Science Environmental Chemistry
Environmental Sciences Honors	
Minors: Biology; Chemistry; Physics	
Non-Degree Program: Pre-Pharmacy	
Graduate Degrees:	
<ul style="list-style-type: none"> • BS/MS in Environmental Sciences with concentrations in Marine Science and Environmental Chemistry 	

- M.S. in Chemistry
- M.S. in Marine-Estuarine and Environmental Sciences with concentrations in Ecology, Fisheries, Environmental Chemistry, and Environmental Science
- M.S. in Toxicology
- P.S.M. in Quantitative Fisheries and Resource Economics
- Ph.D. in Marine-Estuarine and Environmental Sciences with concentrations in Ecology, Fisheries, Environmental Chemistry, and Environmental Science
- Ph.D. in Toxicology

For more information, see Graduate Catalog.

School of the Arts and Professions	
Bachelor of General Studies in various concentrations	
Department of Criminal Justice	
Bachelor of Science	
Criminal Justice	
Minor: Criminal Justice	
Graduate Degrees:	
<ul style="list-style-type: none"> • M.S. in Criminology and Criminal Justice with concentrations in Criminology and Research; Law Enforcement and Courts; Corrections and Delinquency Prevention For more information, see Graduate Catalog.	
Department of Education	
Bachelor of Science	
Special Education	
Graduate Degrees:	
<ul style="list-style-type: none"> • M.A.T. in the following disciplines: Agriculture, Art, Biology, Business, Chemistry, English, Family and Consumer Sciences, Mathematics, Music, Social Studies, Technology • M.Ed. in Counselor Education • M.Ed. in Special Education • Ed.D. in Educational Leadership For more information, see Graduate Catalog.	
Department of English and Modern Languages	
Bachelor of Arts	Concentration
English	
English Education	
Minors: English, Spanish, Telecommunications	
Department of Fine Arts	
Bachelor of Arts	Concentration
Applied Design	Graphic Illustration Commercial Photography Commercial Ceramics Sequential Art
Art Education	
Music Education	Choral General Instrumental
Minors: Art, Music	
Department of Social Sciences	
Bachelor of Arts	
African American Studies	
History	
Sociology	
Social Studies Education	
BA in Sociology	
Graduate Degree: Ph.D. in Organizational Leadership For more information, see Graduate Catalog.	

School of Business and Technology	
Department of Business, Management, and Accounting	
Bachelor of Science	
Accounting	
Business Administration	
Business Education	
Finance	
Marketing	
Minors: Accounting, Business Administration	
Department of Engineering and Aviation Sciences	
Bachelor of Science	Concentration
Aviation Sciences	Aviation Electronics Aviation Management Aviation Software Professional Pilot
Engineering	Aerospace Computer Electrical Mechanical
Department of Hotel and Restaurant Management	
Bachelor of Science	
Hotel and Restaurant Management	
PGA Golf Management	
Minors:	
For HRM majors only	
<ul style="list-style-type: none"> • Culinary Arts Restaurant Management • Travel and Tourism 	
For non-HRM majors	
<ul style="list-style-type: none"> • Hotel Administration • Food and Beverage Management. 	
Department of Mathematics and Computer Science	
Bachelor of Science	
Mathematics	
Mathematics Education	
Computer Science with Business Focus	
Computer Science	
Minors: Computer Science; Computer Science with Business Focus; Mathematics	
Graduate Degree: M.S. in Applied Computer Science	
For more information, see Graduate Catalog.	
Department of Technology	
Bachelor of Science	Option
Construction Management Technology	
Engineering Technology	Electrical/ Electronics Option Mechanical Engineering Option
Technology Education	
Minors: Construction Management Technology; Technology Education	
Certification: Career and Technology Education Certification	
Graduate Degree: M.Ed. in Career and Technology Education	
For more information, see Graduate Catalog.	

School of Pharmacy and Health Professions	
Department of Exercise Science	
Bachelor of Science	Concentration
Exercise Science	Clinical Health Fitness
Department of Rehabilitation	
Bachelor of Science	Option
Rehabilitation Psychology	
Rehabilitation Services	Allied Health Option American Sign/Language Option
Certification: Provisional Certification in Chemical Dependency	
Graduate Degree: M.S. in Rehabilitation Counseling	
Other Graduate Degrees in the School of Pharmacy and Health Professions: Masters of Physician Assistant D.P.T. in Physical Therapy Pharm.D in Pharmacy For more information, see Graduate Catalog.	

THE FREDERICK DOUGLASS LIBRARY

The Frederick Douglass Library, led by the Dean of Library Services, provides a multiplicity of reference and technical resources onsite and via the Internet to support the University's programs. As a member of the University System of Maryland (USM) Libraries, the Frederick Douglass Library is electronically linked via an automated integrated internet system with USM's eleven campuses and thirteen libraries. Therefore, the Library's patrons have access to the USM's extensive library collections, electronic resources, and global access to collections, databases, and/or resources worldwide.

Frederick Douglass Library (1968) was named for the self-educated abolitionist, orator and author who was born on the Eastern Shore. This three-story facility houses a multiplicity of print and non-print resources to support the mission and academic programs of the university. In 1991, through renovation efforts, the library doubled in size to 61,000 square feet. The collection includes over 271,310 volumes; 37,482 bound periodicals; and over a half million microfiche and microfilm collections. As a member of USMAI (University System of Maryland and Affiliated Institutions) consortium, the library is affiliated with the sixteen libraries at the public universities and colleges in the State of Maryland for the purpose of sharing library resources. The integrated, comprehensive information library system Ex-Libris makes it possible for our patrons to have 24/7 access to USMAI library collections and electronic resources. These collections and resources are reflected in the library catalog and include over 148 research databases often including full text journals, books and newspapers. A very competent staff is also available to assist with information needs.

The Library provides instruction sessions to enhance students' research skills. Library instruction sessions are tailored to the needs of each class to assist students and may range from an overview of basic library resources to the use of advance or subject research materials and techniques. Since fall 2005, the library has offered an online Information Literacy course taught by the library faculty. Please visit our web site <http://www.umes.edu/FDL/> for additional information about the library.

CENTER FOR INSTRUCTIONAL TECHNOLOGY

The Center for Instructional Technology at UMES assists faculty and students in all aspects of e-learning including hosting, training, development, and support of the Blackboard 9.1 Learning Management System, the Blackboard Portfolio System, Respondus, and Echo 360. Additionally, the Center for Instructional Technology runs an official Microsoft IT Academy and Certification Testing Center as well as supports the Eastern Shore E-Learning Symposium. Founded in 2006, the Center for Instructional Technology is supported by a grant awarded through Title III. The Center is located in 1106 Wilson Hall and is open Monday through Friday during normal business hours. **For additional information, please call (410) 651-7574.**

CHILD AND FAMILY DEVELOPMENT CENTER

The UMES Child and Family Development Center (CFDC), located in the Early Childhood Research Building, is a Maryland State Department of Education licensed preschool environment for one hundred-two children ages six-weeks through school-age. One director, five full-time classroom teachers, supporting full-time staff and UMES students manage the full-day program that is in operation year-round and serves University students, staff and faculty, and the local community. The CFDC is committed to facilitating children's growth and development in a caring, enriched and supportive environment. State approved curricula, *The Creative Curriculum* and *Little Treasures*, prepare the children for successful entry into formal educational settings. Tuition fees are reasonable and are set on a sliding fee scale. Purchase of Care funds are accepted. Breakfast, lunch and afternoon snack are served. **For additional information regarding the UMES Child and Family Development Center visit the Center's website: <http://www.umes.edu/Academic/SANS/HE/CFDC/> or contact the director, Dr. Donna Long at 410-651-6173.**

INTERNATIONAL DEVELOPMENT PROGRAMS

www.umes.edu/oiprogram

The Office of International Development Programs (OIDP) 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; develop domestic and international linkage agreements to facilitate international education; and assist faculty and staff members to participate in exchange programs. **For additional information contact the Office of International Development Programs at 410-651-6548/6192 or oiprogram@umes.edu.**

OFFICE OF THE REGISTRAR

www.umes.edu/Registrar/

The Office of the Registrar is the official university repository of academic records. The Office of the Registrar strives to provide the highest level of customer service, professionalism, courtesy, and efficiency in servicing students, faculty, staff, alumni and the community. This office plays an essential role in the Division of Academic Affairs by ensuring that all academic policies and procedures are met. The Office of the Registrar is located in the Student Development, Cultural, and Recreation Center (SDCRC). The following services are representative, but not limited to those offered by the Office of the Registrar: Issuance of Transcripts; Enrollment Verifications; Withdrawal from the University; Graduation Audits; Credit by Examination; Coordination of Cooperative Programs; Change of Major; Degree Certification; Course Withdrawal; and Inter-Institutional Enrollment.

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 the Registrar.

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 review their academic requirement report and print an unofficial transcript from the HawkWeb at the end of each semester.

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.

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 remedial courses and MATH 101.

Commencement

Commencement is held three times a year, the third Friday in December and May, and in September for the Doctor of Physical Therapy students only. **Students who do not graduate as expected must resubmit an application for degree in order to have their degree conferred in the next Commencement Exercise.**

Participation in Commencement

It is the policy and practice of the University of Maryland Eastern Shore that all participants in its commencement must have completed all academic requirements as presented in the catalog in effect at the time of initial enrollment at the University as a degree-seeking student and approved by the degree granting department. Once a student interrupts his/her 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 at the time of re-enrollment as a degree-seeking candidate. A student who has an approved registration at another institution during the semester of anticipated graduation will receive his/her degree once an official transcript is received by the Registrar's Office and all academic and financial obligations are met. Each student is approved for graduation when the appropriate academic department, school, and the Office of the Registrar complete an official graduation audit.

Completion of Graduation Requirements Agreement

Students who are one course short of fulfilling the credit requirement for graduation and would like to participate in the graduation ceremonies can pursue the Completion of Graduation Requirement Agreement process.

The process is as follows:

- 1) Students who need one course (maximum allowed) may request their Chairperson or Dean provide the permission to participate in the graduation ceremonies.
- 2) Students will sign a written agreement indicating the course/s to be taken and when they plan to take the course/s.
- 3) The course/s must be taken during the term immediately following the signing of the agreement (i.e. summer/fall or May graduation, or winter/spring for December graduation).
- 4) The Dean provides the written request (signed agreement form) with attached degree audit to the Provost and Vice President for Academic Affairs. Upon approval the Dean and Registrar will be notified.
- 5) The student may fulfill his or her needed credit/s as follows:
 - a. Take the required course (online or face-to-face) at UMES or another approved (by Dean and Chair) four-year institution. All required paperwork must be submitted to the Office of the Provost and Vice President for Academic Affairs.
 - b. Enroll for an independent study with the approval of the Dean and Chairperson.

Application for Degree

Winter Commencement

Students planning to graduate in **December** must complete their academic program requirements by the end of the fall semester. Students who expect to complete the degree requirements at the end of a semester should complete an 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. **The deadline for submission for the Winter Commencement is June 30th.** Students who do not graduate as expected **must** resubmit an application for degree in order to participate in the next Commencement Exercise.

Spring Commencement

Students planning to graduate in **May** must complete their academic program requirements by the end of the spring semester. Students who expect to complete the degree requirements at the end of a semester should complete an 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. **The deadline for submission for Spring Commencement is January 30th.** Students who do not graduate as expected **must** resubmit an application for degree in order to participate in the next Commencement Exercise.

Summer Commencement – Physical Therapy Students Only

Students planning to graduate in September must complete their academic program requirements by the end of the third summer session. Students who expect to complete the degree requirements at the end of a term should complete an 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. **The deadline for submission for Summer Commencement is June 1st.** Students who do not graduate as expected **must** resubmit an application for degree in order to participate in the next Commencement Exercise.

Other

Students who expect to graduate and are not enrolled at the University must file the application for degree by **January 30th** for the spring semester commencement and **September 30th** for the fall semester commencement. Students will be charged a non-refundable diploma fee each semester the application for degree is submitted. 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.

Students who do not graduate as expected **must** resubmit an application for degree in order to participate in the next Commencement Exercise. **For additional information contact the Office of the Registrar at 410-651-6413.**

Diploma Names

Your name will appear on your graduation diploma as it appears in your official student record. If you have legally changed your name due to adoption, court order, or a change in your marital status and you want to change how your name will appear on your diploma, please follow the procedures outlined below. Following this process will ensure that your diploma is ordered correctly and that your name is listed in the Commencement Program correctly.

ALL name changes **must occur no later than the end of the ADD Period** of any semester. Check the Academic Calendar to identify the last day to ADD for a particular semester.

1. Take all pertinent documents showing the legal name change (i.e., driver's license, birth certificate, court order, marriage certificate, divorce decree, social security card, etc.) to the appropriate admissions office (see the list below).
2. Complete the Change of Name form and submit to the appropriate office.
3. Affix the new name on the Application for Degree **only** if it has been officially changed by the appropriate office.
4. If your application for degree was submitted **prior to** the name change, contact the Office of the Registrar immediately.

Career

Office and Location

Undergraduate students

Office of Admissions & Recruitment
1st Floor Suite 1140
Student Development Center
410-651-7921

Graduate Students

Office of Graduate Studies
Early Childhood Center
410-651-6507

Professional (Pharmacy)

Office of Student Affairs
116 Somerset Hall
410-651-2292

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. 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. A copy of the program outline showing all requirements for each degree must be filed with the Office of the Registrar. 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.

Graduation with Latin Honors

The faculty of UMES may recommend candidates for graduation with honors in a particular curriculum under the conditions listed below. To be considered for Latin honors, a student must have earned in residence at UMES a minimum of 60 semester hours upon graduation.

- 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.

OUTREACH PROGRAMS

Under the leadership of the Office of Academic Affairs, UMES offers outreach programs and summer camps for UMES students as well as high school students in the community. Summer outreach includes programs in STEM (Science, Technology, Engineering, Math) disciplines, a foreign language institute, a summer enrichment academy, as well as Upward Bound, a college

preparation program. Current information regarding outreach programs can be found at <http://www.umes.edu/Academic/> under the Community Outreach link.

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, and 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.

ADMINISTRATIVE AFFAIRS

www.umes.edu/

The Division of Administrative Affairs provides services to enhance and support the University's learning, inquiry and engagement goals. The Division administers policies and procedures, plans and maintains facilities, manages the campus' financial affairs, insures the safety and welfare of students, faculty, staff, visitors and facilities, enhances campus efficiency and effectiveness through computer utilization, and improves and expands services offered to campus clientele to support the overall mission of the University. Incorporated in this component are the following functional divisions: (1) Administrative Computing, (2) Auxiliary Enterprises; (3) Budget; (4) Comptroller's Office; (5) Human Resource Management; Information Technology (6) Plant Operation and Maintenance; (7) Procurement; (8) Public Safety; (9) The Richard A. Henson Center and (10) University Dining Services. Administrative Affairs is committed to providing quality service to its customers.

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 2013-2014 academic year, the fee structure will tentatively be as follows:

FULL-TIME TUITION AND FEES¹

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

Maryland Residents

	Per Semester	Per Year
Fixed Charges		
Tuition	\$2,314.00	\$4,628.00
Mandatory Fees		
Athletic	375.00	750.00
Student Activities	63.00	126.00
Recreational Activities	400.00	800.00
Student Union	275.00	550.00
Technology Fee	<u>72.00</u>	<u>144.00</u>
Total MD Resident	\$3,499.00	\$6,998.00

Non-Maryland Resident^{1,2}

	Per Semester	Per Year
Tuition	6,567.00	13,134.00
Mandatory Fees	<u>1,185.00</u>	<u>2,370.00</u>
Total Non-MD Resident	\$7,752.00	\$15,504.00

ADDITIONAL CHARGES^{1,2}

Room	Per Semester	Per Year
Traditional Double	2,378.00	4,756.00
Single	2,770.00	5,540.00
Efficiencies – 2 Bedroom	2,712.00	5,424.00
Efficiencies – Single Bedroom	2,834.00	5,668.00
Leased Efficiency	2,860.00	5,720.00

Board (Meal Plan)³

19 Meal Plan w/\$200 annual food points	1,950.00	3,900.00
14 Meal Plan w/\$200 annual food points	1,850.00	3,700.00
10 Meal Plan w/\$150 annual food points	1,500.00	3,000.00
*5 Meal Plan w/\$100 annual food points	739.00	1,478.00

(*Commuters only)

PART-TIME TUITION AND FEES ¹

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	\$287 per credit hr.
Undergraduate (11 cr. hrs. or less)	192 per credit hr.
Student Fee	33.00 per semester
Technology Fee	10.00 per semester

Non-Maryland Resident

Graduate	\$511 per credit hr.
Undergraduate	484 per credit hr.
Student Fee	33.00 per semester
Technology Fee	10.00 per semester

SCHOOL OF PHARMACY

Pharmacy D Program

Maryland Resident

Tuition 25,271.00

Mandatory Fees:

Pharmacy Activity Fee 300.00

Technology Fee 144.00

Student Union 550.00

Recreational Facilities 800.00

Total Maryland Resident 27,065.00

Non-Maryland Resident

Tuition 49,130.00

Mandatory Fees 1794.00

Total Non-Maryland Resident 50,924.00

Supplementary Charges/Fees (all students applicable)

Commencement Fee	\$35.00
Credit-by-examination Fee	
Per Semester Hour Credit	\$30.00
Application Fee (Undergraduate)	\$25.00
Protested Check	\$25.00
Laboratory Fees ⁴	\$25.00
Library (varies)	
Overdue Book (per day)	0.50
Overdue Laptop (per ½ hour)	\$10.00
Lock Replacement Charge	
Lost Keys	\$100.00
Total Lock Replacement	\$250.00
Lost HAWKCARD	\$20.00
Damaged HAWKCARD	\$10.00

Motor Vehicle Registration	\$ 40.00
Transcript of Academic Record ⁵	\$3.00

¹Notwithstanding 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.

²All Fees are subject to annual adjustments.

³Students residing in the traditional Residence Halls and the Student Apartments are required to be on the board plan.

⁴Laboratory fees may vary by department.

⁵A transcript of a student's record will not 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, Discover, and American Express), 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 cannot 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 unless 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). **THERE IS NO LONGER A LATE REGISTRATION DATE** 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

A. 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.

1. Students who are financially independent or financially dependent, as hereinafter defined, shall have their residency classification determined based on 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):
 2. 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 students may share living quarters in Maryland which are owned or rented and occupied by a parent, legal guardian, or spouse;
 3. Maintains within Maryland substantially all personal property;
 4. Pays Maryland income tax on all earned taxable income including all taxable income earned outside the State;

5. Registers all owned motor vehicles in Maryland in accordance with Maryland law;
6. Possesses a valid Maryland driver's license, if licensed, in accordance with Maryland law;
7. Is registered in Maryland, if registered to vote;
8. 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,
9. Has a legal ability under federal and Maryland law to reside permanently without interruption in Maryland.
10. 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.

E. 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 or 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.

F. **Support:** Except as set forth in (2) of this section, support shall mean financial or material support, including gifts, services, and trusts, including income or benefits derived from one's family. 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.

AUXILIARY ENTERPRISES

Auxiliary Enterprises are self-supporting units which provide non-academic services to students, faculty, staff and guests of the university. These services include: student, faculty and staff dining, catering, snack bar, concessions, mail service, hotel accommodations, conferencing, laundry, bookstore, Greyhound Bus Service, student ID cards, vending, printing and document services and student security.

MISSION

Consistent with the University's mission, Auxiliary Enterprises exists to enhance and support the institution's learning, inquiry, and engagement goals. The unit further seeks to provide these services to the campus community in the most effective and efficient manner. Our primary aim is to provide the best customer service and experience that is possible.

HAWK CENTER

The HAWK CENTER is the pulse of Auxiliary Enterprises. It serves as the service center for the UMES Community and special programs. The HAWK CENTER is located on the 2nd floor of the Student Services Center. Hours of operations for payments are 8:30 a.m. to 3:30 p.m., Monday through Friday. All other services are available Monday through Friday from 8:30 a.m. to 4:15 p.m.

SERVICES AVAILABLE

Student Account Payments - Students are able to conduct student accounts business at the HAWK Center. Hours of operations are 8:30 a.m. – 3:30 p.m., Monday through Friday. Payments are accepted and placed directly onto a student account. Individuals can pay using cash, money order, cashier check, bank check or credit card.

Check Cashing - The HAWK Center functions as an agent for the Office of Student Accounts and administers check cashing services for registered UMES students. Students may cash one personal check per week not to exceed \$50.00. Money Orders and Cashier Checks will be cashed up to \$150.00 as long as funds are available. There is a \$1.00 service fee for cashing of checks and/or money orders. No starter checks or postdated checks will be accepted. If a check is returned to the University for any reason, the individual will lose his/her check cashing privileges. Services are provided throughout the academic year at the HAWK CENTER. This service is available during regular business hours: Monday through Friday 8:30 a.m. – 4:15 p.m.

HAWKCARD - The HAWKCARD is the official UMES ID card. Faculty, staff and students are issued their first card at no cost. Replacement cost is \$20.00 for lost and stolen cards. A fee of \$10.00 is charged for the replacement of damaged cards. Cards which malfunction with no apparent damage are replaced at no charge to the individuals. There is a \$30.00 replacement cost for HAWKCARD that allows access and \$15.00 for damages access card. Lost or stolen cards should be reported immediately to the HAWK CENTER during regular business hours or via Campus Center.

The HAWKCARD is a permanent card, non-transferable and is the property of the University of Maryland Eastern Shore. It must be surrendered upon request. Students must carry their HAWKCARD at all times for prompt identification. A penalty fee of \$35.00 is charged to individuals who allow another person to use their card.

HAWK CAMPUS CENTER - The HAWK CAMPUS CENTER is an Internet browser-based 24-hours a day, 7 days a week, on-line interactive gateway to many Auxiliary Services. Individuals are able to view accounts, transfer funds from one account to another account, use the Box Office, vote on line, established a Who's Who and access many other available services. The HAWK CAMPUS CENTER can be reached through the University of Maryland Eastern Shore web page, which can be found at www.umes.edu. Click on the Auxiliary icon

located on the center of the page. The HAWK CAMPUS CENTER is only available to University of Maryland Eastern Shore students and staff. Students may request a parent's password by filling out a "Request for Parents Password". All users will have to log onto the system with their login name and a password initially assigned by Auxiliary Enterprises. Users can then change their password to anything they want.

HAWK CASH CENTERS Locations - Funds may be added at the following locations: University Terrace, ORL HMAT, Student Services Center, Water Hall, Student Development Center and HAWK Landing.

HAWKCARD Account - The HAWKCARD Account is a flexible account, which allows an individual to make purchases on a debit basis. An individual can open an account by simply placing funds into his/her account. There is no minimum amount required. Funds can be added by one of the following means: Cash; Check - (Payable to: University of Maryland Eastern Shore) and Money Order - (Payable to: University of Maryland Eastern Shore). Credit Card (Visa, MasterCard or Discover) can be added via the HAWK CAMPUS CENTER. HAWK CASH CENTER located in the Student Services Center. Cash, checks and money orders payments can be done at the HAWK CENTER during regular business hours. Payments are posted immediately and are available to the individuals immediately. **Funds can be sent by mail to: HAWK CENTER, 30665 Student Services Center Lane, University of Maryland Eastern Shore, Princess Anne, MD, 21853.**

University Printing and Document Services (UPDS) - Individuals wishing to have copies made or binding completed can do so for a nominal fee at the University Printing and Document Services. Only the HAWKCARD is accepted. At no time is CASH OR CHECK ACCEPTED. To add funds to use at UPDS, an individual must report to the HAWK CENTER. Funds will either be placed in your HAWKCARD ACCOUNT or a receipt will be generated to take to UPDS.

HAWKMAT - Within each residential facility is a card operated laundry facility. Individuals are able to use their HAWKCARD, if funds are available, to utilize the washers and dryers. Each washer and dryer has a number assigned to it. This number is used when attempting to start a washer or dryer. Individuals should report any washer or dryer not working to the HAWK CENTER during service hours or email hawkcenter@umes.edu. Every attempt will be made to have washers or dryers back in service within a 24 hour period. When reporting malfunctioning washer or dryer, the following information will be needed: the location of the washer or dryer, the number assigned to the washer or dryer, the nature of the problem as complete as possible. If there was a loss of funds, it should be indicated at that time. For refunds, an individual must report in person to the HAWK Center during service hours.

HAWK Vending - Vending machines are located throughout the campus. Upkeep of machines is done through the Office of Auxiliary Enterprises. Individuals who lose money should report in person to the HAWK Center during regular business hours to receive a refund. Student refunds are placed directly on their HAWKCARD. Faculty, staff and visitors can receive cash refunds. Individuals must complete a Vending Refund Form prior to receiving their refund. Problems associated with vending machines should be reported to the HAWK Center by calling extension 7747 during regular business hours or email hawkcenter@umes.edu.

Greyhound - Greyhound ticket sales are available to UMES Community and surrounding area during regular business hours. The HAWK Center serves as a ticket agent for Greyhound. Tickets can be purchased using cash and the HAWK CARD. Greyhound offers a price adjustment when tickets are purchased 7 days in advance. Bus schedules can be viewed www.greyhound.com or visit the HAWK CENTER located second floor of the Student Services Center.

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. **For additional information, please contact the Office of Financial Aid at (410) 651-6172.**

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 1st 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.

NEEBO BOOKSTORE

The UMES Bookstore provides course materials (both new & used), general reading books and references, school and office supplies, computer products, and official UMES sportswear and paraphernalia to the university family. The bookstore has some custom Greek apparel and accessories available in the store. The bookstore, which is located in the Student Services Center, accepts the Hawk Express, cash, checks, and all major credit cards. Items can be purchased online at www.neebo.com/umes.

CASH FOR BOOKS

No matter where students bought them, Follett will buy them back. Prime book buyback time is during finals. That's when the bookstore knows the most about needs for the next semester, and when the bookstore has the least inventory. This means that students are likely to get the best price on what they sell back.

Where to Find the Bookstore

The bookstore is located on the first floor of the Student Services Center, or visit the bookstore on the web at www.umes.bkstr.com.

PUBLIC SAFETY

The Department of Public Safety is responsible for the safety and security of all students, faculty and staff, as well as, the university's facilities, grounds and property. 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 Telephones

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, staff and visitors must be registered and display a parking permit or obtain a temporary parking permit from 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 and are expected to park only in the designated areas for their parking permit. All Students, regardless of whether they have a University registered vehicle, are responsible for knowing the policies for operating motor vehicles on campus and are expected to park only in designated areas. Failure to do so can result in ticketing and/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 for flagging of registration renewal and fines added to the student's UMES fiscal account.

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. **For additional information, please contact the Office of Human Resources at (410) 651-6400 or www.umes.edu.**

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. **For additional information, please contact the Office of Student Financial Aid at (410) 651-6172.**

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 equals 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 additional information, please contact the Office of Residence Life at (410) 651-6144.**

INSTITUTIONAL ADVANCEMENT

www.umes.edu/

The Division of Institutional Advancement combines five traditional Advancement disciplines—Development (or Philanthropy), Public Relations (or Communications), Marketing and New Media (or Advertising and Promotion), Alumni Affairs, and Advancement Services (or Stewardship of University Donor Funds)—to advance the mission of the University consistent with the leadership’s vision. Through private fundraising efforts, 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. Public Relations activities and publications raise awareness, appreciation and recognition of the remarkable accomplishments of our students, faculty, staff and alumni. Marketing strategies promote the University through advertising and other avenues. Through Alumni outreach programs and events, the division maintains and nurtures the lifetime relationship graduates enjoy with their Alma Mater. Advancement Services maintains a high level of accountability as custodians of invested donor funds.

DISCOVER UMES

Discover UMES is an activity designed to strengthen experiential learning opportunities in the field of broadcasting and communications for UMES students. **For additional information, please contact Jim Glover, Interim Producer, Discover UMES, (410) 651-6556 or jmglover@umes.edu or www.umes.edu.**

RESEARCH AND ECONOMIC DEVELOPMENT

www.umes.edu/DRED

The Division of Research and Economic Development (D-RED) is administered by a Vice President, an Associate Vice President and a Research Compliance Officer. The research portfolio is managed through the Office of Sponsored Research and Programs. The development and advancement of the research mission of the university is further enhanced through the School of Graduate Studies. The Division is also responsible for executing the economic development mission of the University of Maryland Eastern Shore. This is accomplished through the Rural Development Center and the Maryland Hawk Corporation.

Mission

The Division of Research and Economic Development will support and enhance an academic environment that promotes excellence in research, scholarship, and creative endeavors while optimizing economic development opportunities.

Vision

The Division of Research and Economic Development will be nationally recognized for its efficient infrastructure that supports: the administration of research and scholarly activities; intellectual discovery; creative problem solving; and aggressively promotes economic development on the Eastern Shore.

RESEARCH

Office of Sponsored Research and Programs

The Office of Sponsored Research and Programs (OSRP) was established in 1992 by the President of UMES to serve as the compliance and administrative office responsible for oversight of sponsored (e.g., external) awards. Administrative responsibility is assigned to the Vice President for Administration. The purpose of the OSRP is to provide faculty, research associates, students and staff with assistance in the preparation and submission of proposals and in the administration of grant and contract awards. This action provides a single focal point for the University community and external agencies and organizations for all activities related to the acquisition and administration of sponsored activities with the exception of the 1890 Land Grant awards.

OSRP is responsible for identifying potential funding sources and communicating such information to the faculty, maintaining contacts with potential sponsors and arranging appointments with such sponsors as requested by the faculty, and helping with the development of proposals to potential sponsors. The OSRP is responsible for proposal processing, ensuring that proposals conform to all agency and organization's requirements, that the proposed financial arrangements are acceptable and consistent with UMES and University System of Maryland (USM) requirements, and that special commitments (e.g. in-kind and matching funds) have had prior internal review and approval. OSRP is responsible for grant and contract administration, functioning as the liaison between the funding organization, the faculty member, and other University offices.

The OSRP is the primary support organization for sponsored programs at the University. As such, it works with the Office of the President, Office of the Vice President for Academic Affairs, the Vice President for Administrative Affairs and other appropriate offices to ensure that sponsored activities are carried out according to the University mission and the sponsoring organization's requirements, and the policies of the USM. All grants and contracts represent legal obligations of the University and as such must be signed on behalf of the University by the President.

The OSRP publishes procedures to ensure that expenditures are made within the regulations and policies of the University, the State of Maryland, USM and the Federal government or other funding source. In addition, the OSRP advises principal investigators (PIs) of any special regulations which may be imposed by the granting organization. Moreover, OSRP provides institutional oversight of grant and contract awards to ensure compliance with OMB circulars, FARS and other federal and state laws, regulations and policies that govern the expenditure of sponsored funds.

OSRP Services - The OSRP provides the following services:

- Identification of funding sources;
- Use electronic databases to identify private/corporate sector sources of support for university faculty, research associates, students and staff (e.g. IRIS);
- Identification of faculty interest using an Internet-based faculty research form;
- Delivery of grants workshops are held periodically. Faculty are encouraged to suggest topics and speakers;
- Consultation on proposal writing and editorial services;
- Coordination of animal welfare (IACUC), human subjects, biohazard, biosafety, recombinant DNA and other related committees;
- All pre-and post- award administration services from pre-proposal through award negotiation to extensions and close-outs;
- Annual reporting to UMES and USM;
- Collection of reimbursable costs; and,

- Coordination of Federal reporting requirements such as OMB A-21, A-110, A-133, Misconduct in Science, R&D efforts, IRB and IACUC compliance, and FARs.
- Security Clearance support

SCHOOL OF GRADUATE STUDIES

The School of Graduate Studies at the University of Maryland Eastern Shore provides for the education of students in the scholarly methods of intellectual inquiry and critical analysis; Trains students in the discipline and skill necessary for beneficial research, applications and practice; and fosters in students a dedication to creative thought and the search for knowledge. The UMES Graduate School equally promotes the freedom and intellectual environment necessary to stimulate research and scholarship of the highest quality for both students and faculty. Headed by a Dean of Graduate Studies, the School offers 19 degree programs including Master's degrees in Applied Computer Science, Career and Technology Education, Chemistry, Counselor Education, Criminology and Criminal Justice, Food and Agricultural Sciences, Marine-Estuarine-Environmental Sciences, Physician Assistant, Professional Science Master's Degree in Quantitative Fisheries and Resource Economics, Rehabilitation Counseling, Special Education, Teaching and Toxicology and doctoral degrees in Educational Leadership, Food Science and Technology, Marine-Estuarine-Environmental Sciences, Organizational Leadership, Physical Therapy and Toxicology. This School is housed in the Early Childhood Research Center, Suite 1137.

Mission

The mission of the School of Graduate Studies (The Graduate School), operating through the departmental graduate programs, is to conduct programs of instruction leading to advanced degrees and certificates. Degree programs and non-degree study may provide the advanced specialized training to meet the needs of professions and occupations seeking a pool of skilled professionals, practitioners and researchers for entry level and career advancement positions, or the needs of individuals seeking career changes, continuing education or lifelong learning opportunities.

The Graduate School is school is housed in the Early Childhood Research Center, Suite 1137. For more information, call the office at (410) 651-6507 or visit online at <http://www.umes.edu/grad/>

ECONOMIC DEVELOPMENT

Rural Development Center

The Rural Development Center (RDC) works to strengthen and diversify the rural economy of Maryland's Eastern Shore by increasing income, employment, and the local tax base. In doing so, it provides assistance to counties, communities, and businesses and collaborates with local higher education institutions, governments, and the private sector to accomplish its mission.

Located at the University of Maryland Eastern Shore, the Center's scope of work includes assisting public economic development projects with the creation of conversion strategies; using plans, loans, grants, projects, and programs for community and county vitality; and creating public/private partnerships and regional approaches for the prosperity of the community and local businesses.

Maryland Hawk Corporation

The Maryland Hawk Corporation is a University-Affiliated Foundation 501 (c) (3) non-profit organization focused on the commercialization and entrepreneurial development of intellectual property created at the university of Maryland Eastern Shore. Revenues from royalties, dividends, leases, licenses and other commercial activities are used to support the administrative function of the corporation with excess revenues supporting the mission of the University.

STUDENT AFFAIRS AND ENROLLMENT MANAGEMENT

www.umes.edu/Student

The Division of Student Affairs and Enrollment Management at the University of Maryland Eastern Shore exists for the purpose of providing programs, services and educational experiences that promote the academic success of students and enhance the quality of campus life. Headed by a Vice President, the division is comprised of Admissions and Recruitment, Office of the Registrar, Career Services and Cooperative Education, Counseling, Wellness Center, Student Activities, WESM Radio and Student Health. This Division is housed in the Student Services Center.

Mission

The mission of the Division of Student Affairs and Enrollment Management is to contribute to the teaching, research, and public service functions of the University of Maryland Eastern Shore by providing programs, services and educational experiences which promote the academic success of UMES students and enhance the quality of campus life.

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, 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, International Student 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.

ADMISSIONS AND RECRUITMENT

The Office of Admissions and Recruitment, serves prospective students, currently enrolled students, faculty, and staff relative to matriculation, document processing and the maintenance of students' records. The Recruitment Office engages in prescribed activities designed to identify, attract, enroll and retain prospective students through graduation.

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) 651-8403.

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:

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

Applicable courses pertinent to the Freshman Admission Requirements 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 standardized exam.

Graduates of Non-Accredited Maryland High Schools

Applicants are required to have competitive SAT/ACT test scores and commendable grades. Students who meet or do not meet entrance requirements can qualify for conditional admission. 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 15th**. For the **spring semester, December 1** is the application priority deadline. Applications can be processed over the web at 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.

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 can qualify for 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. 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 each month 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 at least one (1) 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, academic, and financial standing in order to be considered for admission to the University.

International Students

UMES is certified by the Immigration Customs Enforcement (ICE) 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, Customs and Enforcement 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.

Enrollment 101 and New Student Orientation

Enrollment 101 is a one-day activity for students and parents offered during the summer to enable students to complete the registration process prior to the start of the semester. New Student Orientation (NSO) is a two-day summer program designed to familiarize new students with campus life at UMES. NSO is generally offered two days prior to the start of classes and is sponsored by the New Student Orientation Committee. Students accepted into the University receive detailed information about the program and registration materials from the Committee for Enrollment 101 and NSO. There is a minimal fee for the program that is separate from the semester charges. All new and transfer students with fewer than 24 credit hours are required to participate in the University-wide Enrollment 101 and 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.

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 System of Maryland institutions. Direct transfer allows automatic admission and transfer of all college level credits of a "C" or better. **See Appendix 1 for full text of applicable MHEC regulations.**

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 résumés, 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 school 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), 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 additional information, contact the Office of Career Services/Cooperative Education at 410-651-6447.**

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,
- 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.

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 CENTER FOR ACCESS AND ACADEMIC SUCCESS (CAAS)

The Center for Access and Academic Success (CAAS) provides students with access to academic services which strengthen students' performance and promote student success and retention. The CAAS staff is comprised of highly trained and caring professionals dedicated to helping students persist in their efforts and achieve success at the University of Maryland Eastern Shore. CAAS services focus on supplemental academic advising, tutoring, and mentoring.

Supplemental academic advising services are provided by supplemental academic advisors and consist of out-of-class support for students who have consulted with their primary faculty advisor. Supplemental academic advisors consider faculty advisement paramount to student success and will defer to faculty recommendations when advising students. Supplemental academic advisors take a holistic approach to serving students and serve as a liaison with other departments and services on campus. Supplemental academic advisors assess students' needs on an individual basis and, as needed, refer students to academic departments, career services, counseling services, tutoring, financial aid, residence life, or the health center.

Tutoring services are offered by highly trained upper class students, as well as by CAAS faculty members. Student tutors provide support for most freshman and sophomore level courses, with emphasis on English, math, and sciences. Faculty members provide support with math, as well as reading and writing for academic purposes, at all levels of study. Student tutors are available by appointment Mon-Fri 8:30 a.m. – 8:00 p.m. Faculty members are available on a walk-in and appointment basis during posted office hours.

Mentoring services are provided by Hawk Mentors, a group of highly trained and highly motivated upper class students. Hawk Mentors serve as “voices of experience” to a protégé group of incoming first-year students, whom they support in the process of transitioning from high school to college. Hawk Mentors provide resources and information in the areas of academic achievement, co-curricular involvement, and leadership, as well as model the core values of academic success: Engagement, Persistence, Leadership and Excellence. **For additional information, contact the Center for Access and Academic Success at 410-651-6254 or caas@umes.edu.**

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 additional information, contact the Coordinator of the program at 410-651-6461.**

CENTER FOR INTERNATIONAL EDUCATION

The purpose of the Center for International Education is to provide a conducive environment that will support the educational, cultural and social interactions among international students/scholars, domestic students, faculty, staff, and the community. The Center will promote global education through student study/research abroad programs and faculty research and teaching abroad. **For additional information contact the Center for International Education at 410-651-8385 or 6079 or oiss@umes.edu.**

Goals: The goals of the Center of International Education are as follows:

- Facilitate internationalization of the curriculum and promote greater involvement of all students in significant international education experiences.
- Facilitate efforts to ensure that research and scholarship pertaining to international matters permeate disciplinary and interdisciplinary fields.

- Create and maintain a stimulating and supportive academic and cultural environment for international students and scholars and UMES study abroad students.
- Provide support to increase the international activities of faculty and staff.
- Develop partnerships and collaborations with some USM campuses and/or other institutions of education to support globalization efforts.

Objectives: The objectives are as follows:

1. Organize and conduct seminars and other activities to facilitate cross-cultural communication and awareness.
2. Encourage, advise, counsel and mentor American students at UMES to participate in Student Study/Research Abroad programs.
3. Advise, counsel and mentor international students at UMES.
4. Coordinate UMES managed Student Study/ Research Abroad Programs.
5. Coordinate campus-wide Faculty Research/ Teaching Abroad Programs.
6. Coordinate campus-wide International Scholars-in-Residence initiatives in the Division of Academic Affairs.

COUNSELING SERVICES

The University Counseling Center offers a broad range of services designed to assist students in personal growth, academic success, emotional health and well-being, and human development. The Center's holistic and student-centered approach to counseling allows the staff to help students learn to make reasoned decisions in the multiple areas of their academic and personal lives.

It is the policy of the Counseling Center to provide comprehensive services to all students. The Counseling Center subscribes to principles outlined by the International Association of Counseling Services (ISACS) and the code of ethics of the American Counseling Association (ACA). These services are offered at no cost to enrolled students.

It is the philosophy of Counseling Services that one of the basic rights of clients in treatment is the right of confidentiality, as counseling is most effective when a student can be direct and honest with the Counselor without fear that personal information will be divulged.

Confidentiality is an ethic that prevents unauthorized disclosure about clients, including their names and their care, without the client's written permission, except under conditions where such disclosure is necessary to protect the student or someone else from imminent danger. While information will not be released outside of The Counseling Center without the student's written permission, by state law Counseling Center staff may confer with each other in order to improve the quality of its services.

Referrals from the campus community are encouraged as faculty and staff are often the first to identify that a problem exists and can provide support by referring students to Counseling Services. To make an appointment, the student may walk in or call (410-651-6449) to schedule the initial session.

DISABILITY STATEMENT

Students capable of success, regardless of their disabilities are admitted to the university. The faculty and staff of the University of Maryland Eastern Shore work cooperatively to assist their students in achieving their educational goals. Moreover, students with disabilities are accommodated in accordance with both federal and state laws. To receive special accommodations for a disability, the student must register with Student Disability Services before any accommodations can be granted. At the time of registering for disability services, please bring documentation to support your claimed disability. The documentation must be within three years and provided by a licensed professional with expertise in the special disability area. If you have questions about disability services or accommodations, please

contact Dr. Dorling Joseph at (410) 621-3446. The Student Disability Services office is located in the Student Services Center (SSC), Suite 2169.

HEALTH CENTER

The Charles R. Drew Student Health Center provides basic health care for students (residents and commuters) currently enrolled at UMES. The Health Center staff includes a nurse practitioner, a physician and nursing staff that provide evaluation, diagnosis, treatment, counseling, and referral for health needs.

The Student Health Center provides a variety of services such as treatment for acute conditions, immunizations and screenings. There is no charge for office visits; however some fees may be required for certain services. 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.

All registered students, including graduate, transfer and international, regardless of number of credit hours being taken are required to provide a completed health history form and proof of up-to-date immunization status for measles, mumps, rubella (MMR) and tuberculosis (TB) prior to registering for and/or attending classes. Students living in campus housing must also meet the meningitis requirement. Registration blocks will be placed on students who have not submitted the required documents. This will prevent students from registering for/ or attending classes until the records are received and processed. To avoid delays, students should submit the records as soon as possible. The deadlines for submission are: August 1 for the Fall semester and January 1 for the Spring semester. Students who encounter difficulty obtaining documentation should contact the Student Health Center for assistance.

Students are also required to have health insurance. A university sponsored plan is available, and full-time undergraduate students are automatically enrolled in the insurance plan unless they opt out. To opt out of the university health insurance plan, students must provide proof of current valid health insurance and complete the online waiver request. Waivers must be completed by September 15 in the Fall and by February 15 in the Spring. If no waiver is completed, the student's account will be billed for insurance at the current rate. The cost is \$38 per semester for domestic students and \$247 per semester for international students. Part-time students and graduate students are eligible for the plan but must enroll themselves directly with the company. Copies of the insurance brochure may be obtained from the Student Health Center or accessed online at <http://njcservices.com/>. Students with questions about using the insurance should contact the Health Center staff.

Hours for the Health Center during the Fall and Spring semesters are 8:00 AM to 4:00 PM, Monday through Friday. For medical emergencies after these hours, students may seek assistance through Campus Police or Residence Life staff members. **For additional information, contact the Student Health Center at (410) 651-6597 or (410) 651-6702 (fax).**

STUDENT CODE OF CONDUCT

The University of Maryland Eastern Shore (UMES) is a student-centered community, the central purpose of which is the discovery and transmission of knowledge and learning through scholarly research, teaching, service, and community outreach, building towards the total development of its students and the global community.

Members of the UMES community (students, faculty, administrators, and staff) have come together in a voluntary association, not merely to fulfill individual responsibilities, but to contribute to the realization of the University's objectives and mission. Therefore, in the interest of maintaining order (in the University community) within the broadest range of student freedom, these rules and regulations have been established by the University of Maryland Eastern Shore to govern student conduct.

The UMES Conduct System is designed to assure due process, with the speedy and constructive resolution of cases and controversies. Disciplinary proceedings at UMES are not criminal proceedings; therefore the focus of inquiry in disciplinary proceedings shall be to determine whether a student(s) has violated the University Student Code of Conduct. A humanistic approach to discipline is employed whenever possible. It is intended that this conduct 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 (on and off campus), as well as registered student and Greek-letter organizations.

The authority to administer the Student Code of Conduct and its conduct system is delegated to the Vice President for Student Affairs and Enrollment Management. The Campus Conduct Board adjudicates disputes over complaints of violations of these rules and regulations.

All UMES students share the following responsibilities: To read, become acquainted with, and adhere to the Code; To respect personal and property rights of others, and to act in a responsible manner at all times, on or off campus; To protect and foster the intellectual, academic, research, cultural, and social missions of the University; and To observe the laws of local, state and federal governments and agencies.

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 and uphold and accept these values as standards of conduct. These include honor, personal and academic integrity, mutual respect for personal and property rights of others, justice, freedom, diversity, leadership, civility, courtesy, fairness, spirituality, and loyalty to the University. UMES has established this Code of Student Values (*see full Interpersonal Values Statement in appendix, Student Code of Conduct*), which forms the model of conduct for student members of our academic community.

Prohibited Conduct

The following conduct is prohibited by the University of Maryland Eastern Shore and subject to disciplinary action in accordance with the Student Code of Conduct. Attempts to commit acts prohibited by this Code shall be punished to the same extent as completed acts, which may include suspension and/or expulsion from the University. Students and student organizations are responsible for the conduct of their guest(s) on, or in University property and at functions sponsored by the University, and may be disciplined for a guest's violation of this Student Code of Conduct. Pursuant to the University's parental notification policy, parents or guardians will be notified when students under the age of twenty-one (21) receive disciplinary sanctions for abuse and/or misuse of alcohol, and drugs, or for arrest. Please note this is not an exhaustive list, a more complete list is available in the Student Code of Conduct.

1. Computer Misuse and Dishonesty
2. Forgery, Fraud, and Dishonesty
3. Improper Possession, Use or Abuse of Alcoholic Beverages
4. Drugs
5. Discriminatory Conduct
6. Violence to Persons
7. Theft, Vandalism, Destruction and Abuse of Property
8. Disruptive, Disorderly, or Reckless Conduct
9. Possession of Dangerous Weapons, Firearms, or Explosives
10. Violations of Residence Life and Housing/Rules and Regulations
11. Cellular Telephone and Pagers in the Classroom

12. Obstruction of the free flow of pedestrian or vehicular traffic
13. Arson
14. Harassment
15. Sexual Assault
16. Stalking
17. Illegal Gambling or Wagering
18. Hazing
19. On or Off Campus Event Related Misconduct

IMPORTANT UNIVERSITY REGULATIONS WHICH APPLY TO STUDENTS

The following behavior may result in referral to the UMES campus Conduct 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 administrative 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 Chairperson 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 conduct 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 Chair.

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 as 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 Center, etc.) may recommend suspension of any student or organization from a facility, pending action by the Conduct 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 conduct administrator.

CAMPUS LIFE

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 Spring Fest.

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; Pan-Hellenic Council; Pom-Pom Squad; Poultry Science Club; Recruitment Club; Rehabilitation Services Student Association; Social Work Student Association; Student Activity Advisory Board; Wesley Foundation.

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 Yearbook is generated through student fees, appropriated by the Student Government Association. While the Yearbook is an annual publication, students volunteer as editors, photographers, and writers for the publications. For information on how to volunteer for the publication, contact the Student Government or the Office of Campus Life.

The Pan-Hellenic Council

The Pan-Hellenic 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.

Student Handbook

The UMES Student Handbook is designed to familiarize students with official policies and procedures related governing students through their educational path with respect and dignity towards all persons associated with the University. This publication is located at www.umes.edu/Student/.

The Golden (ID) Identification Program for Senior Citizens

The purpose of the Golden Identification Program at UMES is to make courses available to retired citizens who are 60 years old or older and are residents of the State of Maryland. Once admitted to the University, the Maryland resident will be eligible to register for credit courses (maximum of 6 credits) as a regular or a special student and pay the mandatory fees. Tuition, per semester, will be waived. **For additional information contact the Office of Student Activities at 410-651-6436. For Advanced Special Student Status (graduate level) contact the School of Graduate Studies at (410) 651-6507.**

INFORMATION AND PROCEDURES

Policy on Off-Campus Disorderly and Disruptive Behavior

Under the provisions of the Student Code of Conduct, the University may bring judicial charges against a student or group of students whose “off-campus behaviors affect the university community or the university’s pursuit of its mission, policies or procedures” (Student Code of Conduct). Off-campus behavior, which is disorderly and disruptive to others

in the community or the neighborhoods surrounding the University, may fall under this category.

When addressing the off-campus behavior of its students, the University is primarily interested in responding to students who demonstrate a pattern of behavior over time that is disruptive to others in the community and involves disorderly conduct that is a violation of local, state or federal laws or the University's Student Code of Conduct.

Conduct that is disorderly and disrupts others in the community is prohibited and is subject to discipline through the University's conduct process. Students who lease off-campus residences shall be held accountable for the disorderly and disruptive actions of others occurring within the leased premises and shall be subject to discipline under the Student Code of Conduct. Students who live in off-campus residences leased by the University shall be held accountable to the University's housing agreement, and for disorderly and disruptive actions of others occurring within those premises and shall be subject to discipline under the Student Code of Conduct. It is not necessary for students to receive a criminal or civil citation in order for their behavior to be subject to discipline through the University's conduct process.

Dress Code

The dress code is based on the theory that learning to use socially acceptable manners and selecting attire appropriate to specific occasions and activities are critical factors in the total educational process. Understanding and employing these behaviors not only improves the quality of one's life, but also contributes to optimum morale, as well as embellishes the overall campus image. They also play a major role in instilling a sense of integrity and an appreciation for values and ethics. The continuous demonstration of appropriate manners and dress insures that the University of Maryland Eastern Shore students meet the very minimum standards of quality achievement in the social, physical, moral and educational aspects of their lives - essential areas of development necessary for propelling students toward successful careers.

Students will be denied admission to various functions if their manner of dress is inappropriate. On this premise students at the University of Maryland Eastern Shore are expected to dress neatly at all times. The following are examples of appropriate dress for various occasions:

- Classroom, Dining Hall, Snack Bar, Student Center and University offices - neat, modest, casual or dressy attire.
- Formal programs in Ella Fitzgerald Center for the Performing Arts Center, the William P. Hytche Athletic Center, Tawes Gymnasium, the Theater and the Chapel - business or dressy attire.
- Interviews - business attire.
- Social/Recreational activities, Residence hall lounges (during visitation hours) - modest, casual or dressy attire.
- Balls, Galas, and Cabarets - formal, semi-formal and dressy attire respectively.
- ***Students may be denied admission to various functions if their manner of dress is inappropriate.***

Examples of inappropriate dress and/or appearance include but are not limited to: Caps, do-rags, pajamas, and or hoods for men or women; and scarves for women in classrooms, the dining hall, snack bar, student center or other indoor activities. This policy does not apply to headgear considered as a part of religious or cultural dress. Other examples are: pajamas, midriffs or halters, mesh, netted shirts, tube tops or cutoff tee shirts in classrooms, dining hall, snack bar, the student center, and offices; bare feet, short shorts, blue or other type jeans at major programs such as Musical Arts, Convocations, Commencement, Career Fair, or other programs dictating professional, dressy, or formal attire; clothing with derogatory, offensive and/or lewd messages either in words or pictures.

All administrative, faculty and support staff members will be expected to monitor student behavior applicable to this dress code and report any such disregard or violations to the Offices of the Vice President for Student Affairs and Enrollment Management, or the Associate Vice President for Student Affairs.

UNIVERSITY HOUSING/RESIDENCE LIFE

There are twelve (12) residential communities in the University's array of housing options. Combined, these facilities accommodate over 2100 residents. Housing options range from traditional double rooms to apartments with single bedrooms. Included are unique options such as apartments with full kitchens. Students who reside in the efficiency apartment communities are not required to purchase a meal plan. The Office of Residence Life (ORL) oversees the operation of all University housing, off-campus leased properties and strives to promote a living environment which respects the privacy and security of residential students and, perhaps more importantly, encourages the creation of good academic habits, non-traditional learning and managed social opportunities. All residential facilities have policies which incorporate quiet hours for the purpose of study and rest and restricted hours for disruptive group activities.

In order for students to acquire on-campus housing, students must complete a housing contract on Hawkville, Residence Life online housing reservation system. Room deposits are required upon completion of the housing contract. For the fall semester, the room deposit is \$300 and \$150 for the spring semester. The room deposit is applied towards the student's account to assist in covering future charges. It is refundable by notifying the ORL in writing by July 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 if the student decides not to matriculate at UMES. Information regarding housing policies, descriptions and how to reserve housing may also be obtained from the UMES website at 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 in the ORL or online (www.umes.edu/reslife). Failure to follow these terms may result in fines, University Judicial sanctions, or eviction from the residential community.

The residential visitation policy varies according to class status, residential community, days of the week and time. Freshmen may only have inter-room visitation by the opposite sex on weekends during specified hours; . For upperclassmen (sophomores, juniors and seniors), room visitation is allowed every day from noon to midnight, with extended hours on weekends. Visitation hours are determined by the Area Director. Overnight guests of the same sex are permitted with the approval of the Area Director. Overnight guests of the opposite sex are not permitted. All overnight guests must be registered with the residence hall staff office which serves the specific housing area being visited.

Housing Options

There are four (4) types of University housing available: traditional halls, apartment suites, efficiency units, and off-campus leased units. The residents of traditional halls are all same sex and have a similar class standing. However, within the Murphy Annex, genders and classifications are mixed. Genders are separated according to floors. An apartment suite has five single rooms, a common living room and its own bathroom. An efficiency unit has two or three bedrooms, a common living room, a kitchen and 2 bathrooms. The off-campus leased properties are all single rooms with a common kitchen area and 2 bathrooms.

Housing Communities

Traditional Halls: Murphy Hall - Freshman Females; Murphy Annex – Upper Class & Co-ed; Nuttle Hall - Freshman Males; Wicomico Hall - Freshman Males; Court Plaza Hall – Freshman Males; Plaza Hall – Freshman Females; University Terrace – Freshman Females; Harford Hall – Freshman Females.

Apartment Suites: Student Apartments – Upper Class, Males/Females.

Efficiency Units: Student Residential Complex – Upper Class, Males/Females; Hawks Landing – Upper Class, Males/Females.

Off-Campus Leased Units: Arden’s Run – Upper Class, Males/Females; Talon’s Square – Upper Class, Males/Females.

Rooms: Rooms in each residence hall are equipped with basic furnishings: beds, dressers, desks, chairs, and closets. Cable TV, , telephone and internet connections are in each room. On campus telephone service connects students to all campus extensions at no cost. UMES supplies active telephone and internet (free) connections in each room.

End of Semester Check-out: Students must move out of the residence halls, if required, 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. While 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 possessing Bachelor’s and/or Master’s degrees manage University housing and facilitate educational and social programming to strengthen the on-campus experience. The Director, Assistant Director, Administrative Assistant and a Clerk Typist are housed in the Central Housing Office and are responsible for effectively administering all aspects of the campus housing operation.

SCHOLARSHIPS

www.umes.edu

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. Scholarships, grants and loans are offered through various offices/departments/areas. Offices with scholarships, grants and loans are listed below. Please use the respective web links to access a complete listing or contact the appropriate office.

OFFICE OF FINANCIAL AID SCHOLARSHIPS, GRANTS, AND LOAN OPPORTUNITIES

Many scholarships, grants, loans, and other awards are available through the Office of Financial Aid. For further information, please contact the Office of Financial Aid at **410-651-6172**. Additional scholarship resources can be found at the following links:

Financial Aid homepage: <http://www.umes.edu/financialaid/>

Grants: <http://www.umes.edu/financialaid/Default.aspx?id=6904>

Scholarships Resources: <http://www.umes.edu/financialaid/Default.aspx?id=20942>

Institutional Scholarships: <http://www.umes.edu/financialaid/Default.aspx?id=20960>

Information regarding loan programs can be found at:

<http://www.umes.edu/financialaid/Default.aspx?id=26524>

HONORS PROGRAM

The Honors Program has scholarship available to students who have been selected to participate in the program. For further information, please contact the Honors Program at **410-651-6082** or use the following link to access a list:

<http://www.umes.edu/Honors/Default.aspx?id=34524>

INSTITUTIONAL ADVANCEMENT

Scholarships are offered through the Office of Institutional Advancement. For further information, please contact the Office of the Vice President at **410-651-7773** or use the following link to access a list: <http://www.umes.edu/IA/Default.aspx?id=5106>

ACADEMIC INFORMATION AND PROCEDURES

www.umes.edu/Academic/

In order for students to have a smooth transition during their academic career, the Division of Academic Affairs, in connection with the Faculty Assembly and UMES Senate, have established policies and procedures that should be followed. This section covers all policies and procedures that relate the academic arena.

ACADEMIC CLEMENCY

It is the policy of UMES to allow undergraduate students returning to the campus after a separation of at least five years to petition for the removal of a limited number of unsatisfactory or failing grades earned previously at the Eastern Shore Campus. Contact your Department Chair immediately after being readmitted or reinstated since you must file your petition prior to the first day of classes of your first semester back on campus. To ensure prompt review of your petition, apply EARLY for readmission or reinstatement so that you will have ample time to select courses and register. Courses which are excluded will be identified on your transcript by the notation, "Academic Clemency."

ACADEMIC HONESTY POLICY FOR GRADUATE AND UNDERGRADUATE STUDIES

Academic honesty and integrity lie at the heart of any educational enterprise. The University of Maryland Eastern Shore (UMES) is committed to the values of academic honesty and integrity, and the ensuring that these values are reflected in behaviors of the students, faculty, and staff.

UMES is committed to the prevention of academic dishonesty. To reinforce that commitment, information, including definitions and examples of academic dishonesty, will be published in the UMES Student Handbook and the university catalog. The intention of this information is to prevent acts of academic dishonesty. Prevention is the primary goal of the University in general and the Division of Academic Affairs in particular.

When there is evidence that a student has disregarded the University's Academic Honesty Policy, that student will be subject to review and possible sanctions. 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 committee selected by the appropriate Dean to review such matters. The minimum sanction for cases of proven cheating is failure of the course. Instructors will 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 UMES is to promote the highest standards of professionalism among its students. 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. The following definitions and 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 academic record;
 - d. conspiring or inducing others to forge or alter academic records.

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 complete one's assignment;
 - f. submitting as one's own work, work done by someone else;
 - g. permitting someone else to submit one's 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, poems, etc.), from a computer hard drive or discs and presenting them as one's own.

3. **Plagiarism** as a form of cheating is also unacceptable. Plagiarism is the act of presenting as one's 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 one's own;
 - b. quoting 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 one's own compositions;
 - c. quoting directly quoting or exactly copying material from a source without giving proper reference or otherwise presenting the copied material as one's own creation.

Acts of falsification, cheating, plagiarism and other forms of academic dishonesty are grounds for failure of a course. The University reserves the right to impose more severe penalties for any of these forms of academic dishonesty. The penalties may include, but are not limited to suspension from the University, probation, community service, expulsion from the University, or other disciplinary action the University believes to be appropriate.

ACADEMIC DISHONESTY PROCEDURES

In accordance with existing policy in the University System of Maryland (USM), students accused of plagiarism and other forms of academic dishonesty will be given due process. When an instructor believes that a student has committed plagiarism or other acts of academic dishonesty, the following steps will be taken:

1. A faculty member who has sufficient reason to believe that a student is guilty of academic dishonesty will notify and subsequently meet with the student within **ten calendar days** from the time the alleged academic dishonesty is discovered.
2. Prior to the initial meeting of the faculty member and the accused student, the faculty member should check the files on academic dishonesty kept in the office of the Vice President for Academic Affairs to determine whether the student has been previously disciplined for academic dishonesty. The University reserves the right to impose more severe disciplinary action against a student who is a repeat offender or who has previously been found guilty of egregious incidents of cheating.
3. At the initial meeting the student will be given the complete and detailed charges in writing, and an opportunity to respond to the faculty member regarding the charges.

4. If the student wishes, he/she may submit a written response to the charges. This response must be delivered to the aforementioned faculty member within **five calendar days** of the initial meeting.
5. If the student admits to the charge of academic dishonesty, and the offense is his/her first offense, he/she will be asked to sign a statement consenting to the punishment imposed. Consent statements will be filed with the appropriate records in the Office of the Vice President for Academic Affairs. For first offenses, the punishment will be failure of the course.
 - a. If the case is a repeat offense, the faculty member is also required to send the matter forward to the next level of review.
 - b. The faculty member will notify the department chair and the Dean of his/her findings, and within five calendar days forward to the Dean a written explanation of the circumstances, along with copies of any pertinent evidence.
 - c. The Dean will review the explanation and any supporting evidence, and may, at his or her discretion, interview the accused student and/or the faculty member, for purposes of clarification and adherence to the University's Academic Honesty Policy.
 - d. The Dean will notify the Vice President for Academic Affairs of his/her findings and within five calendar days forward a written explanation of the circumstances, along with copies of any pertinent evidence.
 - e. The Vice President for Academic Affairs will review the explanation and any supporting evidence, and may, at his/her discretion, interview the accused student and/or faculty member, for purposes of clarification and adherence to the University's Academic Honesty Policy.
 - f. After the careful review by the Vice President for Academic Affairs has occurred, the final decision will be documented in writing, to the student, faculty member, department chair, dean and registrar.
 - g. If the student refuses to sign the consent form, the faculty member will proceed to the next step in the process.
6. The faculty member will notify the student whether or not the matter will be taken to the next step in the process within **five calendar days** of receiving from the student a written response to the charges. The student shall file his/her written response with the Office of the Vice President for Academic Affairs.
7. If the student does not respond within the time indicated, the faculty member must proceed to the next step in the process. If, upon receiving the written response, the faculty member does not accept the student's explanation, the faculty member is required to send the matter forward to the next level of review.
 - a. If the case is not a repeat offense, and the student does not respond within the time indicated, the faculty member must proceed to the next step in the process.
 - b. If the case is not a repeat offense and upon receiving the written response the faculty member does not accept the student's explanation, the faculty member is required to send the matter forward to the next level of review.

8. Once the student has been duly notified of the charges, he/she will not be permitted to drop the course, but will continue as a student, completing and submitting all work required throughout the remainder of the semester.
9. The faculty member will notify the department chair and the Dean of his/her findings, and within **five calendar days forward** to the Dean a written explanation of the circumstances, along with copies of any pertinent evidence.
10. The Dean will review the explanation and any supporting evidence, and may, at his or her discretion, interview the accused student and/or the faculty member, for purposes of clarification and adherence to the University's Academic Honesty Policy. If the matter cannot be resolved at that level to the satisfaction of the faculty member bringing the charges, within **five calendar days** it will then be forwarded to the school's committee on academic dishonesty.
11. A five member committee on academic dishonesty will be appointed by the respective Dean of each school at the beginning of the academic year. It will be comprised of three full-time tenured faculty, one exempt employee of the University, and one junior or senior level student. In the event that the alleged dishonesty occurred on the graduate level, the student member will be a graduate student. The Dean will appoint the chair of the committee. In order for its actions to be official, at least three members of the committee must be present when decisions are made. The verdict will be decided by the majority, in this case two votes of three. If four or more members are present, the majority shall be three or more votes.
12. A faculty member, who has brought or is in the process of bringing charges against a student for academic dishonesty in the current academic year, will not be eligible to serve on the committee. The Dean will appoint a replacement.
13. The committee will meet to review cases and to hear any testimony it considers relevant to the matter on dates requested by the Dean. At the meeting, the student will be allowed the opportunity to appear and respond to the charges, and answer any additional questions from the committee. All proceedings will be tape recorded, and the recording will be entered into the academic dishonesty records maintained in the Office of the Vice President for Academic Affairs. In the event of academic dishonesty allegedly occurring during summer sessions or during final work at the conclusion of a semester, the alleged dishonesty charge will be reviewed during the committee's first meeting in the fall. In the interim, the student will receive a grade of "I."
14. The committee review shall be informal, with neither party represented by an advocate. Witnesses may be asked and/or permitted 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. If the student wishes he or she may have an associate present for consultation purposes only. Lawyers, parents, or any form of professional advocate may **not** serve as an associate.
15. The committee shall meet privately at the close of the meeting to decide whether a majority believes a preponderance of evidence supports the allegation of falsification, cheating or plagiarism.
16. If the allegation is sustained, the committee will also determine whether the standard minimum penalty of failure in the course shall be accompanied by an additional penalty or penalties. If the allegation is not sustained, the student is not guilty of violating the Academic Honesty Policy.

17. The records of the proceedings, both written and electronically recorded, are to be kept in the files on academic dishonesty maintained in Office of the Vice President for Academic Affairs.
18. The committee shall notify, in writing, the student, the instructor, and the Dean within **ten calendar days** of having reached its decision. The decisions of the committee may be appealed on procedural grounds only. All appeals should be made to the Vice President for Academic Affairs, who will then have the following options:
 - a. affirm the decision and the penalty imposed by the committee;
 - b. affirm the decision, but amend the penalty; or
 - c. vacate the decision and order a new hearing with a different committee.

After a careful review of the record of the proceedings, the Vice President for Academic Affairs will render the final decision of the University.

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:

Fall Semester

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

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

Spring Semester

November 1st - Students who have been out one or more semesters and want to return for the Spring Semester.

January 5th - Current semester students on dismissal at the end of the Fall Semester and want to return for the Spring Semester.

Applications received after the deadline indicated above will be considered for the next session. Applications may be obtained online at www.umes.edu/registrar or by writing to the Office of the Registrar, Student Development and Cultural Center, 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 School's specific 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 thirteen (13) 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.

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.

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

Total Hours Attempted	Academic Dismissal If Cum. GPA is	Academic Probation If Cum. GPA is in the range
1-24	1.549 or below	1.550 to 1.999
25-48	1.699 or below	1.700 to 1.999
49-73	1.799 or below	1.800 to 1.999
74 and above	1.949 or below	1.950 to 1.999

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 Center for Access and Academic Success.

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.

ALLEGED ARBITRARY AND CAPRICIOUS GRADING (PROCEDURES FOR REVIEW - 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.
11. 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.

ALTERNATIVE CREDITS

All undergraduate students who enroll in degree programs will be required to complete 12 alternative credits before graduating. Alternative credits can be earned by completing internships, summer and winter session courses, on-line courses, independent study, undergraduate research, credit by examination, and courses completed while studying abroad.

USM Policy on Alternative Credit: University System of Maryland Policy on Alternative Means of Earning Academic Degree Credit

This policy was designed to encourage students to take advantage of alternative means of earning academic degree credit, including through online courses; registration in special sessions; independent study or undergraduate research; study abroad; service learning; internships; credit by exam; and advanced placement credits. Institutions have worked to promote the use of alternative means of earning credit and have also developed tracking mechanisms to flag such alternative credits, beginning with the first-time, full-time freshman cohort of Fall 2006.

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.

CATALOG GOVERNING GRADUATION REQUIREMENTS

It is the policy and practice of the University of Maryland Eastern Shore that all participants in its graduation 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 a non-degree-seeking student declares a major, he or she must fulfill the requirements of the catalog in effect at the time they become degree-seeking. Or, the student may choose to meet requirements of the catalog in effect at the time of their initial enrollment at UMES as long as their initial enrollment and the date they become a degree-seeking student does not exceed five years, and provided that the student indicates this choice at that time by filing an application for catalog change with the Office of the Registrar.

Students transferring from Maryland colleges and universities are expected to fulfill graduation requirements under the catalog in effect at the time of initial enrollment at UMES. Or, the student may choose to fulfill requirements under the catalog in effect at the time of initial enrollment at the other Maryland institution provided the student indicates this choice at the time of initial enrollment at UMES by filing an application for catalog change with the Office of the Registrar.

Students transferring from colleges and universities outside of Maryland are required to fulfill graduation requirements under the catalog in effect at the time of initial enrollment at UMES.

The following applies to the provisions stated above:

If the University changes a program in a way that prevents the student from meeting any graduation requirement as stated in their catalog, the change may necessitate substitutions but will not result in any increase in the student's requirements.

Substitutions for any graduation requirement must be approved by the student's department chair and dean by filing the course substitution form with the Office of the Registrar.

If a major program undergoes revision after the year in which a student enrolls, the student may choose to substitute the new requirements in full for those which appear in the catalog of the student's initial enrollment. The student must indicate his or her choice to follow the new requirements by filing the application for catalog change with the Office of the Registrar no later than one semester after the program revisions are in effect.

A student may complete the Permission to Change University Catalog form, found on the Academic Affairs forms page, <http://www.umes.edu/Academic/index.aspx?id=26134>. The request must be approved by the academic advisor, the department chair, and the dean.

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.

Procedures for Student Absences

Although the University does not encourage constant absence from class, it is aware that situations may arise when a student will not be able to attend class for one or more reasons (i.e., death, illness, etc.). It is the responsibility of the student to inform the department of his/her major, if the student is unable to attend class. Once this information has been received from the student, the departmental office is to notify the faculty of all courses of which the student is enrolled of the student's absence. It will be the responsibility of the student and faculty to decide on how the missed assignments are to be handled. Upon the student's return, he/she must provide documentation to the departmental office.

If a student decides not to return to the University, then the student should refer to the policy on Withdrawal from the University. A form is required to complete this process.

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 either 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 **winter 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 Spring semester. 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 work must be completed and the terminal grade must be submitted by the **end of the next semester of enrollment**, otherwise the "I" becomes "W."

CREDIT BY EXAMINATION

Credit towards the bachelor's degree may be established by examination under the conditions below. **For further information, please contact the Office of the Registrar at 410-651-6414.**

1. 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.
2. 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 **cannot** 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 (30) may be established by examination. However, in no case does this permission waive the minimum residence requirement of 30 semester credits.

3. 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.
4. Applications 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:
 - a. 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.
 - b. 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, "Test Credit By Exam" or "By CLEP," whichever is applicable.
 - c. 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.
 - d. Part-time or special students are not eligible to establish credit by examination.

Note: Students are advised that UMCP and UMBC and many other institutions will not accept transfer credits taken through this process.

CLASS DELIVERY

The University of Maryland Eastern Shore publicly discloses the mode of class delivery for all courses offered. This information can be found in the university catalog under Types of Class Delivery, online in the Schedule of Classes published each semester, and in our student administration system – PeopleSoft/HawkWeb within the enrollment and catalog components. The mode of class delivery at UMES includes: Assessment, Clinical, Discussion, Hybrid, Independent Study, Internship, IVN/Direct TV, Laboratory, Lecture, Online, Practicum, Research, Seminar, Studio, Tutorial, Web, and Workshop.

Types of Class Delivery

<u>Course Type/Component</u>	<u>Instruction Mode</u>	<u>Attendance Type</u>
Assessment	In Person	Class Meeting
Clinical	In Person/Field Study	
Discussion	In Person	Class Meeting
Hybrid	Lecture/Online	Class Meeting
Independent Study	Instructor Consultation	Instructor Consult
Internship	Field Study	Conference
IVN/Direct TV	Direct TV	Class Meeting
Laboratory	In Person	Class Meeting
Lecture	In Person	Class Meeting
Online	Web	Web
Practicum	Field Study	Conference

Types of Class Delivery

<u>Course Type/Component</u>	<u>Instruction Mode</u>	<u>Attendance Type</u>
Research	In Person/Field Study	
Seminar	In Person	Class Meeting
Studio	In Person	Class Meeting
Tutorial	In Person	Class Meeting
Web	Online	Web
Workshop	In Person	Class Meeting

Distance Education Policy

To ensure compliance with Section 495 of the Higher Education Opportunity Act Distance Education and Correspondence Education Policy, the University of Maryland Eastern Shore has specific measures in place. **For a detailed explanation of the measures, please see Appendix 2.**

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. **Students are not allowed to register for courses in which a conflict will be created.**

A student registering for more than 18 hours per semester must have special approval from the Vice President for Academic Affairs. Students having a cumulative grade point average of 3.0 or above must complete a **Request for Additional Credit Unit Load** in consultation with the Department Chair. The Department Chair will forward the request to the Dean who will request permission from the Vice President for the student to register for more than 18 semester hours. The Office of the Registrar will not accept the Registration Schedule if an overload of credit hours is requested without such approval. The request for more than 18 credits should be completed during the Academic Advising period. Established dates for Academic Advising are posted on the Academic Calendar. **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.

DISRUPTIVE BEHAVIOR IN ACADEMIC AND SOCIAL SETTINGS

Students, faculty, and staff each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to behavioral standards established by the University of Maryland Eastern Shore may be subject to conduct intervention as documented in the **University of Maryland Eastern Shore Student Code of Conduct.**

Faculty and staff have the professional responsibility to set reasonable standards and behavioral expectations for their classrooms and campus facilities, and have the obligation to take the

appropriate course of action when student behavior substantially interferes with their ability to execute their assigned duties.

Disruptive behavior is defined as conduct, by a student that negatively impacts the University community. This behavior detracts from any student's ability to benefit from an environment that is conducive to academic, spiritual, emotional, and social growth. The University of Maryland Eastern Shore considers disruptive behavior to be inclusive of, but not limited to speech or actions which: 1) are disrespectful, offensive, and/or threatening, 2) interfere with the learning and or social activities of other students, 3) impede the delivery of University services, and; or 4) have a negative impact in any learning environment – including department and staff offices, the Library, the Computing Center, the Learning Assistance Centers, labs, clinical sites, services learning sites, classrooms, and residential facilities, etc. (See Student Code of Conduct). Disruptive students in the academic setting hinder the educational process. The purpose of this communication is to clarify what constitutes disruptive behavior in academic and social settings; what actions faculty, staff, and the Office of the Associate Vice President for Student Affairs and Enrollment Management may take in response to disruptive conduct; and the authority of university officials to initiate disciplinary proceedings against students for disruptive conduct.

Disruption, applied within the academic setting, means behavior that a reasonable faculty or staff member would view as interfering with normal university functions. Examples include, but are not limited to: persistently speaking without being recognized or interrupting other speakers; behavior that distracts the class from the subject matter or discussion (i.e. use of cell phone); or in extreme cases, physical threats, harassing behavior or personal insults, or refusal to comply with directions given by members of the faculty or staff.

Civil expression of disagreement with the course instructor, during times when the instructor permits discussion, is not in itself disruptive behavior and is not prohibited.

Some disruptive students may have emotional or mental disorders. Although such students may be considered disabled and are protected under the Rehabilitation Act/ADA, they are held to the same standards of conduct as any other student.

Policy Statement

- Students are required to adhere to the behavior standards listed in the **University of Maryland Eastern Shore Student Code of Conduct** and to refrain from disrupting classes, other university settings or sponsored events.
- If a student is disruptive, the faculty/staff member and/or the relevant chair's office may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in academic or disciplinary action.
- **Faculty/staff members are authorized to ask a student to leave a classroom or other facility, if they deem it necessary.** If the faculty/staff member does this, s/he shall file an Incident Report with the Judicial Administrator, the Office of the Associate Vice President for Student Affairs and Enrollment Management, and the Department Chair or Director within 24 hours. The incident report should contain the name of the student(s), a full detailed description of the behavior, location, date, and time of the incident, including the response, involvement and role of the faculty/staff member involved, as well as the names of witnesses. The Conduct Administrator shall provide the student with a copy of the report.
- Faculty/staff members may also exclude a student from the classrooms or other facility pending resolution of the matter by: (1) informing the student of the exclusion, (2) informing the student of his/her rights to request an expedited review of the exclusion, and (3) by immediately referring the matter to the Conduct Administrator by submitting the Incident Report, and by informing the relevant

departmental chair, the Office of the Associate Vice President for Student Affairs and Enrollment Management/Conduct Administrator. If such exclusion occurs, and if the student requests a review, the Conduct Administrator shall review the exclusion within five business days of the date the student requests the review.

- Nothing in this policy prohibits an immediate call to the **University of Maryland Eastern Shore Office of Public Safety (Police Department)**, or referral of the matter to another policy office, as determined to be appropriate by the classroom instructor or staff member.

Possible Sanctions

Authority of Instructor and Relevant Assistant/Associate Vice President for Student Affairs and Enrollment Management:

- Warning
- Exclusion from the instructor's classroom or academic area, pending expedited review by the Conduct Administrator
- Academic sanction, if course participation is a component of the final grade and is indicated in the course syllabus

Authority of the Conduct Administrator/Conduct Board

- Warning
- Educational Sanctions, such as class, papers or community service
- Disciplinary Probation
- Suspension
- Expulsion
- Exclusion from any part of or all of campus

Authority of the Vice Presidents or Assistant/Associate Vice Presidents

- Summary Suspension
- Exclusion from any part of or all of campus

Documentation

Instructors should be aware that notes of the dates, times, witnesses and details of the incidents of disruption, and the impact of the disruption on those present, may be important in any future proceedings which may be necessary. Referrals to the Conduct Administrator require written documentation containing factual and descriptive information. The student is entitled to see this documentation.

Disruptive Classroom Incident Report

The Disruptive Classroom Incident Report shall contain the following information:

- Date of Report:
- Student's Name:
- ID#:
- Instructor's Name:
- Instructor's Phone Number:
- Instructor's E-Mail:
- Title of Course, Course Number and Section:
- Date/Time/Location of Incident:
- A detailed summary of the incident, including a description of the disruptive behavior:
- Witnesses:
- Action, if any, taken by the instructor (e.g. student warned, asked to leave the class, etc.):

- Recommended course of action and reasons for this recommendation?
- Instructor's Signature:

ENGLISH PROFICIENCY EXAM

The English Proficiency Examination (EPE) 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.

FINAL EXAMINATIONS

A final examination shall be given in every course. Exceptions may be made with approval of the Department Chairperson 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 approval from the Vice President for Academic Affairs. The Department Chairperson and Dean must keep a file of all final examinations.

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.

Students must earn a grade of "C" or better in major and minor courses. All students must also earn at least a "C" or better in English 101 and 102 and MATH 101. All Teacher Education majors must earn a "C" or better in Teaching Internship. 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").

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 earned to obtain the grade point average for the semester. The cumulative grade point average is computed in a similar manner by including all courses earned at the University of Maryland. Courses transferred from other institutions are not included in the grade point average.

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 and the terminal grade must be submitted **by the end of the next semester of enrollment**, otherwise the "I" becomes "W."

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 Chairperson 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.

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.

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 A Class

Students who are properly registered may add courses during the first week of instruction each 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.

Dropping a Class

Students may drop courses during the first two weeks of the current semester. Only in exceptional cases, and with the permission of the **Dean**, will a student be permitted to drop a course later than the end of the drop period. 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.

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.

WITHDRAWALS

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. **Withdrawal requires the signature of the Advisor and the Instructor of the course in which the student is withdrawing.** The end of the withdrawal period is published each semester or term in the Academic Calendar.

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. **The last day to withdraw from the Institution will be in concurrence with the last day of class.**

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

Fall and Spring Semesters

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.

Period from First Day of Instruction
Two weeks or less

Refundable Percentage
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.

Title IV Recipients (*UMES Refunds and the “Return of Title IV Funds” Policy*)

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 Work-study, 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.

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. A maximum of seventy (70) credits will be accepted from an accredited 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.

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 1st** – Students wanting to return for the Winter or Spring Session. **April 1st** – Students wanting to return for the Summer and Fall Session

Applications may be obtained from www.umes.edu/registrar or by writing to: Office of the Registrar, Student Development, Cultural and Recreation Center, University of Maryland Eastern Shore, Princess Anne, MD 21853-1299.

REINSTATEMENT FOLLOWING ACADEMIC DISMISSAL

When a student is academically dismissed from UMES, he/she must complete the **Application for Reinstatement** prior to the desired date of reinstatement. Reinstatement will not normally be granted by the UMES Academic Appeals Board until at least one semester has elapsed from the time of the student's dismissal. Reinstatement is not automatic; however, if the Application for Reinstatement is denied, a student may again apply for reinstatement after a lapse of an additional semester.

Upon being reinstated following Academic Dismissal, the student will be placed on Academic Probation and will be subject to the conditions of Academic Probation.

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

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 Chairperson and Dean to designate a substitute course, which when taken, will remove the grade of the discontinued course. Courses failed at UMES with the grade of 'F' or 'D' should be repeated at UMES. The course so named and the student involved should be reported in writing to the Office of the Registrar.

Only in extenuating circumstances will the Vice President for Academic Affairs consider requests to repeat a course at a USM institution that was failed at UMES. In this case, the department chair of the failed course will need to certify the equivalency of the course at the other institution and communicate this in writing to the Vice President for Academic Affairs.

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

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 **Request for Change of Major, Minor or Concentration Form**. Declaring a major does not in any way bind a student permanently to that program.

Freshmen Who Do Not Declare A Major

For those students who enter as freshmen and do not declare a major, General Education Requirement courses may be taken; **however a major must be declared before the second semester of the sophomore year**. 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.

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 **Request for Change of Major, Minor or Concentration 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.

Subsequently, students entering on or after fall 1998 will be eligible to take the examination only after successful completion of English 101 and they must be enrolled in English 102 the semester that they take the EPE. *ENGL 001 is a Co-Requisite for ENGL 102; and, ENGL 003 is the Co-Requisite for ENGL 102H Honors Students. ENGL 002 is a Requisite for Transfer Students who have taken English 102 prior to attending UMES and for UMES students who took English 102 at another higher education institution.*

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 [Appendix 1](#).

Transfer from Colleges and Universities

A maximum of seventy (70) credits will be accepted from an accredited two-year community or junior college. 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.

Credit from 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.

WINTER SESSION AND SUMMER SCHOOL

The Office of Academic Affairs provides the opportunity to take advantage of a wide range of winter and summer learning experiences in condensed format that support educational, career and personal enrichment goals. These activities are designed to reach the total community with courses, workshops and programs that are offered to populations of all ages from children to retirees. The standards of academic achievement and the quality of work required are maintained at the same level as during the regular term.

The office has the supervisory responsibility in the planning, coordinating and administering the University's Winter and Summer Sessions and Outreach activities. These programs have been designed to help optimize student progress and to enhance the University's four-year graduation rates by providing degree-related courses work for undergraduate and graduate students.

The winter session is a three-week session which runs from the first full-week of January through the third week of January. Courses are not offered on Fridays', unless a make-up day is required. Students cannot take more than three (3) credits, or one four (4) credit course, or a three (3) credit lecture and a one (1) credit laboratory during the Winter Session. If a student takes one four (4) credit course, or a three (3) credit lecture and a one (1) credit laboratory, **he or she must complete the Additional Credit Load Unit Request form.**

The summer session features several convenient sessions varying from two five-week sessions and one ten-week session, which runs from the beginning through the end of the second session. Students can take up to six (6) credits in Summer Sessions I and II (exception is a 4 credit course or a 3 credit lecture and 1 credit laboratory). If a student takes a four (4) credit course or a (3) credit lecture and (1) credit laboratory as well as a three (3) credit course in Summer I or II, he or she **must complete the Additional Credit Load Unit Request form.** The total maximum number of credit hours for the entire Summer is twelve. (Example: if you take nine credits in Session III, you can only take one three-credit course in Sessions I or II).

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.

Students who are academically dismissed during the Fall or Spring semesters are not permitted to enroll in the Winter or Summer Sessions. If a student is enrolled in either the Winter or Summer Sessions and is placed on academic dismissal that student shall be dropped from those courses.

Session Information and Procedures

Below are the policies governing the Winter and Summer sessions:

1. **"Deferments"** for the Winter and Summer Sessions for undergraduate and graduate students only can be found at www.umes.edu. "Students with an unpaid balance from the previous semester **are not eligible** for "Deferments".
2. As always, students are responsible for adding and dropping courses that have not been **cancelled** by the Office of Academic Affairs.
3. All Winter and Summer Session balances **must be paid** by the last day of class, to avoid problems with the next semester.
4. Students should not drop a course that is to be cancelled.
5. Courses with enrollment of less than seven (7) students in either the Winter or Summer sessions are subject to cancellation.
6. Students **cannot** receive a **"Deferment"**, for the second Summer Session until the first and/or session(s) have been paid in full.
7. If a student who has pre-registered decides not to take the course in either of these sessions, the student **must withdraw** from the **University** to avoid being billed for that course and receiving a failing grade. **Contact the Office of the Registrar at 410-651-6143 regarding completion of the appropriate paperwork.**

8. **All students are required to complete a Payment Confirmation form for the Winter and Summer sessions.** Failure to do so will result in students being **DROPPED** from courses for **non-payment of fees.** **Contact the Office of Student Accounts at 410-651-6092/6093, for further information.**

The Schedule, containing detailed information concerning the number of sessions, and course offerings, is located on the UMES webpage at www.umes.edu under Academic Affairs.

Withdrawal Refund Policy

Academic Affairs is committed to pay faculty even if the student withdraws and gets a refund beyond the first week of classes. Courses with an enrollment of less than seven are subject to cancellation by the Office of the Vice President for Academic Affairs. Students should not DROP courses which are scheduled for cancellation.

Winter Session - (Three-Week Session)

<u>Begins First Day of Instruction</u>	<u>Refundable Percentage</u>
Less than Three days	70%
Three to Four days	50%
Five days	30%
Greater than five days	No Refund

Summer Sessions - (Five-Week Sessions)

<u>Begins First Day of Instruction</u>	<u>Refundable Percentage</u>
Less than Four days	70%
Four days	50%
Five to Ten days	30%
After Ten days	No Refund

(Ten-Week Session)

<u>Begins First Day of Instruction</u>	<u>Refundable Percentage</u>
Less than Eleven days	70%
Eleven to Fifteen days	50%
Sixteen to Twenty days	30%
After Twenty days	No Refund

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.

GENERAL EDUCATION REQUIREMENTS¹ (GEN ED CURR AREA)

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 and does not apply toward graduation requirements.** General Education Requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select ENGL 203² plus one course in each of two disciplines.

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203²

¹A minimum of 40 credits is required.

²Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

AGEC 213 or AGECE 213H

ECON 200 or ECON 200H

ECON 201 or ECON 201H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7-8

Students must select **two** science courses and **one** science laboratory course from the following.

ANPT 114, ANPT 114H

BIOL 101, BIOL 103 (lab),

CHEM 101, CHEM 102, CHEM 103 (lab), CHEM 104 (lab)

ENVS 101, NUDT 210

PLSC 184, PLSC 185 (lab)

PHYS 101, PHYS 103 (lab)

Students in **Agriculture, Engineering, Exercise Science, Human Ecology Physician Assistant and Rehabilitation Services only** 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 124 (lab), PHYS 161, PHYS 163 (lab)

PHYS 182H, PHYS 182, PHYS 184 (lab) PHYS 263

PLSC 184, PLSC 185 (lab)

Curriculum Area IV – MATHEMATICS²

Credits 3-8

One course at or above the level of College Algebra

MATH 102, if student needs MATH 101³, he/she **must** take MATH 101 before MATH 102;

MATH 109, if a student needs MATH 101³, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101/H

ENGL 102 or ENGL 102/H

ENGL 305/H or ENGL 310/H

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Most majors require MATH 109 or higher. Math 109 requires grade of "C" or better in order to pass the course.

³MATH 101 does not satisfy the General Education Requirement or count towards graduation. Student must attain a grade of "C" or better to pass Math101.

Curriculum Area VI - EMERGING ISSUES

Credits 1-7

Courses identified as being essential to a full program of general education for UMES students. This course is required of all students:

GNST 100 First Year Experience or departmental first year experience course **Credits 1**

In addition, students must consult with their departmental advisor for any additional Emerging Issues course requirement (up to 6 additional credits). Students may select from the following three-credit courses:

EXSC 111 – Personalized Health Fitness¹

Credits 3

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

TMGT 306 – Ecology and Cultural Tourism

Total Required for General Education

Credits 40-43

¹EXSC 111 **cannot** be repeated for credit.

Dr. Jurgen Schwarz, Chairperson

MISSION

The mission of the Department of Agriculture, Food and Resource Sciences 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; and
- 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.

OBJECTIVES

The objectives of the Department of Agriculture, Food and Resource Sciences are as follows:

1. To provide an interdisciplinary program inclusive of mathematical, biological, physical and social sciences, and humanities to support areas of concentration in the food and agricultural sciences, including conservation and preservation of our natural resources,
2. To prepare students to interpret and apply scientific principles and techniques in the ever-evolving food, agricultural, and environmental sciences, on a global basis,
3. To promote civic responsibilities of students through community interactions, and
4. To provide students with the applied information technology skills necessary to compete successfully in today's workforce.

DEGREES OFFERED

Bachelor of Science - Agribusiness

Bachelor of Science - General Agriculture

Bachelor of Science – Urban Forestry

Master of Science¹ - Food and Agricultural Sciences

Doctor of Philosophy¹ - Food Science and Technology

¹See Graduate Catalog

DEPARTMENTAL REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Agriculture, Food and Resource Sciences is based upon the general admission requirements of the University. Successful completion of PRAXIS I and a minimum GPA of 2.75 are required for admission to the Agriculture Education concentration offered in the General Agriculture degree program.

Agribusiness major - Students majoring in Agribusiness must complete a total of 120 credit hours of University courses. This includes a minimum of 42-43 semester hours of General Education Requirements, 14 semester hours of Departmental Core courses¹, 48 semester hours of Major Core courses¹, 6 semester hours of Supportive courses¹, and 10 semester hours of free electives.

General Agriculture major - Students majoring in General Agriculture must complete a total of 120 credit hours of University courses. This includes a minimum of 41-43 semester hours of General Education Requirements, 14 semester hours of Departmental Core courses¹, 24 - 48 semester hours of Major Core courses¹, 18-35 semester hours of supportive courses¹, and 3-5 semester hours of free electives, depending on the Option Area chosen. The Option Areas include:

Agriculture Education Option: 42, 14, 45, and 19 semester hours of General Education Requirements, Departmental Core Courses¹, Major Core Courses¹ and Supportive Courses¹, respectively.

Agricultural Studies Option: 41, 14, 27, and 38 semester hours of General Education Requirements, Departmental Core Courses¹, Major Core Courses¹, and Supportive Courses¹, respectively.

Animal and Poultry Science Business/Technology Option I: 43, 14, 27, 30 and 6 semester hours of General Education Requirements, Departmental Core Courses¹, Major Core Courses¹, Supportive Courses¹ and Free Elective Courses, respectively.

Animal and Poultry Science Pre-Veterinary/Pre-Professional Option II: 43, 14, 24, 35 and 4 semester hours of General Education Requirements, Departmental Core Courses¹, Major Core Courses¹, Supportive Courses¹ and Free Elective Courses, respectively.

Plant and Soil Science Option: 43, 14, 25, 34 and 4 semester hours of General Education Requirements, Departmental Core Courses¹, Major Core Courses¹, Supportive Courses¹ and Free Elective Courses, respectively.

Urban Forestry major –Students majoring in Urban Forestry must complete a total of 120 credit hours. This includes a minimum of 42 credit hours of General Education Requirements, 14 credit hours of core courses, 47 credit hours of Major Courses, and 17 credit hours of Support Courses.

*Students must select **AGRI 400 Senior Capstone Experience under Emerging Issues** as a part of the General Education Requirement.

¹Students must receive a grade of “C” or better in each course in this area.

AGRIBUSINESS

CAREER OPPORTUNITIES

A degree in Agribusiness prepares students to teach, to conduct research, to pursue graduate and professional degrees, to work in government and business, and numerous other related jobs such as: Business and Technology, Marketing and Management, International Trade and Development, Economic Research, Commodity Brokerage, Computer Science, Public Relations Specialist, Market Forecaster, Technical Representative, Extension Educator, Market Reporter, Financial Analyst, and Financial Representative.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109
or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201 Principles of Macroeconomics

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS

Credits 6-7

MATH 109 or MATH 111H;

MATH 2110

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101 or ENGL 101/H	
ENGL 102 or ENGL 102/H	
ENGL 001/002/003	
ENGL 305/H/Online or ENGL 310/H/Online	

Curriculum Area VI - EMERGING ISSUES	Credits 4
AGNR 111 First Year Experience	
AGRI 400 Senior Capstone Experience	

Total Required for General Education Credits 42-43

PROGRAM CORE REQUIREMENTS	Credits 14
AGEC 213 Introduction to Agricultural Economics	3
AGME 283 Engineering Principles Applied to Agriculture	3
ANPT 114 Introduction to Animal Science	4
PLSC 184 Introduction to Plant Science	3
PLSC 185 Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS	Credits 48
ACCT 201 Introductory Financial Accounting	3
ACCT 202 Introductory Corporate & Managerial Accounting	3
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 & Dev	3
AGEC 443 Farm Management	3
AGEC 453 Agricultural Finance	3
AGEC 463 Agricultural Policy	3
CSDP 220 Introduction to Computer Use	4
ECON 200/H Principles of Microeconomics	3
ECON 300 Intermediate Micro Economic Theory	3
MATH 112 Calculus I	4

SUPPORTIVE REQUIREMENTS	Credits 6
ACCT 301 Cost and Budgetary Control	3
AGBU 300 Internship I	3
AGBU 371 Agribusiness Seminar I	1
AGBU 400 Internship II	3
AGEC 419 Agricultural Cooperatives	3
BUAD 302 Organizational and Accounting Management	3
BUAD 307 Industrial Relations	3
BUAD 411 Operations Research & Design Theory	3
BUAD 412 Business Law	3
CSDP 240 Principles of Data Processing	3
ECON 301 Intermediate Macro Economic Theory	3
ECON 302 Money and Banking	3
ECON 303 Labor Economics	3
ECON 304 The Economics of Black America	3
ECON 402 Economics of Development	3

A minimum cumulative grade of “C” (GPA 2.0) or better is required for supportive courses.

ELECTIVES**Credits 10**

Students may take any course offered at the University for which the student has the required prerequisites.

CURRICULUM GUIDE FOR AGRIBUSINESS

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	AGME 283	3
ENGL 101/H	3	ECON 200/H	3
MATH 109	3	MATH 112	4
ECON 201/H	3	ENGL 102/H	3
AGNR 111	<u>1</u>	ENGL 001/ENGL 003 ¹	<u>0</u>
	14		13

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN ED CURR AREA I	3	GEN ED CURR AREA I	3
ENGL 203	3	AGBU 223	3
GEN ED CURR AREA II	3	GEN ED CURR AREA III	4
PLSC 184	3	CSDP 220	<u>4</u>
PLSC 185	1		14
AGEC 213	<u>3</u>		
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGBU 313	3	ACCT 202	3
ACCT 201	3	GEN ED CURR AREA IV	3
GEN ED CURR AREA III	4	ENGL 305/Online	3
AGBU 323	3	Elective	3
ECON 300	<u>3</u>	AGEC 333	<u>3</u>
	16		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGEC 433	3	AGEC 423	3
AGEC 463	3	AGEC 443	3
AGEC 453	3	Supportive Course	3
Supportive Course ²	3	Elective	4
Elective	3	AGBU	<u>1</u>
GEN ED CURR AREA VI	<u>3</u>		14
	18		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

GENERAL AGRICULTURE

CAREER OPPORTUNITIES

A degree in General Agriculture prepares students to teach, to conduct research, to pursue graduate and professional degrees, to work in government and business, and numerous other related careers or jobs such as: Agricultural Education, Veterinary Medicine, Animal Management and Production, Livestock Production Management, Animal Health Product Sales, Feed Sales/Management, Livestock Equipment Sales/Mgt, Livestock Procurement, A.I. Breeding Technician, Livestock Feedlot Operations, Market Forecasting, Food Safety, Plant Breeding and Biotechnology, Greenhouse & Nursery Management, Landscape Design, Water Quality, Nutrient Management, Food and Fiber Processing, Natural Resource Sciences, Extension Education, Housing & Environmental Quality, Livestock Insurance, Quality Assurance, Farm Management, Stable Management, Market Reporting, Meat Grading, geospatial information technologies, soil chemists, soil biologists, plant biochemists, plant pathologists, entomologists, horticulturists, agronomists, soil hydrologists, and soil microbiologists.

GENERAL AGRICULTURE AGRICULTURE EDUCATION Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109
or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203.

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 11
Students must select three science courses and two laboratory courses:	
BIOL 111	
BIOL 113 (lab)	
CHEM 111	
CHEM 113 (lab)	
ENVS 101	
Curriculum Area IV – MATHEMATICS	Credits 3
MATH 109 or higher	
Curriculum Area V - ENGLISH COMPOSITION	Credits 9
ENGL 101 or ENGL 101H	
ENGL 102 or ENGL 102H	
ENGL 001/002/003	
ENGL 305/H/Online or ENGL 310/H/Online	
Curriculum Area VI - EMERGING ISSUES	Credits 4
AGNR 111 First Year Experience	
AGRI 400 Senior Capstone Experience	
Total Required for General Education	Credits 42
PROGRAM CORE REQUIREMENTS	Credits 14
AGEC 213 Introduction to Agricultural Economics	3
AGME 283 Engineering Principles Applied to Agriculture	3
ANPT 114 Introduction to Animal Science	4
PLSC 184 Introduction to Plant Science	3
PLSC 185 Introduction to Plant Science Laboratory	1
MAJOR CORE REQUIREMENTS	Credits 45
AGED 313 Supervised Experience Programs	3
EDCI 200 Introductory to Contemporary Education	3
EDCI 201 PRAXIS Preparation	1
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 427 Curriculum and Instruction in Agriculture	3
EDCI 480 Teaching Internship	6
EDCI 490 Teaching Internship	6
EDSP 428 Communication & Collaboration in Special Education	3
PSYC 303 Adolescent Psychology	3
PSYC 307 Educational Psychology	3
SUPPORTIVE REQUIREMENTS	Credits 19
BUED 212 Computer Concepts/Applications I	3
Select 200-400 level Agriculture courses with permission of advisor	16

A minimum cumulative grade of “C” (GPA 2.0) or better is required for supportive courses.

**CURRICULUM GUIDE FOR GENERAL AGRICULTURE
AGRICULTURE EDUCATION (Grades 7-12)^{1 & 2}**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	ENVS 101	3
ENGL 101	3	AGME 283	3
MATH 109	3	GEN ED CURR AREA I	3
BIOL 111	3	ECON 200/H	3
BIOL 113	1	ENGL 102	3
AGNR 111	<u>1</u>	ENGL 001/ENGL 003 ³	<u>0</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PSYC 200	3	GEN ED CURR AREA I	3
ENGL 203	3	ENGL 305 or ENGL 310	3
CHEM 111	3	PSYC 303	3
CHEM 113	1	PSYC 307	3
EDCI 200	3	Elective Agricultural Course ⁴	<u>3</u>
EDCI 201 ⁵	1		15
AGEC 213	<u>3</u>		
	17		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 212	3	EDCI 406	3
PLSC 184	3	EDCI 409	3
PLSC 185	1	Elective Agricultural course ⁴	3
AGED 313	3	Elective Agricultural course ⁴	<u>4</u>
Elective Agricultural course ⁴	3		13
Elective Agricultural course ⁴	<u>3</u>		
	16		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDCI 311	3	EDCI 400	3
EDCI 427	3	EDCI 480	6
EDCI 410	3	EDCI 490	<u>6</u>
EDSP 428	3		15
AGRI 400	<u>3</u>		
	15		

Total Credit Hours: 120

¹A grade of "C" or better will be required in the courses taken to satisfy the Agriculture Education Concentration requirement.

²For additional program requirements for the Agriculture Education (Teaching) major, please refer to the Department of Education and the Teacher Education Handbook. UMES' Teacher Education Programs are accredited by the National Council for Accreditation of Teacher Education and approved by the Maryland State Department of Education.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴200-300 level agricultural courses.

⁵Does not count toward graduation.

**GENERAL AGRICULTURE
AGRICULTURAL STUDIES OPTION
Required Courses**

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109
or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7-8

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109 or higher

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

Curriculum Area VI - EMERGING ISSUES **Credits 7**
AGNR 111 First Year Experience
AGRI 400 Senior Capstone Experience
Free Elective

Total Required for General Education **Credits 41**

PROGRAM CORE REQUIREMENTS **Credits 14**

AGEC	213	Introduction to Agricultural Economics	3
AGME	283	Engineering Principles Applied to Agriculture	3
ANPT	114	Introduction to Animal Science	4
PLSC	184	Introduction to Plant Science	3
PLSC	185	Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS **Credits 27**

Students must select a minimum of 27 credit hours of which one three credit-hour course must be selected from at least three Department Programs.

SUPPORTIVE REQUIREMENTS **Credits 38**

Student must select 38 credit hours, of which a minimum of 20 credit hours must be from the 200-400 level, to enhance and strengthen the student's chosen Food & Agricultural Science interest area.

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

**CURRICULUM GUIDE FOR GENERAL AGRICULTURE
AGRICULTURAL STUDIES**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	Supportive Course	3
ENGL 101/H	3	ENGL 102/H	3
MATH 109	3	ENGL 001/ENGL 003 ¹	0
PLSC 184	3	GEN ED CURR AREA VI	3
PLSC 185	1	GEN ED CURR AREA III	3
AGNR 111	<u>1</u>	GEN ED CURR AREA III	1
	15	ECON 200/H	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGME 283	3	GEN ED CURR AREA II	3
ENGL 203	3	Agricultural Studies Core Course	3
AGEC 213	3	Agricultural Studies Core Course	3
Agricultural Studies Core	3	GER ED CURR AREA I	3
GEN ED CURR. AREA III	<u>3</u>	200-400 Level Supportive Course	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or 310	3	Agricultural Studies Core Course	6
Agricultural Studies Core Course	3	200-400 Level Supportive Course	3
Supportive Area Course	3	Supportive Course	3
Supportive Area Course	3	GEN ED CURR. AREA I	<u>3</u>
200-400 Level Supportive Course	<u>2</u>		15
	14		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Agricultural Studies Core Course	3	Agricultural Studies Core Course	3
200-400 Level Supportive Course	3	Agricultural Studies Core Course	3
200-400 Level Supportive Course	3	Supportive Course	3
200-400 Level Supportive Course	3	Supportive Course	3
Supportive Course	<u>3</u>	200-400 Level Supportive Course	<u>3</u>
	15		15

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

GENERAL AGRICULTURE
ANIMAL AND POULTRY SCIENCE BUSINESS TECHNOLOGY OPTION¹
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109
or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 12

Students must select **two** science courses and **one** science laboratory course from the following.

BIOL 111, BIOL 113 (lab)

CHEM 111, CHEM 113

CHEM 112, CHEM 114 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 110 or higher

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES **Credits 4**
 AGNR 111 First Year Experience
 AGRI 400 Senior Capstone Experience

Total Required for General Education **Credits 43**

PROGRAM CORE REQUIREMENTS **Credits 14**

AGEC	213	Introduction to Agricultural Economics	3
AGME	283	Engineering Principles Applied to Agriculture	3
ANPT	114	Introduction to Animal Science	4
PLSC	184	Introduction to Plant Science	3
PLSC	185	Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS **Credits 27**

ANPT	214	Animal and Avian Physiology	4
ANPT	223	Intro to Poultry Technology & Management	3
ANPT	304	Reproductive Physiology	4
ANPT	313	Introduction to Animal & Avian Nutrition	3
ANPT	424	Animal and Avian Health and Diseases	4
Student must select three (3) 400 level ANPT production courses			9

SUPPORTIVE REQUIREMENTS **Credits 30**

ACCT	201	Introduction to Financial Accounting	3
ACCT	202	Intro to Corporate & Managerial Accounting	3
BIOL	222	Genetics	3
BIOL	223	Genetics Laboratory	1
BIOL	301	Microbiology and	3
BIOL	303	Microbiology Laboratory or	3
AMIC	324	Agricultural Microbiology	4
BUAD	132	Introduction to Business	3
BUED	212	Computer Concepts/Applications I	3
CHEM	211	Fundamentals of Organic Chemistry I and	3
CHEM	213	Fundamentals of Organic Chemistry I Laboratory	1
Student must select two 300-400 level courses from:			
BUAD, ACCT, ECON, AGBU or AGECE			6

A minimum cumulative grade of “C” (GPA 2.0) or better is required for supportive courses.

ELECTIVES **Credits 6**

Students may take any course offered at the University for which the student has the required prerequisites.

GENERAL AGRICULTURE¹
ANIMAL AND POULTRY SCIENCE BUSINESS AND TECHNOLOGY OPTION I

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	Free Elective	3
ENGL 101/H	3	ECON 200/H	3
BIOL 111	3	BUAD 132	3
BIOL 113	1	MATH 110 or Higher	3
AGNR 111	1	ENGL 102	3
GEN ED CURR AREA I	<u>3</u>	ENGL 001/ENGL 003 ²	<u>0</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 223	3	AGME 283	3
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
PLSC 184	3	BIOL 222	3
PLSC 185	1	BIOL 223	1
GEN ED CURR AREA I	<u>3</u>	ANPT 214	<u>4</u>
	14		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGEC 213	3	ACCT 202	3
ACCT 201	3	ANPT 304	4
CHEM 331 or		BIOL 301 <u>and</u> BIOL 303 or	
CHEM 211 <u>and</u> CHEM 213	4	AMIC 324	4
ANPT 313	3	ANPT 400 Level Elective ³	<u>3</u>
ENGL 203	<u>3</u>		15
	16		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 212	3	ENGL 305	3
ANPT 400 Level Elective ³	3	ANPT 424	4
GEN ED CURR AREA II	3	ANPT 400 Level Elective ³	3
Free Elective	3	300-400 level course ⁴	3
300-400 level course ⁴	<u>3</u>	AGRI 400	<u>3</u>
	15		16

Total Credit Hours: 120

¹A minimum grade of "C" is required for Required Major courses.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Student must select three (3) 400 level ANPT production courses.

⁴Student must select 300 – 400 level courses from BUAD, ACCT, ECON, AGBU, or AGECE.

GENERAL AGRICULTURE
ANIMAL AND POULTRY SCIENCE PRE-VETERINARY/PRE-PROFESSIONAL
OPTION II

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H, POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 12

Students must select the courses below:

BIOL 111, BIOL 113 (lab)

CHEM 111, CHEM 113(lab)

CHEM 112, CHEM 114 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 110, or MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES	Credits 4
AGNR 111 First Year Experience	
AGRI 400 Senior Capstone Experience	

Total Required for General Education	Credits 43
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PROGRAM CORE REQUIREMENTS	Credits 14
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AGEC 213	Introduction to Agricultural Economics	3
AGME 283	Engineering Principles Applied to Agriculture	3
ANPT 114	Introduction to Animal Science	4
PLSC 184	Introduction to Plant Science	3
PLSC 185	Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS	Credits 24
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ANPT 214	Animal and Avian Physiology	3
ANPT 223	Intro to Poultry Technology and Management	4
ANPT 304	Reproduction Physiology	3
ANPT 313	Intro to Animal & Avian Nutrition	4
ANPT 424	Animal and Avian Health and Diseases	4
ANPT	Student must select two 400 level ANPT production courses	6

SUPPORTIVE REQUIREMENTS	Credits 35
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BIOL 222	Genetics	3
BIOL 223	Genetics 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	3
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry I Laboratory	3
PHYS 121	Introductory Physics I	3
PHYS 123	Introductory Physics I Laboratory	3
PHYS 122	Introductory Physics II	3
PHYS 124	Introductory Physics II Laboratory	3
	Student must select from MATH 210, MATH 260 or BUED 212	3
	Student must select BIOL 301 and BIOL 303 or AMIC 324	4
	Student must select from BIOL 311, BIOL 322, BIOL 326/327, BIOL 420/421, or BIOL 426M	4

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

ELECTIVES	Credits 4
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Students may take any course offered at the University for which the student has the required prerequisites.

¹A minimum grade of "C" is required for each course.

² Student must select two (2) 400 level ANPT Production courses.

**GENERAL AGRICULTURE
ANIMAL AND POULTRY SCIENCE PRE-VETERINARY/PRE-PROFESSIONAL
OPTION II¹**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	ENGL 102/H	3
ENGL 101	3	ENGL 001/ENGL 003 ²	0
BIOL 111	3	MATH 110 or Higher	3
BIOL 113	1	CHEM 112	3
AGNR 111	1	CHEM 114	1
CHEM 111	3	ECON 200/H	<u>3</u>
CHEM 113	<u>1</u>		13
	16		

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	ANPT 214	4
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
PLSC 184	3	BIOL 222	3
PLSC 185	1	BIOL 223	1
AGEC 213	3	AGME 283	<u>3</u>
ANPT 223	<u>3</u>		15
	17		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 121	3	PHYS 122	3
PHYS 123	1	PHYS 124	1
ANPT 313	3	ANPT 304	4
GEN ED CURR. AREA I	3	BIOL 301 and BIOL 303 or	
GEN ED CURR. AREA II	3	AMIC 324	4
MATH 210, MATH 260 or		Free Elective	<u>4</u>
AGNR Equivalent	<u>3</u>		16
	16		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or		ANPT 424	4
ENGL 310	3	ANPT 400 Level Elective	3
CHEM 341	3	AGRI 400	3
CHEM 343	1	Supportive Course ⁷	<u>4</u>
ANPT 400 Level Elective	3		14
GEN ED CURR AREA I	<u>3</u>		
	13		

Total Credit Hours: 120

¹A minimum grade of "C" is required for all Required Major Courses.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

**GENERAL AGRICULTURE
PLANT AND SOIL SCIENCE**

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: ECON 201/H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 12

Students must select the following courses:

BIOL 111 and BIOL 113 (lab)

CHEM 111 and CHEM 113 (lab)

CHEM 112 and CHEM 114 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109 or higher, if a student needs MATH 101, he/she **must** take before Math 109

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 4

AGNR 111 First Year Experience

AGRI 400 Senior Capstone Experience

Total Required for General Education

Credits 43

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203.

PROGRAM CORE REQUIREMENTS			Credits 14
AGEC	213	Introduction to Agricultural Economics	3
AGME	283	Engineering Principles Applied to Agriculture	3
ANPT	114	Introduction to Animal Science	4
PLSC	184	Introduction to Plant Science	3
PLSC	185	Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS			Credits 25
AGRN	423	Plant Nutrition & Soil Fertility	3
AMIC	324	Agricultural Microbiology	4
BIOL	112/H	Principles of Biology II	3
BIOL	114/H	Principles of Biology II Laboratory	1
BUED	212	Computer Concepts/Applications I	3
CHEM	211/H	Fundamentals of Organic Chemistry I	3
CHEM	213/H	Fundamentals of Organic Chemistry I Laboratory	1
HORT	203	Introduction to Horticultural Science	3
SOIL	203	Introduction to Soil Science	3
SOIL	204	Introduction to Soil Science Laboratory	1

SUPPORTIVE REQUIREMENTS			Credits 34
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Select a minimum of 23 credit hours

AGME		Select courses with advisor's approval	
AGRI	483	Recombinant DNA Technology	3
AGRI	490	Technical Writing in Agricultural Sciences	3
AGRI	499	Special Topics in Agriculture	3
AGNR	283	Agriculture and the Environment	3
AGNR	353	Natural Resources Conservation	3
AGNR	483	Principles of Geographic Information Systems	3
AGNR	490	Current Issues in Sustainable Agriculture	3
AGRN	333	Weed Science	3
AGRN	413	Global Agronomic Crops	3
AGRN	463	Plant Genetics and Breeding	3
AGRN	499	Independent Study in Plant & Soil Science	1-4
ENTO	313	General and Applied Entomology	3
FDST	493	Food Chemistry	3
HORT	313	Floriculture & Ornamental Horticulture	3
HORT	333	Landscape Design Theory	3
HORT	353	Turf Maintenance and Management	3
HORT	383	Horticultural Therapy	3
HORT	423	Horticultural Crops	3
HORT	463	Plant Tissue Culture	3
NRES	404	Conservation Biology	3
PLSC	283	Agriculture and the Environment	3
PLSC	406	Crop Physiology and Ecology	3
PLSC	440	Plant Physiology	4
PLSC	474	Plant Pathology	4
PLSC	476	Plant Propagation	3
PLSC	484	Internship in Agriculture & Natural Resources	3-6
SOIL	443	Soil Chemistry	3

Select a minimum of 11 credit hours

BIOL	222	Genetics	3
BIOL	223	Genetics Laboratory	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 Laboratory	1
CHEM	311	Analytical Chemistry I	4
CHEM	312	Analytical Chemistry II	4
CHEM	341	Biochemistry I	3
CHEM	343	Biochemistry I Laboratory	1
ENVS		Select courses with advisor's approval	
HUEC		Select courses with advisor's approval	
MATH		Select courses with advisor's approval	
PHYS		Select courses with advisor's approval	

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

ELECTIVES

Credits 4

Students may take any course offered at the University for which the student has the required prerequisites.

**CURRICULUM GUIDE FOR GENERAL AGRICULTURE
PLANT AND SOIL SCIENCE¹**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGNR 111	1	ECON 201/H	3
ENGL 101/H	3	BIOL 111/H	3
MATH 109 or Higher	3	BIOL 113/H	1
CHEM 111/H	3	CHEM 112	3
CHEM 113/H	1	CHEM 114	1
PLSC 184	3	ENGL 102/H	3
PLSC 185	<u>1</u>	ENGL 001/ENGL 003 ²	<u>0</u>
	15		14

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114/H	4	SOIL 203	3
AGEC 213/H	3	AGME 283	3
HORT 203	3	BIOL 112/H	3
ENGL 203	3	BIOL 114/H	1
CHEM 211/H	3	BUED 212	3
CHEM 213/H	<u>1</u>	GEN ED CURR AREA I	3
	17	SOIL 204	<u>1</u>
			17

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305/Online	3	AMIC 324	4
GEN ED CURR AREA I	3	Supportive Course	3
Supportive Course	3	Supportive Course	3
Supportive Course	3	GEN ED CURR AREA II	<u>3</u>
Plant & Soil Sci Elec	<u>3</u>		13
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AGRN 423/H	3	Plant and Soil Science Electives	5
Supportive Course	3	Plant and Soil Science Electives	3
Supportive Course	4	Free Elective	4
Supportive Course	<u>4</u>	AGRI 400	<u>3</u>
	14		15

Total Credit Hours: 120

¹A minimum grade of "C" is required for all Required Major Courses.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

URBAN FORESTRY

DEPARTMENTAL REQUIREMENTS

Students majoring in Urban Forestry must complete a total of 120 credit hours of University courses. This includes a minimum of 42 credit hours of General Education Requirements, 14 credit hours of Departmental Core courses, 47 credit hours of Major Core courses, and 17 credit hours of supportive courses.

CAREER OPPORTUNITIES

A degree in Urban Forestry prepares students to teach, to conduct research, to pursue graduate and professional degrees, to work in government and business, and numerous other related careers or jobs such as: urban forest management, commercial tree care, nutrient management, food and fiber processing, natural resource sciences, and Extension education.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select these courses:

CHEM 111 and CHEM 113 (lab); CHEM 112 and CHEM 114 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 110 or MATH 111

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**
 ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**
 AGNR 111 First Year Experience
 AGRI 400 Senior Capstone Experience
 Free Elective

Total Required for General Education **Credits 42**

PROGRAM CORE REQUIREMENTS **Credits 14**

AGEC	213	Introduction to Agricultural Economics	3
AGME	283	Engineering Principles Applied to Agriculture	3
ANPT	114	Introduction to Animal Science	4
PLSC	184	Introduction to Plant Science	3
PLSC	185	Introduction to Plant Science Laboratory	1

MAJOR CORE REQUIREMENTS **Credits 47**

AGNR	323	Introductory to Biostatistics	3
AGRN	423	Plant Nutrition and Soil Fertility	3
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Laboratory	1
HORT	333	Landscape Design Theory	3
NRES	151	Introduction to Urban Forestry	3
NRES	201	Dendrology	4
NRES	333	Silviculture	3
NRES	433	Forest Ecology	3
NRES	474	Forest Mensuration	3
NRES	475	Urban Affairs and Planning	3
PLSC	321	Integrated Pest Management, or	3
ENTO	313	General & Applied Entomology	
PLSC	474	Plant Pathology	4
PLSC	484	Internship in Ag & Natural Resources	3-6
SOIL	203	Introduction to Soil Science	3
SOIL	204	Introduction to Soil Science Laboratory	1

SUPPORTIVE REQUIREMENTS **Credits 17**

AGRI	499	Special Topics in Agriculture	3
AGRN	499	Independent Study in Plant & Soil Science	3
AGRN	333	Weed Science	3
AGNR	353	Natural Resources Conservation	3
AGNR	483	Principles of Geographic Information Systems	3
AGNR	463	Plant Genetics and Breeding	3
AGME	313	Agricultural Surveying Technology	3
BIOL	402	Ecology	3
BUED	212	Computer Concepts & Applications	3
CHEM	211	Fundamentals of Organic Chemistry I	3
CHEM	213	Fundamentals of Organic Chemistry I laboratory	3
HORT	203	Introduction to Horticultural Science	3
HORT	313	Floriculture and Ornamental Horticulture	3
HORT	353	Turf Management and Maintenance	3
HORT	388	Ornamental Plant Materials	3
HORT	423	Horticultural Crops	3

NRES	404	Conservation Biology	3
PLSC	283	Agriculture and the Environment	3
PLSC	333	Plant Anatomy	3
PLSC	476	Plant Propagation	3
PLSC	406	Crop Physiology & Ecology	3
SOCI	315	Urban Sociology	3
SOIL	443	Soil Chemistry	3
AMIC	324	Agricultural Microbiology	4
ENVS		w/advisor approval	3
PHYS		w/advisor approval	3

A minimum cumulative grade of “C” (GPA 2.0) or better is required for supportive courses.

CURRICULUM GUIDE FOR URBAN FORESTRY PROGRAM¹

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101/H	3	ENGL 102/H	3
MATH 110 or		ENGL 001/ENGL 003 ²	0
MATH 111	3	NRES 151	3
PLSC 184	3	BIOL 111	3
PLSC 185	1	BIOL 113	1
AGNR 111	1	CHEM 112	3
CHEM 111	3	CHEM 114	1
CHEM 113	<u>1</u>	GEN ED CURR AREA I	<u>3</u>
	15		17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ANPT 114	4	SOIL 203	3
ENGL 203	3	SOIL 204	1
Free Elective	3	AGME 283	3
NRES 201	4	NRES 475	3
Support course	<u>3</u>	NRES 333	3
	17	ECON 201	<u>3</u>
			16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or		AMIC 324	4
ENGL 310	3	GEN ED CURR AREA II	3
AGEC 213	3	HORT 333	3
AGRN 423	3	NRES 474	<u>3</u>
AGNR 388	3		13
GEN ED CUR AREA I	<u>3</u>		
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
NRES 433	3	PLSC 484	4
ENTO 313/PLSC 321	3	Support courses	3
PLSC 474	4	AGRI 400	3
Support courses	<u>4</u>	Support Courses	<u>3</u>
	14		13

Total Credit Hours: 120

¹A minimum grade of "C" is required for all Required Major Courses.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

MINOR PROGRAMS

Students desiring a Minor in Agribusiness¹ must complete a minimum of 18 hours from the courses listed²:

AGBU 313	AGEC 213	AGEC 333	AGEC 419
AGBU 323			AGEC 423
AGBU 371			AGEC 433
			AGEC 443
			AGEC 453
			AGEC 463

¹The Minor in General Agriculture – A minor in General Agriculture requires a minimum of 18 hours for the Plant and Soil Sciences, or for the Animal and Poultry Sciences.

²A grade of “C” or better will be required in the courses taken to satisfy the minor requirement.

COURSE DESCRIPTIONS

AGRIBUSINESS

AGBU 223/Honors Introduction to Agribusiness Credit 3
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 Credit 3
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/Honors Quantitative Methods in Agribusiness Credit 3
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/Honors Agribusiness Management Credit 3
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 Credit 1
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 Credit 3
The course offers the opportunity for 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 Credit 1
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/Honors Introduction to Agricultural Economics Credit 3
The course gives students an understanding of how economic theory is explained in the context of agricultural activities (i.e., production, marketing, and management). A specific attempt is made to combine descriptive materials with data on current issues so that students may see the relevance of agricultural economics studies in today's world. Also discussed is the place of agricultural production and the food system in the context of the U.S. economy and well-being. Prerequisite: ECON 200.

AGECE 333 Agricultural Price Analysis/Honors Credit 3
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.

AGEC 413 International Agricultural Development**Credit 3**

This course is a multidisciplinary course which combines various aspects of agricultural sciences relating to globalization. These aspects include economic development theory, agribusiness management and marketing, soil and plant sciences, and animal science; research, extension, and education; and land and labor theories with a global perspective. Prerequisite: ECON 200 or ECON 201.

AGEC 419 Agricultural Cooperatives**Credit 3**

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.

AGEC 423/Honors Marketing Agricultural Products**Credit 3**

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.

AGEC 433/Honors International Agricultural Markets, Trade and Development**Credit 3**

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.

AGEC 443/Honors Farm Management**Credit 3**

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.

AGEC 453/Honors Agricultural Finance**Credit 3**

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.

AGEC 463/Honors Agricultural Policy**Credit 3**

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****Credit 3**

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. Two hours lecture and two hours laboratory per week.

AGRICULTURAL MECHANIZATION

- AGME 283 Engineering Principles Applied to Agriculture Credit 3**
The application of engineering principles to problems in soil and water conservation, agricultural power units, machinery, agricultural electricity, structures, and animal environments will be studied. Material handling and processing of agricultural products will also be covered. Two hours lecture and two hours laboratory per week.
- AGME 313 Agricultural Surveying Technology Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 334 Small Power Equipment Technology Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 344 Agricultural Construction Materials and Procedures Credit 3**
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. Two hours lecture and two hours laboratory per week.
- AGME 354 Metal Construction and Maintenance Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 374 Farm Tractor Power Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 384 Agricultural Electrification Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 444 Agricultural Machinery and Power Management Credit 4**
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. Two hours lecture and four hours laboratory per week.
- AGME 454 Principles of Animal Environment and Structures Credit 4**
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. Two hours lecture and four hours laboratory per week.

AGME 490 Pre-Occupational Internship**Credit 4**

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**Credit 1-4**

This course requires a written report and an oral presentation of agricultural mechanization related topics. Prerequisite: Permission of instructor.

¹ Honors (H) courses: Students will be given more assignments, take home problems, term papers, and exams and quizzes than regular students.

AGRICULTURE AND NATURAL RESOURCES**AGNR 111 First Year Experience Seminar****Credit 1**

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**Credit 3**

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**Credit 3**

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[®], 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. Two hours lecture and two hours laboratory per week.

AGNR 490/Online Current Issues in Sustainable Agriculture**Credit 3**

This course covers the principles, processes, and practices of sustainable agriculture in a changing, global climate environment. It provides a background for accomplishing sustainability and will include experiential learning activities such as decision cases at the regional, national, and international dimensions. Prerequisites: PLSC 184 and 185, or permission of instructor.

AGRICULTURE**AGRI 301 Agriculture Seminar: Professional Development****Credit 1**

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 400 Senior Capstone Experience**Credit 3**

This course will use a systems-based approach to assess students' ability to integrate practical and theoretical scientific knowledge to address current environmental, agribusiness management, plant, soil, animal and educational issues and concepts. It will also provide an opportunity to evaluate senior level students' critical thinking, problem solving, and communication skills proficiency. Prerequisite: Student must have completed 90 or more credit hours.

AGRI 483 Recombinant DNA Technology**Credit 3**

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 490 Technical Writing in Agricultural Sciences**Credit 3**

This course is designed to cover analysis and practice of various forms of scientific writing, such as reports, journal articles, abstracts, mini-proposals, and personal statements. It includes research methods, design of papers, development of graphics, use of graphics and statistical information, technical style, ethics, and editing strategies. This course is intended to assist agriculture majors in preparing for graduate school and their professional writing needs. Prerequisite: ENGL 305 or permission of instructor.

AGRI 499 Special Topics in Agriculture**Credit 3**

Students conduct research with faculty on prearranged topics. Prerequisite: Permission of instructor.

AGRONOMY**AGRN 333 Weed Science****Credit 3**

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. Two hours lecture and two hours laboratory per week.

AGRN 413/Honors Global Agronomic Crops**Credit 3**

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. Three hours lecture per week.

AGRN 423/Honors Plant Nutrition and Soil Fertility**Credit 3**

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. This course is cross-listed with AGRN 653.

AGRN 463 Plant Genetics and Breeding**Credit 3**

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. Three hours lecture per week.

AGRN 499 Independent Study in Plant and Soil Science**Credit 1-4**

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

Credit 4

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. Three hours lecture and three hours laboratory per week.

ANIMAL AND POULTRY TECHNOLOGY

ANPT 114/Honors Introduction to Animal Science

Credit 4

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. Three hours lecture and three hour laboratory per week.

ANPT 202 Practicum in Animal and Poultry Science

Credit 2

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. Two hours laboratory per week.

ANPT 213 Introduction to Aquaculture

Credit 3

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. Two hours lecture and three hours laboratory per week.

ANPT 214/Honors¹ Animal and Avian Physiology

Credit 4

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. Three hours lecture and three hours laboratory per week.

ANPT 223 Introduction to Poultry Technology and Management

Credit 3

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. Two hours lecture and three hours laboratory per week.

ANPT 304/Honors Reproductive Physiology

Credit 4

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. Three hours lecture and two hours laboratory per week.

ANPT 313/Honors Introduction to Animal and Avian Nutrition

Credit 3

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. Three hours lecture per week.

ANPT 399 Internship in the Animal and Poultry Industry**Credit 3**

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. Three hours laboratory per week.

ANPT 403 Advanced Aquaculture**Credit 3**

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. Two hours lecture and three hours laboratory per week. Course also offered as NRES 403.

ANPT 413 Advanced Poultry Production and Management**Credit 3**

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. Two hours lecture and two hours laboratory per week.

ANPT 423 Wildlife Management**Credit 3**

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. Two hours lecture and three hours laboratory per week. Course also offered as BIOL 463.

ANPT 424/Honors Animal and Avian Health and Diseases**Credit 4**

Students study parasitic, viral, bacterial and protozoan diseases of mammalian and avian species. Methods of disease prevention, control and eradication are also discussed. Prerequisites: ANPT 214/H or permission of instructor. Three hours lecture and three hours laboratory per week.

ANPT 433 Livestock Production**Credit 3**

Ruminant animal production including breeding and selection, reproduction, nutrition, management production systems, herd health, ruminant wildlife and related technologies will be discussed. Two hours lecture and two hours laboratory per week.

ANPT 443 Horse Production**Credit 3**

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). Two hours lecture and three hours laboratory per week.

ANPT 463 Dairy Production**Credit 3**

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). Two hours lecture and three hours laboratory per week.

ANPT 473 Swine Production**Credit 3**

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. Two hours lecture and three hours laboratory per week.

ANPT 499 Special Topics in Animal and Poultry Science**Credit 1-5**

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 200/Honors/Online Principles of Microeconomics****Credit 3**

This course explores how households and firms make decisions and how they interact in markets. Topics covered include market forces of supply and demand; economic reasoning of individual choices; behavior of firms in a competitive and noncompetitive environment; markets for factors of production including land, labor, and capital; and effects of government policies on the markets. Prerequisite: MATH 102 or higher.

ECON 201/Honors/Online Principles of Macroeconomics**Credit 3**

Students learn the principles of analyzing the economy as a whole. Topics covered include inflation and unemployment; saving, investment and financial systems; fiscal and monetary policies; economic growth; and international trade. Prerequisite: MATH 102 or higher.

ECON 300/Honors Intermediate Micro Economic Theory**Credit 3**

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 200 and ECON 201.

ECON 301 Intermediate Macro Economic Theory**Credit 3**

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 200 and ECON 201.

ECON 302/Honors Money and Banking**Credit 3**

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 200 and ECON 201.

ECON 303 Labor Economics**Credit 3**

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 legislation. Prerequisites: ECON 200 and ECON 201.

ECON 304 The Economics of Black America**Credit 3**

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 200 and ECON 201.

ECON 401 Interpretative Analysis of Economic Theories**Credit 3**

Students do an in-depth study of basic economic concepts and theories which will be applied to understanding current economic policies and issues. Topics in general include monetary policy, fiscal policy, the public debt, income distribution, black economic development, collective bargaining, various marketing structures, international trade, alternative economic systems, and the less developed countries. Prerequisites: ECON 200 and ECON 201.

ECON 402 Economics of Development**Credit 3**

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 200 and ECON 201.

ECON 403 Economics of Public Finance**Credit 3**

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 200 and ECON 201.

ECON 404 International Economics**Credit 3**

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 200 and ECON 201.

ECON 480 Directed Independent Study in Economics**Credit 3**

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**Credit 3**

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****Credit 3**

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****Credit 3**

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 Introduction to Horticultural Science

Credit 3

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

Credit 3

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. Two hours lecture and two hours laboratory per week.

HORT 333 Landscape Design Theory

Credit 3

Students learn theory and principles of design, role of the environment in selecting plants and landscape materials, and basic graphic elements. Two hours lecture and two hours laboratory per week.

HORT 353 Turf Management and Maintenance

Credit 3

This course shows students how 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. Two hours lecture and two hours laboratory per week.

HORT 383 Horticultural Therapy

Credit 3

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

Credit 3

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. Two hours lecture and two hours laboratory per week.

HORT 463 Plant Tissue Culture

Credit 3

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. Two hours lecture and two hours laboratory per week.

NATURAL RESOURCES

NRES 151 Introduction to Urban Forestry

Credit 3

This course involves learning about the care and management of tree populations in urban settings for the purpose of improving the urban environment. Lecture 2 hours, laboratory 2 hours. Prerequisites: PLSC 184 and PLSC 185.

NRES 201 Dendrology

Credit 4

This course involves the identification of selected woody plants, including trees, shrubs and woody vines. Emphasis is on species of the northeastern United States. Lecture 3 hours, laboratory 2 hours. Prerequisites: PLSC 184 and PLSC 185.

NRES 333 Silviculture**Credit 3**

This course involves understanding the science, and learning how to manage and handle forest trees with respect to human objectives. Lecture 2 hours, laboratory 2 hours. Prerequisites: NRES 151.

NRES 403 Advanced Aquaculture**Credit 3**

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. Also listed as ANPT 403.

NRES 404 Conservation Biology**Credit 3**

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. This course is cross-listed with BIOL 404.

NRES 433 Forest Ecology**Credit 3**

This course is a comprehensive analysis of the distribution, structure, and dynamics of forest ecosystems. Topics include paleoecology of forests, ecophysiology of forest trees, disturbance, succession and community analysis, primary productivity, and nutrient cycling. Lecture 2 hours, laboratory 2 hours. Prerequisites: PLSC 184 and PLSC 185, NRES 151.

NRES 473 Ornithology**Credit 3**

This course covers general biology, taxonomy, and natural history of birds, with an emphasis on North American families. This course is cross-listed with NRES 673. Prerequisites: BIOL 111, BIOL 113, BIOL 112, BIOL 114 or permission of instructor.

NRES 474 Forest Mensuration**Credit 3**

This course is to develop basic knowledge and skills in urban forest resource inventory topics including tree content estimation, forest sampling, and stand yield prediction. Lecture 2 hours, laboratory 2 hours. Prerequisites: NRES 151.

NRES 475 Urban Affairs and Planning**Credit 3**

This course is to develop basic knowledge and understanding of the complexity and diversity of the urban environment, and the policy and management processes that affect it. Lecture 3 hours.

PLANT AND SOIL SCIENCE**PLSC 184/Honors Introduction to Plant Science****Credit 3**

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/Honors Introduction to Plant Science Laboratory**Credit 1**

This course deals with laboratory and field studies of plants and related processes including classification, reproduction, genetic variability, photosynthesis, nitrogen fixation, and plant protection. For Honors credit, case analyses of a current agricultural issue from a field trip are included. Co-requisite: PLSC 184/H.

PLSC 283 Agriculture and the Environment**Credit 3**

This course examines the impact of agricultural practices on humans and our natural resources. Emphasis is placed on providing and maintaining an adequate food supply while protecting the environment.

PLSC 321 Integrated Pest Management**Credit 3**

This course is designed as an introduction to insect pests, disease causing organisms, weeds, and their management in crop plants using integrated practices. Topics will include classification, identification, biology, ecology, sampling methods, IPM development, management tactics, use of conventional pesticides, biological control, host plant resistance and legislative methods. It will also include biology and management of important insects, diseases and weeds in selected crops. The course meets for two lectures and for a two hour laboratory per week. Prerequisites: PLSC 184 and PLSC 185.

PLSC 333 Plant Anatomy**Credit 3**

This course involves the use of preparation and viewing methods for studying plant anatomy. It involves understanding the complexity of tissue organization that exists within plant bodies to allow plants to develop and live as integrated organisms in diverse environments. Lecture 2 hours, laboratory 2 hours. Prerequisites: PLSC 184 and PLSC 185.

PLSC 406 Crop Physiology and Ecology**Credit 3**

This course involves in-depth discussion of ecological factors affecting crop growth, development, and productivity. Prerequisites: PLSC 184 and PLSC 185, or permission of instructor.

PLSC 474/Honors Plant Pathology**Credit 4**

This course examines causes of diseases in agronomic and horticultural crops, to include symptom recognition, isolation and enumeration, and management of diseases in landscape and field crops. Laboratory exercises include preparation of a journal-type manuscript based on an individual research project. Prerequisites: PLSC 184 and PLSC 185 or permission of instructor. This course is cross-listed with PLSC 674. Three hours lecture and three hours laboratory per week.

PLSC 476 Plant Propagation**Credit 3**

The course emphasizes the principles and current techniques involved in propagating different types of plants using seeds and various vegetative structures. Students will gain practical experience in propagating plants. Prerequisites: PLSC 184 and PLSC 185, or permission of instructor.

PLSC 484 Internship in Agriculture and Natural Resources**Credit 3-6**

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****Credit 3**

This course engages students in a study of soil forming factors, soil forming processes and minerals involved in soil development, weathering, soil physical and chemical properties, organic matter mineralization, and the impact of these factors on soil fertility, soil moisture holding ability, and pH. Prerequisites: CHEM 111 and CHEM 113 or permission of instructor. Three hours lecture per week.

SOIL 204 Introduction to Soil Science Laboratory**Credit 1**

This course will provide students with individual and group dynamic approaches to laboratory exercises that will be designed for students to acquire knowledge, comprehend, apply, analyze, synthesize, and evaluate aspect of soil profile development, soil forming factors, minerals, weathering, soil physical properties, chemical properties, organic matter mineralization, soil chemistry, and the impact of these factors on soil fertility, soil moisture content, and soil hydrogen ion concentration. Prerequisite: CHEM 111 and CHEM 113 or permission of instructor. Co-requisite: SOIL 203.

SOIL 443 Soil Chemistry

Credit 3

This course provides students with knowledge of the chemical composition and formation of soils, knowledge of 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.

DIRECTORY OF FACULTY

Acquah, Emmanuel, Professor

B.S., University of Maryland Eastern Shore, M.S. and Ph.D., The Ohio State University

Allen, Arthur L., Professor, 1890 Associate Research Director

B.S., University of Arkansas at Pine Bluff; M.S., Oklahoma State University; Ph.D., University of Illinois-Urbana

Clarke, Maurice F., Assistant Professor

B.S., Tuskegee University; M.Sc., University of Edinburgh; DVM, Tuskegee University

Cotton, Corrie P., Research Assistant Professor

B.S., University of Maryland Eastern Shore; BLA, MLA, The Pennsylvania State University

Dadson, Robert B., Professor and Acting Chairperson

B.Sc., University of London; M.Sc., Ph.D., McGill University

Demissie, Ejigou, Professor

B.S., M.S., Ph.D., Oklahoma State University

Escobar, Enrique N., Assistant Professor

B.S., M.S., Universidad de El Salvador; Ph.D., University of Maryland, College Park

Gong, Tao, Assistant Professor

B.S., M.S., Harbin Institute of Technology, P.R. China; Ph.D., Middle Tennessee State University

Green, Bessie, Research Associate

B.S., Salisbury State University; M.S., Ph.D., University of Maryland Eastern Shore

Hashem, Fawzy, Research Associate Professor

B.S., University of Ain Shams; M.S., University of Cairo; Ph.D., University of Cairo; Ph.D., University of Maryland College Park

Marsh, Lurline E., Professor

B.S., University of the West Indies; M.S., Tuskegee University; Ph.D., University of Minnesota

Min, Byungrok, Assistant Professor

B.S., M.S., Seoul National University, R.O. Korea; Ph.D., Iowa State University

Mollett, Theodore A., Associate Professor

B.S., Oregon State University; M.S., Ph.D., Purdue University

Parveen, Salina, Professor

B.S., M.S., University of Dhaka; Ph.D., University of Florida

Schwarz, Jurgen, Professor

B.S., M.S., Hohenheim University; Ph.D., Cornell University

Shorter, George, Assistant Professor

B.S., Maryland State College; M.S., Virginia State College; Ph.D., Iowa State University

Timmons, Jennifer, Assistant Professor

B.S., University of Delaware; M.S., Ph.D., University of Maryland Eastern Shore

Tubene, Stephan L., Associate Professor

B.S., Institut Facultaire des Sciences Agronomiques de Yangambi; M.S., Alcorn State University; Ph.D., Kansas State University

DEPARTMENT OF HUMAN ECOLOGY

<http://www.umes.edu/HE>

Dr. Nina Lyon Bennett, Chairperson

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, Dietetics, 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.

OBJECTIVES

The objectives of the Human Ecology Department are to:

1. Establish and promote high academic standards and performance.
2. Provide career development opportunities for students, faculty and staff.
3. Strengthen and expand research and community service programs.
4. Increase enrollment and graduation rates.

DEGREES OFFERED

Bachelor of Science – Human Ecology

CERTIFICATION

Family Financial Planning Certificate

DEPARTMENTAL REQUIREMENTS

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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA.

ALTERNATIVE CREDITS

All undergraduate students who enroll in degree programs will be required to complete 12 alternative credits before graduating. Alternative credits can be earned by completing internships, summer and winter session courses, on-line courses, independent study, undergraduate research, credit by examination, and courses completed while studying abroad.

CHILD DEVELOPMENT PROGRAM

The program in Child Development provides a broad interdisciplinary background in the area of children and families. As the only four-year program in Maryland, it prepares students to work and/or teach others to work with children and their families. Emphasis is 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 and their families with different abilities, and backgrounds in a variety of settings. In addition to classroom instruction, 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. Students choosing this option can broaden their career possibilities by completing courses in cognitive areas such as business,

recreation, sociology, social work, or nutrition that complement the training in Child Development. Successful completion of the Child Development program also provides excellent preparation for graduate studies.

DEPARTMENTAL REQUIREMENTS

The Child Development Program requires that all students, including those transferring to the Department from 2-year institutions, 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA.

Child Development students are required to complete 400 clock-hours of internship and practicum experience designed to provide on-the-job training in the childcare/education field. Students must include a minimum of 12 credit hours of out-of-class experience. HUEC 400 and HUEC 450, for three (3) credits and five (5) credits respectively, meet the out-of-class experience. Students should consult their advisor to select four (4) additional credits to meet the 12 credit hour requirement.

CAREER OPPORTUNITIES

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 cognitive areas such as business, exercise science, social work, or nutrition that complement the training in Child Development.

CHILD DEVELOPMENT

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203^{1,2}

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Honor students substitute Honors courses

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES¹ **Credits 7**

Students must select **two** science courses and **one** science laboratory course from the following.

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, NUDT 210, PHYS 101, PHYS 103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS **Credits 3**

MATH 102

Curriculum Area V - ENGLISH COMPOSITION² **Credits 9**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**

HUEC 100 First Year Experience Course

HUEC 230/Online Multicultural Perspectives on Families in the U.S.

EXSC 111 Personal Health & Fitness

Total Required for General Education **Credits 41**

SUPPORT REQUIREMENTS **Credits 5**

BUED 212 Computer-Concepts/Applications I 3

HUEC 474 Research Methodology 2

FOUNDATION KNOWLEDGE **Credits 53**

CHDE 220 Foundations of Early Childhood 3

CHDE 222 Infant/Child Development & Learning 3

CHDE 224 Emerging Language & Literacy 3

CHDE 246 Guiding Young Children 3

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 Interpreting Behavior of Young Children 3

CHDE 332 Curriculum and Instruction for Preschool Children 3

CHDE 335 Movement Education 3

CHDE 427 Partnerships 3

CHDE 430 Supervision & Administration of Early Childhood Prog 3

CHDE 440 School Age Programming 3

HUEC 203/Online Human Development: A Lifespan Perspective 3

HUEC 361 Contemporary Family Issues 3

HUEC 450 Practicum-Human Development 5

NUDT 214 Infant and Child Nutrition 3

¹Child Development majors are strongly encouraged to take NUDT 210 (Elements of Nutrition) to satisfy their GEN ED CURR AREA III (non laboratory science) requirement.

²Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

MAJOR REQUIREMENTS

HUEC 370	Professional Development	2
HUEC 399	Pre-Internship Seminar	1
HUEC 400	Internship	3
HUEC 409	Post-Internship Seminar	1
HUEC 451	Post Practicum	1
HUEC 463	Food, Clothing and Culture	3
HUEC 495	Senior Seminar in Human Ecology	1

Credits 12**FREE ELECTIVES****Credits 9**

CURRICULUM GUIDE FOR CHILD DEVELOPMENT

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	ENGL 102	3
BIOL 103	1	ENGL 001/ENGL 003 ²	0
EXSC 111 ¹	3	MATH 102 <u>or</u> Higher	3
ENGL 101	3	PSYC 200	3
GEN ED CURR AREA I	3	SOCI 101	3
HUEC 100	<u>1</u>	GEN ED CURR AREA I	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 220	3	BUED 212	3
CHDE 222	3	CHDE 224	3
CHDE 246	3	HUEC 203	3
ENGL 203	3	HUEC 230	3
GEN ED CURR AREA III ⁵	<u>3</u>	NUDT 214	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Elective	3	CHDE 325	3
CHDE 323	3	CHDE 332	3
CHDE 327	3	CHDE 335	3
CHDE 330	3	CHDE 440	3
ENGL 305	3	HUEC 361	3
HUEC 370	<u>2</u>	HUEC 399	<u>1</u>
	17		16

SUMMER

HUEC 400 ^{2,4}	3
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SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Approved Elective	3	Approved Elective	3
CHDE 427	3	HUEC 450 ^{3,4}	5
CHDE 430	3	HUEC 451	1
HUEC 409 ³	1	HUEC 463	3
HUEC 474	<u>2</u>	HUEC 495	<u>1</u>
	12		13

Total Credit Hours: 120

¹EXSC 111 cannot be repeated for credit.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Child Development majors must complete HUEC 400 for three (3) credits and HUEC 450 for five (5) credits respectively.

⁴HUEC 400 and HUEC 450 meet the out-of-class experience. Students should consult their advisor to select four (4) additional credits to meet the 12 credit hours requirement.

⁵Child Development majors are strongly encouraged to take NUDT 210 (Elements of Nutrition) to satisfy their Gen Ed Curriculum Area III (non laboratory science) requirement.

CHILD DEVELOPMENT

Articulated Program with Wor-Wic Community College

The University of Maryland Eastern Shore and Wor-Wic Community College entered into an articulation agreement to facilitate 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.

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.

DEPARTMENTAL REQUIREMENTS

The Child Development Program requires 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA.

Child Development majors are required to complete HUEC 400 and HUEC 450 for 5 credits each. Students transferring from Wor-Wic may earn credit for these courses through a departmental credit by examination (CBE) at UMES per the UMES-WWCC Articulation Agreement. Students are encouraged to take CHDE 220, CHDE 222 and CHDE 224 prior to fall enrollment at UMES. Wor-Wic transfer students may earn credit for courses through a departmental credit by examination at UMES, per the UMES-WWCC Articulation Agreement.

CAREER OPPORTUNITIES

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.

CHILD DEVELOPMENT
Program with Wor-Wic Community College
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203^{1,2}

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES³

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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, NUDT 210, PHYS 101, PHYS

103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102

Curriculum Area V - ENGLISH COMPOSITION²

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Honor students substitute Honors courses¹

³Child Development majors are strongly encouraged to take NUDT 210 (Elements of Nutrition) to satisfy their GEN ED CURR AREA III (non laboratory science) requirement.

Curriculum Area VI - EMERGING ISSUES	Credits 7
HUEC 100 First Year Experience Course	
HUEC 230/Online Multicultural Perspectives on Families in the U.S.	
EXSC 111 Personal Health & Fitness	
Total Required for General Education	Credits 41
SUPPORT REQUIREMENTS	Credits 5
BUED 212 Computer-Concepts/Applications I	3
HUEC 474 Research Methodology	2
FOUNDATION KNOWLEDGE	Credits 53
CHDE 220 Foundations of Early Childhood	3
CHDE 222 Infant/Child Development & Learning	3
CHDE 224 Emerging Language & Literacy	3
CHDE 246 Guiding Young Children	3
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 Interpreting Behavior of Young Children	3
CHDE 332 Curriculum and Instruction for Preschool Children	3
CHDE 335 Movement Education	3
CHDE 427 Partnerships	3
CHDE 430 Supervision & Administration of Early Childhood Program	3
CHDE 440 School Age Programming	3
HUEC 203/Online Human Development: A Lifespan Perspective	3
HUEC 361 Contemporary Family Issues	3
HUEC 450 Practicum-Human Development	5
NUDT 214 Infant and Child Nutrition	3
MAJOR REQUIREMENTS	Credits 12
HUEC 370 Professional Development	2
HUEC 399 Pre-Internship Seminar	1
HUEC 400 Internship	3
HUEC 409 Post-Internship Seminar	1
HUEC 451 Post Practicum	1
HUEC 463 Food, Clothing and Culture	3
HUEC 495 Senior Seminar in Human Ecology	1
FREE ELECTIVES	Credits 9

**CURRICULUM GUIDE FOR CHILD DEVELOPMENT 2+2
ARTICULATED PROGRAM WITH WOR-WIC COMMUNITY COLLEGE (WWCC)**

FRESHMAN YEAR (at WWCC)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CMP 101	3	SDV 100	1
EDU 101	4	EDU 151	3
EDU 102	3	EDU 152	3
PSY 101	3	EDU 153	3
ENG 101	<u>3</u>	ENG 151	3
	16	EDU 103 ¹	<u>4</u>
			17

SOPHOMORE YEAR (at WWCC)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIO 101	4	EDU 251	3
EDU 201	3	EDU 252 ¹	3
EDU 260	3	EDU 261 ¹	3
PSY 205	3	EDU 204 ¹	3
MTH 103	3	PHYS 104	4
SOC 101	<u>3</u>	SPH 101	<u>3</u>
	19		19

JUNIOR YEAR (at UMES)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 246	3	CHDE 325	3
CHDE 327 ¹	3	CHDE 332 ¹	3
CHDE 330	3	CHDE 335	3
CHDE 323	3	HUEC 361	3
HUEC 203	3	HUEC 370	2
EXSC 111 ^{2, 3}	3	HUEC 399	1
ENGL 002	<u>0</u>	GEN ED CURR AREA I ²	<u>3</u>
	18		18

SUMMER YEAR (at UMES)

HUEC 400 ⁴	3
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SENIOR YEAR (at UMES)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 427 ¹	3	HUEC 450 ⁴	5
CHDE 430	3	HUEC 451	1
CHDE 440	3	HUEC 463	3
HUEC 409	1	HUEC 495	<u>1</u>
ENGL 305	3		10
GEN ED CURR AREA I ²	3		
HUEC 474	<u>2</u>		
	18		

Total Credit Hours: 135

¹Wor-Wic transfer students may earn credit for these courses through a departmental credit by examination (CBE) at UMES.

² Students are encouraged to complete prior to fall enrollment at UMES.

³EXSC 111 cannot be repeated for credit.

⁴Wor-Wic students must complete EDU 260 and EDU 261 to satisfy requirement for HUEC 400 at UMES.

CHILD DEVELOPMENT

Articulated Program with Chesapeake College

The University of Maryland Eastern Shore and Chesapeake College entered into an articulation agreement to facilitate the transfer of Early Childhood Education students from Chesapeake College to UMES for the purpose of entering the bachelor's degree program in Human Ecology - Child Development.

Students enrolled in Chesapeake 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.

DEPARTMENTAL REQUIREMENTS

The Child Development Program requires 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA.

Child Development majors are required to complete HUEC 400 and HUEC for five (5) credits each. Students transferring from Chesapeake College may earn credit for these courses through a departmental credit by examination (CBE) at UMES per the UMES-CC Articulation Agreement. Students are encouraged to take CHDE 220, CHDE 222 and CHDE 224 prior to fall enrollment at UMES. Chesapeake College transfer students may earn credit for courses through a departmental credit by examination (CBE) at UMES per the UMES-CC Articulation Agreement.

CAREER OPPORTUNITIES

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.

CHILD DEVELOPMENT
Program with Chesapeake College
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203^{1,2}

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES³

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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, NUDT 210, PHYS 101, PHYS

103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102

Curriculum Area V - ENGLISH COMPOSITION²

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Honor students substitute Honors courses¹

³Child Development majors are strongly encouraged to take NUDT 210 (Elements of Nutrition) to satisfy their GEN ED CURR AREA III (non laboratory science) requirement.

Curriculum Area VI - EMERGING ISSUES	Credits 7
HUEC 100 First Year Experience Course	
HUEC 230/Online Multicultural Perspectives on Families in the U.S.	
EXSC 111 Personal Health & Fitness	
Total Required for General Education	Credits 41
SUPPORT REQUIREMENTS	Credits 5
BUED 212 Computer-Concepts/Applications I	3
HUEC 474 Research Methodology	2
FOUNDATION KNOWLEDGE	Credits 53
CHDE 220 Foundations of Early Childhood	3
CHDE 222 Infant/Child Development & Learning	3
CHDE 224 Emerging Language & Literacy	3
CHDE 246 Guiding Young Children	3
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 Interpreting Behavior of Young Children	3
CHDE 332 Curriculum and Instruction for Preschool Children	3
CHDE 335 Movement Education	3
CHDE 427 Partnerships	3
CHDE 430 Supervision & Administration of Early Childhood Program	3
CHDE 440 School Age Programming	3
HUEC 203/Online Human Development: A Lifespan Perspective	3
HUEC 361 Contemporary Family Issues	3
HUEC 450 Practicum-Human Development	5
NUDT 214 Infant and Child Nutrition	3
MAJOR REQUIREMENTS	Credits 12
HUEC 370 Professional Development	2
HUEC 399 Pre-Internship Seminar	1
HUEC 400 Internship	3
HUEC 409 Post-Internship Seminar	1
HUEC 451 Post Practicum	1
HUEC 463 Food, Clothing and Culture	3
HUEC 495 Senior Seminar in Human Ecology	1
FREE ELECTIVES	Credits 9

CURRICULUM GUIDE FOR CHILD DEVELOPMENT
Articulated Program with Chesapeake College (CC)

FRESHMAN YEAR (at Chesapeake)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FSC 101	1	CPL 201	1
ECD 101	3	ECD 105	3
ECD 160	3	PSY 150	3
ENG 101	3	ECD 180 ¹	3
ECD 163	3	SOC 161	3
ART/HUM	<u>3</u>	ENG 102	<u>3</u>
	16		16

SOPHOMORE YEAR (at Chesapeake)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
NAT/SCI	4	ECD 165	3
EDU 214/215	3	CPL 280 ⁴	3
ECD 270	3	MAT 200	3
ECD 161	3	SCI ELE	4
COM 101	3	ECD 171	<u>3</u>
PED 103	<u>3</u>		16
	19		

JUNIOR YEAR (at UMES)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 323	3	CHDE 325 ²	3
CHDE 327	3	CHDE 332 ²	3
CHDE 330	3	HUEC 361	3
ENGL 002	0	HUEC 399	1
HUEC 203	3	ENGL 305	3
HUEC 246	3	HUEC 370	2
GEN ED CURR AREA I	<u>3</u>	CHDE 335	<u>3</u>
	18		18

SUMMER YEAR (at UMES)

HUEC 400 ⁴	3
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SENIOR YEAR (at UMES)

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 427	3	HUEC 451	1
CHDE 430 ²	3	HUEC 450 ³	5
CHDE 440 ²	3	HUEC 463	3
BUED 212	3	HUEC 495	<u>1</u>
HUEC 409	1		10
HUEC 474	<u>2</u>		
	15		

Total Credit Hours: 128

¹Chesapeake College recommends HTH 111 vs. HTH 180/ECD 180. Students planning to transfer to UMES are strongly encouraged to complete ECD 180.

²Chesapeake College transfer students may earn credit for these courses through a departmental credit by examination (CBE) per the UMES-CC Articulation Agreement.

³Child Development majors must complete HUEC 400 for three (3) credits and HUEC 450 for five (5) credits respectively.

⁴Chesapeake students must complete ECD 270 and CPL 280 to satisfy requirement for HUEC 400 at UMES.

DIETETICS

The Didactic Program in Dietetics at the University of Maryland Eastern Shore is housed within the Department of Human Ecology, which is located in the School of Agricultural and Natural Sciences. Students who satisfy and successfully complete the prescribed course requirements for the dietetics program will be awarded the Bachelor of Science Degree in Human Ecology with a concentration in dietetics.

The mission of the dietetics program is to provide educational opportunities for students to develop mastery of food and nutrition principles, and acquire skills for effective dietetic practice; enhance leadership qualities; and foster career development. Its philosophical tenets remain central to the mission of the 1890 Land-Grant Institution.

The Didactic program in Dietetics is currently granted accreditation status through spring 2014 by the Accreditation Council for Nutrition and Dietetics Education (ACEND), an agency of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Chicago, IL 60606-6995, 312.899.0040 Ext. 5400. The next scheduled site visit by ACEND program reviewers will occur fall 2013, as part of the accreditation reaffirmation process, which occurs every ten years.

Obtaining dietetic credentialing is a three-step process. Successful completion of the Didactic Program is the first step toward dietetic credentialing. The second steps consist of completing a supervised practice experience through an ACEND accredited Dietetic Internship. The final step is successfully passing the national Registration Examination for Dietitians administered through the Commission on Dietetic Registration (CDR). Additionally, as of June 1, 2009, graduates of an accredited didactic program are eligible to take the Dietetic Technician Registration exam through the DTR pathway III provision approved by CDR.

DEPARTMENTAL REQUIREMENTS

Program admission requirements are the same as those for the university. Freshman applicants must have graduated from an accredited secondary school. However, for optimal admission consideration, an academic grade point average (GPA) of at least 2.5 and scored competitively on the SAT or ACT tests is expected.

Students who have attended any accredited institution of higher education and have earned at least one (1) credit hour or more will be classified as a transfer student. Students must be in good judicial, academic, and financial standing and to be considered for admission as a transfer student. Transfer students who have less than 28 credits must submit a high school transcript and SAT or ACT test scores unless they have been out of school longer than two years. Students may complete the Declaration of Major form with a designated concentration in Dietetics as a freshman or transfer student, and be assigned an advisor. However, the declaration of a concentration in dietetics does not constitute admission into the program.

Students who wish to be admitted into the dietetics concentration may apply for admission after completing 28 semester hours with a minimum overall GPA of 2.75 and a grade of "C" or better in foundation courses BIOL 111/113; CHEM 111/113 and CHEM 112/114; NUDT 210; MATH 209; ENGL 101 and ENGL 102; SOCI 101; PSYCH 200; and EXSC 111; as well as HUEC 100 First Year Experience and satisfactory passage of the English Proficiency Exam. Program graduates are eligible to receive a Verification Statement with a GPA of 2.75 or higher. Successful completion of the didactic program in dietetics and receipt of a Verification Statement does not guarantee acceptance into a post-baccalaureate dietetic internship. Most DI programs expect a 3.0 or higher GPA for serious consideration.

OUT-OF-CLASS EXPERIENCE

Students must include a minimum of 12 credit hours of out-of-class experiences. The dietetic course curriculum has six credit hours already embedded in the sequence. Students should

consult their departmental academic advisor to select six (6) additional credits to meet the 12 credit hours requirements.

CAREER OPPORTUNITIES

Program graduates who receive a Verification Statement are eligible to apply to an ACEND accredited Dietetic Internship program and sit for the Dietetic Technician Registration (DTR) exam. Upon successful completion of a Dietetic Internship, students are qualified to take the national Dietetic Registration Exam to become a Registered Dietitian and apply for state licensure where applicable. Registered Dietitians are employed by industry, public health services, hospitals and medical centers, food and nutrition services, communications, and other local, state, national and international agencies in research and educational programs.

DIETETICS - Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and **one** science laboratory course from the following.

BIOL 111, BIOL 113 (lab), BIOL 231, BIOL 233 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Honor students substitute Honors courses

Curriculum Area VI - EMERGING ISSUES		Credits 7
HUEC 100	First Year Experience	
EXSC 111	Personal Health & Fitness	
MATH 210	Elementary Statistics	
Total Required for General Education		Credits 42
SUPPORT REQUIREMENTS		Credits 12
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory <u>OR</u>	1
AMIC 324	Agricultural Microbiology	4
BIOL 232	Human Anatomy and Physiology II	3
BIOL 234	Human Anatomy and Physiology II Laboratory	1
FMGT 101	Applied Food Service Sanitation	2
HUEC 474	Research Methodology	2
FOUNDATION KNOWLEDGE		Credits 38
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	4
NUDT 402	Clinical Nutrition II	4
NUDT 471	Foodservice Management	3
NUDT 472	Foodservice Management Laboratory	2
NUDT 473	Community Nutrition	3
MAJOR REQUIREMENTS		Credits 9
HUEC 370	Professional Development	2
HUEC 463	Food, Clothing and Culture	3
NUDT 475	Senior Practicum	3
HUEC 495	Senior Seminar in Human Ecology	1
CHEMISTRY MINOR		Credits 20
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
FREE ELECTIVES		Credits 2

CURRICULUM GUIDE FOR DIETETICS

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 109 or Higher	3	BIOL 113	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
SOCI 101	3	EXSC 111 ¹	3
HUEC 100	<u>1</u>	ENGL 001/ENGL 003 ²	0
	14	ENGL 102	3
		NUDT 210	<u>3</u>
			17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
ENGL 203	3	PSYC 200	3
NUDT 211	3	NUDT 212	3
GEN ED CURR AREA I	<u>3</u>	NUDT 305	<u>3</u>
	17		17

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 341	3	ENGL 305	3
CHEM 343	1	MATH 210	3
HUEC 370	2	NUDT 392	3
NUDT 300	1	NUDT 401	4
NUDT 310	3	GEN ED CURR AREA I	<u>3</u>
NUDT 391	3		15
FMGT 101	<u>2</u>		
	16		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AMIC 324 or		HUEC 463	3
BIOL 301 and	3	Elective	2
BIOL 303	1	NUDT 473	3
HUEC 474	2	NUDT 475 ^{3,4}	3
NUDT 402	4	HUEC 495	<u>1</u>
NUDT 471 ⁴	3		12
NUDT 472	<u>2</u>		
	15		

Total Credit Hours: 123

¹EXSC 111 cannot be repeated for credit.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Dietetics students may substitute NUDT 475 for four (3) credits.

⁴NUDT 471 and NUDT 475 meet the out-of-class experience.

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 background while focusing on one's specific interest(s). Graduates of the Family and Consumer Sciences program will be prepared to work in either the public or private sector environments that serve families and consumers. Students may select a minor to strengthen their general education, core and required coursework. Depending on the student's interest, the minor may be chosen from one of the following areas: Child Development, Dietetics, Fashion Merchandising, Nutrition or Gerontology. Early advisement is highly recommended.

DEPARTMENTAL REQUIREMENTS

The Family and Consumer Sciences Program 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA. All students are required to complete a 200 clock-hour internship during the summer between the junior and senior year.

CAREER OPPORTUNITIES

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, such as social services agencies, group home facilities, or governmental agencies. Students may select to pursue graduate studies in child and family development, education, family and consumer sciences, marriage and family therapy or related disciplines that focus on individuals, families, and communities.

FAMILY AND CONSUMER SCIENCES

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.
 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 103 (Lab),
 PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS Credits 3

MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹ Credits 9

ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H; ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES Credits 7

HUEC 100 First Year Experience
 HUEC 230/Online Multicultural Perspectives on Families in the U.S.
 EXSC 111 Personal Health & Fitness

Total Required for General Education Credits 41**SUPPORT REQUIREMENTS Credits 2**

HUEC 474 Research Methodology 2

FOUNDATION KNOWLEDGE Credits 48

CHDE 222	Infant/Child Development & Learning	3
FMCT 141	Introduction to Fashion Industry	3
FMCT 201	Clothing and Textiles for Consumers OR	3
FMCT 381	Textiles I	3
FMCT 361	Apparel Construction and Evaluation	3
HUEC 203/Online	Human Development: A Lifespan Perspective	3
HUEC 242	Foundations of Family & Consumer Sciences	3
HUEC 243	Housing Design	3
HUEC 310	Resource Management	3
HUEC 361	Contemporary Family Issues	3
HUEC 460	The Family and Aging OR	3
SOCI 361	Social Gerontology	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

MAJOR REQUIREMENTS Credits 11

HUEC 370	Professional Development	2
HUEC 399	Pre-Internship Seminar	1
HUEC 400	Internship	3
HUEC 409	Post-Internship Seminar	1
HUEC 463	Food, Clothing and Culture	3
HUEC 495	Senior Seminar in Human Ecology	1

FREE ELECTIVES Credits 18

NOTE: Students may complete 18 credits of free electives or select and complete an approved minor.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

CURRICULUM GUIDE FOR FAMILY AND CONSUMER SCIENCES

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	EXSC 111 ¹	3
SOCI 101	3	ENGL 102	3
HUEC 100	1	ENGL 001/ENGL 003 ²	0
FMCT 141	3	GEN ED CURR AREA I	3
GEN ED CURR AREA III	<u>4</u>	GEN ED CURR AREA III	3
	14	MATH 109 or Higher	<u>3</u>
			15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HUEC 242	3	CHDE 222	3
ECON 200	3	HUEC 243	3
ENGL 203	3	Elective/Minor Course ³	3
PSYC 200	3	HUEC 230	3
GEN ED CURR AREA I	<u>3</u>	NUDT 210	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HUEC 310	3	ENGL 305	3
HUEC 370	2	HUEC 399	1
NUDT 211	3	NUDT 212	3
PSYC 303	3	NUDT 305	3
FMCT 361	<u>3</u>	Elective/Minor Course ³	<u>6</u>
	14		16

SUMMER

HUEC 400 ⁴	3
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SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HUEC474	2	HUEC 460 or SOCI 361	3
HUEC 409	1	HUEC 463	3
FMCT 381 or		HUEC 361	3
FMCT 201	3	HUEC 490	3
HUEC 495	1	Elective/Minor Courses ³	<u>3</u>
Electives/Minor Courses ³	<u>6</u>		15
	13		

Total Credit Hours: 120

¹EXSC 111 cannot be repeated for credit.

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Students who select a minor must complete a minimum of 18 credit hours.

⁴HUEC 400 meets the out-of-class experience. Please consult your advisor to select nine (9) additional credits to meet the 12 credit hours requirement.

FAMILY AND CONSUMER SCIENCES EDUCATION PROGRAM

The Family and Consumer Sciences Education Program (FCS) 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.

DEPARTMENTAL REQUIREMENTS

The Family and Consumer Science Education Program 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA. Students are also required to meet the education requirements for admission to teacher candidacy through the Department of Education, including passing PRAXIS I. Students will be expected to consult their departmental academic advisor for information regarding requirements.

FAMILY AND CONSUMER SCIENCES EDUCATION Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES Credits 7
 Students must select **two** science courses and **one** science laboratory course from the following.
 BIOL 101, BIOL 103 (Lab), CHEM 101

Curriculum Area IV – MATHEMATICS Credits 3
 MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹ Credits 9
 ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES Credits 7
 HUEC 100 First Year Experience
 HUEC 230/Online Multicultural Perspectives on Families in the U.S.
 EXSC 111 Personal Health & Fitness

Total Required for General Education Credits 41

FOUNDATION KNOWLEDGE Credits 35

CHDE 222	Infant/Child Development & Learning	3
FMCT 201	Clothing and Textiles for Consumers OR	3
FMCT 381	Textiles I	3
FMCT 361	Apparel Construction and Evaluation	3
HUEC 242	Foundations of Family & Consumer Sciences	3
HUEC 243	Housing Design	3
HUEC 310	Resource Management	3
HUEC 361	Contemporary Family Issues	3
HUEC 474	Research Methodology	2
HUEC 490	Consumer Motivation	3
NUDT 210	Elements of Nutrition	3
NUDT 211	Scientific Principles of Food I	3

MAJOR REQUIREMENTS Credits 6

HUEC 370	Professional Development	2
HUEC 463	Food, Clothing and Culture	3
HUEC 495	Senior Seminar in Human Ecology	1

EDUCATION REQUIREMENTS Credits 43

EDCI 200	Introduction to Contemporary Education	3
EDCI 201	PRAXIS Preparation ²	1
EDCI 311	Comprehensive Assessment in Education	3
EDCI 400	Senior Seminar in Education	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
EDCI 427	Curriculum & Instruction in Family & Consumer Sciences	3
EDCI 480	Teaching Intern: Secondary Ed. (Middle School)	6
EDCI 490	Teaching Intern: Secondary Ed. (High School)	6
EDSP 428	Communication and Collaboration in Special Education	3
HUEC 203/Online	Human Development: Lifespan Perspective OR	3
PSYC 305	Developmental Psychology	3
PSYC 307	Educational Psychology	3

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Does not count towards graduation.

CURRICULUM GUIDE FOR FAMILY AND CONSUMER SCIENCES EDUCATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	GEN ED CURR AREA III	3
BIOL 103	1	EXSC 111 ¹	3
ENGL 101	3	ENGL 102	3
HUEC 100	1	ENGL 001/ENGL 003 ²	0
PSYC 200	3	GEN ED CURR AREA I	3
SOCI 101	<u>3</u>	MATH 109 or Higher	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HUEC 242	3	CHDE 222	3
EDCI 200	3	HUEC 203	3
EDCI 201 ³	1	HUEC 230	3
FMCT 361	3	HUEC 243	3
NUDT 210	3	GEN ED CURR AREA I	3
NUDT 211	<u>3</u>	ENGL 203	<u>3</u>
	16		18

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHDE 323	3	EDCI 406	3
ENGL 305	3	EDCI 409	3
FMCT 381 or		HUEC 463	3
FMCT 201	3	HUEC 361	3
PSYC 307	3	HUEC 370	2
HUEC 310	3	HUEC 490	<u>3</u>
HUEC 474	<u>2</u>		17
	17		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDCI 311	3	EDCI 400	3
EDCI 410	3	EDCI 480 ^{4,5}	6
EDCI 427	3	EDCI 490 ^{4,5}	<u>6</u>
EDSP 428	3		15
HUEC 495	<u>1</u>		
	13		

Total Credit Hours: 125

¹EXSC 111 cannot be repeated for credit.

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Course does not count towards graduation.

⁴FCS Education majors must complete EDCI 480 and 490 as part of their Professional Education courses in lieu of HUEC 399, 400 and 409.

⁵EDCI 480 and EDCI 490, six (6) credits each, meet the out-of-class experience criteria.

FASHION MERCHANDISING PROGRAM

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 process of products and services. It includes an internship in Fashion Merchandising or a related area.

In addition, the department participates in the Fashion Institute of Technology (FIT) 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 Marketing Communications. Students return to the University of Maryland Eastern Shore (UMES) to complete the four-year program. To complement their program, students may choose to complete electives that focus on advertising, journalism, communication, visual presentation, or a minor in business administration. With appropriate courses taken as electives, students can pursue careers in fashion reporting, advertising, or graphic design.

DEPARTMENTAL REQUIREMENTS

The Fashion Merchandising Program requires 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA. Students are required to complete an internship designed to provide on-the-job experience in the fashion/textile industry. Some of the businesses which provide internship experience for students are: Bloomingdale’s, Macy’s, J. C. Penney, Liz Claiborne, Black Entertainment Television (BET), Foot Locker, Sears, Nordstrom, and The Gap.

STUDY TOURS

The Fashion Merchandising Program provides students with an opportunity to participate in a minimum of one major study tour each year. Students in the department tour the fashion capital of New York City. During this tour, students have an opportunity to visit and tour the facilities of well-known fashion designers such as Liz Claiborne and Donna Karan, along with several manufacturing facilities of design houses, furriers, computerized facilities of Butterick-Vogue and Simplicity pattern companies, and fashion museums are among the places visited.

CAREER OPPORTUNITIES

The Fashion Merchandising program is designed to prepare students for entry level management positions in the broad field of fashion merchandising, with emphasis on retail products and services. It includes an internship in Fashion Merchandising or related areas. To complement their program, students may opt to complete electives that focus on advertising, promotion, journalism, communication, or visual presentation, and pursue careers in fashion reporting, advertising, fashion buying, style editor, graphic design, or other related careers. Some students may choose to pursue an advanced degree in fashion design, marketing, product development, business administration or international retail.

FASHION MERCHANDISING

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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 103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109*

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H²

ENGL 102 or ENGL 102H²

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online²

Curriculum Area VI - EMERGING ISSUES

Credits 4

HUEC 100 First Year Experience

EXSC 111 Personal Health & Fitness

HUEC 230 Multicultural Perspectives on Families in the U.S.

Total Required for General Education

Credits 41

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

SUPPORT REQUIREMENTS		Credits 18
ACCT 288*	College Accounting	3
ECON 200*	Principles of Microeconomics	3
ECON 201*	Principles of Macroeconomics	3
TELC 336	Computer Graphics I	3
MKTG 308	Principles of Marketing	3
MKTG 314	Retail Management	3

FOUNDATION KNOWLEDGE		Credits 39
FMCT 141	Introduction to the Fashion Industry	3
FMCT 203	Introduction to Fashion Forecasting	3
FMCT 300	Historic Costumes	3
FMCT 341	Fashion Buying and Merchandising I	3
FMCT 342	Advertising and Promotion	3
FMCT 351	Fashion Buying and Merchandising II	3
FMCT 361	Apparel Construction and Evaluation	3
FMCT 371	International Trade and Retailing Issues	3
FMCT 381	Textiles I	3
FMCT 382	Textiles II	3
FMCT 441	Visual Merchandising	3
FMCT 490	Product Development	3
HUEC 490	Consumer Motivation	3

MAJOR REQUIREMENTS		Credits 8
HUEC 370	Professional Development	2
HUEC 399	Pre-Internship Seminar	1
HUEC 400	Internship	3
HUEC 409	Post-Internship Seminar	1
HUEC 495	Senior Seminar in Human Ecology	1

FREE ELECTIVES (Consult Academic Advisor) Credits 14

*Students who select to minor in Business must earn a “C” or better in MATH 109, ACCT 288, ECON 200 and ECON 201; and must satisfy all other requirements for the minor in Business as set by Business & Accounting Program. Please refer to that section for specific requirements.

CURRICULUM GUIDE FOR FASHION MERCHANDISING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
FMCT 141	3	ENGL 001/ENGL 003 ¹	0
HUEC 100	1	GEN ED CURR AREA I	3
GEN ED CURR AREA I	3	GEN ED CURR AREA III	4
GEN ED CURR AREA III	3	MATH 109	3
SOCI 101	<u>3</u>	EXSC 111 ²	<u>3</u>
	16		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 203	3	ECON 201	3
ENGL 203	3	ENGL 305	3
PSYC 200	3	FMCT 300	3
ACCT 288	3	HUEC 230	3
ECON 200	<u>3</u>	TELC 336	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 341	3	FMCT 342	3
FMCT 361	3	FMCT 351	3
FMCT 381	3	FMCT 382	3
Elective	3	HUEC 370	2
MKTG 308	<u>3</u>	HUEC 399	1
	15	Elective	<u>3</u>
			15

SUMMER

HUEC 400	3
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SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HUEC 495	1	MKTG 314	3
FMCT 371	3	FMCT 490	3
FMCT 441	3	HUEC 490	3
HUEC 409	1	Elective	<u>3</u>
Electives	<u>5</u>		12
	13		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

FASHION MERCHANDISING HONORS

The Fashion Merchandising Honors Program is designed to prepare students for entry-level management positions in the broad field of fashion merchandising, with emphasis on the retail process of products and services. It includes a minor in business administration, as well as an internship in Fashion Merchandising or a related area. To complement the program, students may opt to complete electives that focus on advertising, journalism, communication, or visual presentation. With appropriate courses completed as electives, students can pursue careers in fashion reporting, advertising or graphic design.

In addition, the department participates in the Fashion Institute of Technology (FIT) 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 Marketing Communications. Students return to the University of Maryland Eastern Shore (UMES) to complete the four-year program and receive both degrees at graduation. To complement their program, students may choose 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.

DEPARTMENTAL REQUIREMENTS

The Fashion Merchandising Honors Program requires 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA. Students are required to complete an internship designed to provide on-the-job experience in the fashion/textile industry. Some of the businesses which provide internship experience for students are: Bloomingdale’s, Macy’s, J. C. Penney, Liz Claiborne, Black Entertainment Television (BET), Foot Locker, Sears, Nordstrom, and The Gap. Students majoring in the Fashion Merchandising Honors program are required to register for designated Honors courses. Students must include a minimum of 12 credits of Out-of-Class Experience. Students should consult their advisor when selecting the Out-of-Class Experience courses.

STUDY TOURS

The Fashion Merchandising Honors Program provides students with an opportunity to participate in a minimum of one major study tour each year. Students in the department tour the fashion capital of New York City. During this tour, students have an opportunity to visit and tour the facilities of well-known fashion designers such as Liz Claiborne and Donna Karan, along with several manufacturing facilities of design houses, furriers, computerized facilities of Butterick-Vogue and Simplicity pattern companies, and fashion museums are among the places visited.

FASHION MERCHANDISING HONORS

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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 103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109*

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 7

HUEC 100 First Year Experience

EXSC 111 Personal Health & Fitness

HUEC 230 Multicultural Perspectives on Families in the U.S.

Total Required for General Education

Credits 41

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

SUPPORT REQUIREMENTS		Credits 18
ACCT 288*	College Accounting	3
ECON 200*	Principles of Microeconomics Honors	3
ECON 201*	Principles Macroeconomics	3
TELC 336	Computer Graphics I	3
MKTG 308	Principles of Marketing	3
MKTG 314	Retail Management	3

FOUNDATION KNOWLEDGE		Credits 39
FMCT 141	Introduction to the Fashion Industry	3
FMCT 203	Introduction to Fashion Forecasting	3
FMCT 300	Historic Costumes	3
FMCT 341H	Fashion Buying and Merchandising Honors	3
FMCT 342H	Advertising and Promotion Honors	3
FMCT 351	Fashion Buying and Merchandising II	3
FMCT 361	Apparel Construction and Evaluation	3
FMCT 371H	International Trade and Retailing Issues Honors	3
FMCT 381	Textiles I	3
FMCT 382H	Textiles II Honors	3
FMCT 441	Visual Merchandising	3
FMCT 490H	Product Development Honors	3
HUEC 490H	Consumer Motivation Honors	3

MAJOR REQUIREMENTS		Credits 8
HUEC 370	Professional Development	2
HUEC 399	Pre-Internship Seminar	1
HUEC 400	Internship	3
HUEC 409	Post-Internship Seminar	1
HUEC 495	Senior Seminar in Human Ecology	1

FREE ELECTIVES	Credits 14
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*Students who select to minor in Business must earn a “C” or better in MATH 109, ACCT 288, ECON 200 and ECON 201; and must satisfy all other requirements for the minor in Business as set by Business & Accounting Program. Please refer to that section for specific requirements.

CURRICULUM GUIDE FOR FASHION MERCHANDISING HONORS

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101H	3	ENGL 102H	3
GEN ED CURR AREA III	3	ENGL 003 ¹	0
GEN ED CURR AREA I	3	EXSC 111 ²	3
FMCT 141	3	MATH 109	3
HUEC 100	1	GEN ED CURR AREA III	4
SOCI 101	<u>3</u>	MUSI 101H	<u>3</u>
	16		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 203	3	HUEC 230	3
ENGL 203	3	ECON 201H	3
ECON 200H	3	ENGL 305	3
ACCT 288	3	TELC 336	3
PSYC 200	<u>3</u>	FMCT 300	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 341H	3	FMCT 342H	3
FMCT 361	3	FMCT 382H	3
FMCT 381	3	FMCT 351H	3
Elective	3	HUEC 399	1
MKTG 308	<u>3</u>	HUEC 370	2
	15	Elective	<u>3</u>
			15

SUMMER

HUEC 400 ³	3
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SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 371H	3	MKTG 314	3
FMCT 441	3	FMCT 490H	3
HUEC 495	1	HUEC 490H	3
HUEC 409	1	Elective	<u>3</u>
Electives	<u>5</u>		12
	13		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

³HUEC 400 meets the out of class experience requirement for three credits.

FASHION MERCHANDISING FIT ADVERTISING AND MARKETING COMMUNICATIONS

The Fashion Merchandising FIT Advertising & Marketing Communications program is a dual degree program completed in conjunction with the Fashion Institute of Technology 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 Marketing Communications. Students return to UMES to complete the four-year program and receive both degrees at graduation. This program prepares students for entry level management positions in the broad field of fashion merchandising, advertising, and marketing communications, with a minor in business administration.

DEPARTMENTAL REQUIREMENTS

To be eligible to participate in the **Fashion Institute of Technology (FIT) Visiting Student Program**, you must meet the following criteria:

- Must be a full-time student at UMES in the Department of Human Ecology prior to their participation in the Visiting Student Program.
- Must be in good academic standing with a minimum cumulative GPA of 3.0.
- Must complete all forms and meet deadlines listed below in order to be considered for admissions. (See faculty coordinator for related forms).
- **Must complete the last 30 credit hours of course work for his or her degree at UMES.**

Upon acceptance to the University and entrance into the Department of Human Ecology, a student should inform his/her academic advisor prior to registration of his/her interest in participating in the Visiting Student Program. Students will be expected to make an appointment with the faculty coordinator **prior to November 15th** of the sophomore year for details and to receive all forms and applications pertaining to the program. Students who plan to attend FIT will be required to submit all application and financial aid materials by January 15th of their sophomore year.

CAREER OPPORTUNITIES

Possible career opportunities include merchandiser, buyer, fashion stylist, fashion consultant, public relations, marketing, journalism, and broadcasting.

**FASHION MERCHANDISING FIT ADVERTISING AND
MARKETING COMMUNICATIONS**

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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 103 (Lab), PHYS 102, PHYS 161, PHYS 181H, PHYS 182H, PHYS 263, PLSC 184

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109*

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online³

Curriculum Area VI - EMERGING ISSUES

Credits 7

HUEC 100 First Year Experience

EXSC 111 Personal Health & Fitness

HUEC 230 Multicultural Perspectives on Families in the U.S.

Total Required for General Education

Credits 41

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

³Students attending FIT take AC 141, which satisfies requirement for ENGL 305

SUPPORT REQUIREMENTS		Credits 15
ACCT 288*	College Accounting	3
ECON 200*	Principles of Microeconomics	3
ECON 201*	Principles of Macroeconomics	3
MKTG 308	Principles of Marketing	3
MKTG 314	Retail Management	3

FOUNDATION KNOWLEDGE		Credits 33
FMCT 203	Introduction to Fashion Forecasting	3
FMCT 300	Historic Costumes	3
FMCT 341	Fashion Buying and Merchandising	3
FMCT 351	Fashion Buying and Merchandising II	3
FMCT 361	Apparel Construction and Evaluation	3
FMCT 371	International Trade and Retailing Issues	3
FMCT 381	Textiles I	3
FMCT 382	Textiles II	3
FMCT 441	Visual Merchandising	3
FMCT 490	Product Development	3
HUEC 490	Consumer Motivation	3

MAJOR REQUIREMENTS		Credits 8
HUEC 370	Professional Development	2
HUEC 399	Pre-Internship Seminar (IC 298/498-FIT)	1
HUEC 400	Internship (IC 298/498-FIT)	3
HUEC 409	Post-Internship Seminar	1
HUEC 495	Senior Seminar in Human Ecology	1

FIT REQUIREMENTS		Credits 29
AC 111	Advertising and Promotion (FMCT 342)	3
AC 114	Marketing for IMC	3
AC 141	Journalism	3
AC 171	Mass Communication	3
AC 221	Publicity Workshop	3
AC 222	Sales Promotion	3
AC 271	Audiences and Media	3
AC 272	Research Methods in IMC	3
CD 122	Digital Layout I	2
FM 114	Introduction to the Fashion Industry**	3

FREE ELECTIVES		Credits 9
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*Students must earn a "C" or better in MATH 109 in order to enroll in ACCT 288, ECON 200, ECON 201, and FMCT 341.

**Students attending FIT will be expected to complete FM 114 Intro to the Fashion Industry at FIT instead of FMCT 141 at UMES. They cannot receive credit for both courses.

**CURRICULUM GUIDE FOR FASHION MERCHANDISING
FIT ADVERTISING AND MARKETING COMMUNICATIONS**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
SOCI 101	3	ENGL 001/ENGL 003 ¹	0
HUEC 100	1	MATH 109	3
GEN ED CURR AREA I	3	EXSC 111 ²	3
GEN ED CURR AREA III	3	GEN ED CURR AREA I	3
Elective	<u>3</u>	GEN ED CURR AREA III	<u>4</u>
	16		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 288	3	HUEC 230	3
PSYC 200	3	ECON 201	3
ENGL 203	3	FMCT 300	3
ECON 200	3	FMCT 361	3
FMCT 203	3	MKTG 308	3
Elective	<u>3</u>	Elective	<u>3</u>
	18		18

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AC 111	3	AC 222	3
AC 114	3	AC 231 ³	3
AC 141	3	AC 271	3
AC 171	3	AC 272	3
CD 122	2	AC 221	3
FM 114 ⁵	<u>3</u>	IC 298/498 ⁴	<u>4</u>
	17		19

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FMCT 371	3	MKTG 314	3
HUEC 409	1	FMCT 351	3
HUEC 495	1	FMCT 382	3
FMCT 341	3	HUEC 490	3
FMCT 381	3	FMCT 490	<u>3</u>
FMCT 441	3		15
HUEC 370	<u>2</u>		
	16		

Total Credit Hours: 135

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

³AC 231 is equivalent to ENGL 305.

⁴Students may substitute IC 298/498 for HUEC 399 and 400 for 4 credits.

⁵FM 114 is equivalent to FMCT 141.

NUTRITION PROGRAM

The program in Nutrition provides a strong foundation in basic sciences, including chemistry, biochemistry, physiology and microbiology. Nutrition requires an in-depth knowledge of the physiological and biochemical aspects of metabolism, the nutrient composition of foods and an appreciation of the role of social and economic factors as determinants of food selection.

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. It also meets the needs of students who want to continue with their graduate work; and it provides students with a strong foundation for graduate studies in human nutrition and related fields, such as public health. The School of Agricultural and Natural Sciences also offers a Master of Science degree in Food and Agricultural Sciences.

DEPARTMENTAL REQUIREMENTS

The Nutrition Program requires 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. Students transferring into the department from another department or institution must have a 2.5 Cum GPA. All students are required to complete a 200 clock-hour internship.

Nutrition students are not required to complete an internship. However, each student is required to complete an extensive senior research project. The topic of the senior project is based on the student’s area of interest. Recent topics of interest include food safety, nutrition and aging, nutrition and sports, and directed experimental research.

Students must include a minimum of 12 credits of Out-of-Class Experience. Students should consult their advisor when selecting the Out-of-Class Experience courses.

CAREER OPPORTUNITIES

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.

NUTRITION
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES **Credits 9**

Students must select Discipline E: SPEECH ENGL 203^{1,2} plus:

One course from:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101, HIST 102, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGES

ASLS 203, ASLS 204, FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

SOCI 101

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

Students must select **two** science courses and **one** science laboratory course from the following.

BIOL 111, BIOL 113 (lab), BIOL 231, BIOL 233 (lab)

Curriculum Area IV – MATHEMATICS **Credits 3**

MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**

HUEC 100 First Year Experience

EXSC 111 Personal Health & Fitness

MATH 210 Elementary Statistics

Total Required for General Education **Credits 41**

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Honor students substitute Honors courses

SUPPORT REQUIREMENTS		Credits 14
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory <u>OR</u>	1
AMIC 324	Agricultural Microbiology	4
BIOL 232	Human Anatomy and Physiology II	3
BIOL 234	Human Anatomy and Physiology II Laboratory	1
CHEM 342	Biochemistry II	3
CHEM 344	Biochemistry II Laboratory	1
HUEC 474	Research Methodology	2

FOUNDATION KNOWLEDGE		Credits 27
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 391	Nutritional Science I	3
NUDT 392	Nutritional Science II	3
NUDT 473	Community Nutrition	3
NUDT	Elective	3

MAJOR REQUIREMENTS		Credits 11
HUEC 370	Professional Development	2
HUEC 463	Food, Clothing and Culture	3
NUDT 484	Nutrition Research	5
HUEC 495	Senior Seminar in Human Ecology	1

CHEMISTRY MINOR		Credits 20
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

FREE ELECTIVES (consult w/advisor)	Credits 6
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CURRICULUM GUIDE FOR NUTRITION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 111	3	BIOL 111	3
CHEM 113	1	BIOL 113	1
ENGL 101	3	CHEM 112	3
HUEC 100	1	CHEM 114	1
MATH 109	3	EXSC 111 ¹	3
SOCI 101	<u>3</u>	ENGL 102	3
	14	ENGL 001/ENGL 003 ²	0
		GEN ED CURR AREA I	<u>3</u>
			17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
ENGL 203	3	PSYC 200	3
NUDT 211	3	NUDT 212	3
NUDT 210	<u>3</u>	NUDT 305	<u>3</u>
	17		17

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 341	3	CHEM 342	3
CHEM 343	1	CHEM 344	1
HUEC 370	2	ENGL 305	3
NUDT 310	3	MATH 210	3
NUDT 391	3	NUDT 392	<u>3</u>
GEN ED CURR AREA I	<u>3</u>		13
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AMIC 324 or		NUDT 473	3
BIOL 301 and BIOL 303	4	NUDT 484 ^{3,4}	5
Electives	6	HUEC 495	1
HUEC 474	2	HUEC 463	<u>3</u>
NUDT Elective	<u>3</u>		12
	15		

Total Credit Hours: 120

¹EXSC 111 cannot be repeated for credit.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Students may substitute NUDT 484 for HUEC 399, 400 & 409 for five (5) credits.

⁴NUDT 484 (5 credits) and NUDT 499 (1-3 credits) meet the out-of- class experience. Students should consult their advisor to select appropriate courses to meet the 12 credit hour requirement.

MINOR PROGRAMS

The Department offers minor programs in Clothing and Textiles, Fashion Merchandising, Gerontology, Nutrition, and Family Financial Planning. The minor program in Nutrition has two Options: Nutritional Science and Food and Nutrition. A minimum of 18 credits is required for each area. Fashion Merchandising and Family & Consumer Science majors should consult advisor prior to selecting a minor. Clothing and Textiles, Gerontology, and Nutrition Option 2 are not available to FCS majors because of course duplication. The courses are as follows.

CLOTHING AND TEXTILES

FMCT 300 FMCT 361 FMCT 381
FMCT 382

Select two from:

FMCT 321 FMCT 422 HUEC 490
FMCT 460

FASHION MERCHANDISING

FMCT 141 FMCT 341 FMCT 441
FMCT 342

Select two from:

FMCT 361 FMCT 381 HUEC 490
FMCT 490

GERONTOLOGY

HUEC 220 HUEC 460 SOCI 361

Select three from:

HUEC 203¹ NUDT 305 REHA 201
HUEC 450 REHA 302

NUTRITION OPTION 1: NUTRITIONAL SCIENCE

NUDT 210² NUDT 391 NUDT 401
NUDT 392 NUDT 402
NUDT 473

NUTRITION OPTION 2: FOOD AND NUTRITION

NUDT 210² NUDT 305 NUDT 473
NUDT 211 NUDT 310
NUDT 212

FAMILY FINANCIAL PLANNING

HUEC 301Online HUEC 403Online HUEC 408 Online
HUEC 305 Online HUEC 404Online
HUEC 315 Online

ALTERNATIVE CREDITS

All undergraduate students who enroll in degree programs will be required to complete 12 alternative credits before graduating. Alternative credits can be earned by completing internships, summer and winter session courses, on-line courses, independent study, undergraduate research, credit by examination, and courses completed while studying abroad.

¹HUEC 203 cannot be used to satisfy the General Education Requirement.

²FCS students must substitute NUDT 214.

COURSE DESCRIPTIONS CHILD DEVELOPMENT

CHDE 220 Foundations of Early Childhood

Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

CHDE 222 Infant/Child Development and Learning

Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

CHDE 224 Emerging Language & Literacy

Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

CHDE 246 Guiding Young Children

Credit 3

This course focuses on developmentally appropriate, positive authoritative child guidance. Pre-service teachers will explore various discipline strategies, as well as learn to build a child's self-esteem and resilience in order to minimize challenging behavior in classroom settings. Co-requisite: CHDE 220.

CHDE 323 Creative Activities for Young Children

Credit 3

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

Credit 3

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. **Emphasis will be placed on inclusion.** Prerequisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

CHDE 327 Curriculum and Instruction for Infants and Toddlers

Credit 3

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 **Credit 3**

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 Credit 3

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 335 Movement Education Credit 3

This course provides application of theoretical and empirical research for field observations and curriculum projects in the field of movement education. Emphasis is placed on gross motor development in a success-oriented, child-centered, non-competitive environment. Traditional and non-traditional outdoor activities, kinesthetic learning activities across the curriculum, as well as structured and unstructured play will be covered. Outdoor learning and playground safety will be included. Pre or co-requisites: CHDE 220, CHDE 222. OPEN TO MAJORS ONLY.

CHDE 427/Online Partnerships Credit 3

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 Credit 3

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 Credit 3

This course will have students examining appropriate principles, materials and methods used with school age children. Emphasis is placed 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 Credit 1-3

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. OPEN TO MAJORS ONLY.

FASHION MERCHANDISING CLOTHING AND TEXTILES

FMCT 141 Introduction to the Fashion Industry Credit 3

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. This course consists of three hours of lecture. OPEN TO MAJORS AND MINORS ONLY.

FMCT 201 Clothing and Textiles for Consumers¹ Credit 3

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 203 Introduction to Fashion Forecasting**Credit 3**

This course will introduce students to trend research, presentation, and forecasting principles needed to work in the merchandising environment to be examined through influences on acceptance and rejection of apparel and textile products. Students will develop basic technological skills needed to forecast and work in the merchandising environment. Prerequisite: FMCT 141. OPEN TO MAJORS AND MINORS ONLY.

FMCT 300/Online Historic Costumes**Credit 3**

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 300 Online: OPEN TO MAJORS AND MINORS ONLY.

FMCT 321 Fashion Illustration**Credit 3**

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/Honors Fashion Buying & Merchandising**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

FMCT 342/Honors Advertising and Promotion**Credit 3**

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 and junior standing. OPEN TO MAJORS AND MINORS ONLY.

FMCT 351/Honors Fashion Buying and Merchandising II**Credit 3**

The course provides the fundamentals of fashion buying with instruction in planning, pricing, purchasing, retail fashion inventories, and identifies wholesale merchandise resources. Prerequisites: FMCT 341 and MATH 109.

FMCT 361 Apparel Construction/Evaluation**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

FMCT 371/Honors International Trade and Retailing Issues**Credit 3**

The course is an examination of international economic and social conditions influencing apparel trade and retailing consumption; students will explore the role of government, industry and consumers in production, distribution, and consumption of apparel in the global economy. Prerequisites: ECON 200 and junior standing or instructor's permission. OPEN TO MAJORS AND MINORS ONLY.

FMCT 381 Textiles I**Credit 3**

This is a fundamental course that covers information on fibers, yarns, fabric construction, dyeing, printing and finishing of textiles. Two lectures and one laboratory. OPEN TO MAJORS AND MINORS ONLY.

¹Course cannot be completed by Fashion Merchandising majors

FMCT 382/Honors Textiles II**Credit 3**

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: MATH 109, FMCT 381. OPEN TO MAJORS AND MINORS ONLY.

FMCT 422 Apparel Design: Pattern Drafting and Draping**Credit 3**

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**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

FMCT 460 Clothing for Special Needs**Credit 3**

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**Credit 3**

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 490/Honors Product Development**Credit 3**

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. Prerequisite: MKTG 308 or instructor's permission. OPEN TO MAJORS AND MINORS ONLY.

FMCT 497A Fashion Merchandising Study Tour**Credit 1-3**

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**Credit 1-3**

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**Credit 1-3**

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. OPEN TO MAJORS AND MINORS ONLY.

HUMAN ECOLOGY

HUEC 100 First Year Experience Seminar

Credit 1

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. Requirement 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/Laboratory

Credit 3

Principles of Art and Design/Laboratory 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 two lecture hours and one laboratory hour. OPEN TO MAJORS AND MINORS ONLY.

HUEC 203/Online Human Development: A Lifespan Perspective

Credit 3

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

Credit 3

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 CURR AREA II.

HUEC 230/Online Multicultural Perspectives on Families in the U.S.

Credit 3

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 CURR AREA VI.

HUEC 242 Foundations of Family and Consumer Science

Credit 3

This course is designed to give students an introduction to the field of family and consumer science. The Human Eco-Systems perspective is emphasized in examining daily life issues for families and consumers. Foundations of the discipline of family and consumer sciences are incorporated to include the history and mission of FCS; roles in meeting the needs of individuals, families, and communities; the integrative nature of the profession; trends in the field; and career opportunities. Prerequisite: HUEC 100.

HUEC 243 Housing Design

Credit 3

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 301 Online Fundamentals of Family Financial Planning

Credit 3

The course introduces students to the various financial planning topics that face families such as the financial planning process, family/planner interactions, time value of money applications, personal financial statements, cash flow and debt management, asset acquisition, and education planning. Risk management, investment planning, retirement planning, plan integration, and ethics are also discussed.

HUEC 305 Online Insurance Planning for Families

Credit 3

The course introduces students to risk management and insurance decisions in family financial planning. Topics include insurance for life, health, disability, property and liability risks, as well as annuities, group insurance, and long term care.

HUEC 310/Honors Resource Management Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

HUEC 315 Online Income Tax Planning for Families Credit 3

The course is an overview of current tax laws, income tax principles, and taxation terminology. It focuses on tax planning considerations, computations, and tax planning strategies including tax pitfalls that impact families' financial planning.

HUEC 343 Dwelling Credit 3

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/Online Contemporary Family Issues Credit 3

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 AREA II. OPEN TO MAJORS AND MINORS ONLY.

HUEC 370 Professional Development Credit 2

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. Pre-requisite: junior level standing. OPEN TO MAJORS ONLY.

HUEC 399 Pre-Internship Seminar Credit 1

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 Credit 3

Internship is a supervised work experience in an approved work setting planned cooperatively with business establishments, agencies, or centers. Two hundred clock hours of field experience are required. Prerequisite: HUEC 399. OPEN TO MAJORS ONLY.

HUEC 403 Online Investment Planning for Families Credit 3

The course provides the student with an understanding of the various types of securities traded in financial markets, investment theory and practice, portfolio construction and management, and investment strategies and tactics to meet a family's investment goals.

HUEC 404 Online Retirement Planning for Families Credit 3

The intent of the retirement planning course is to provide individuals with knowledge of both public and private retirement plans. The public plans include Social Security, Medicare, and Medicaid. The private plans include defined benefit and defined contribution plans and their regulatory provisions. The specifics of the various plans are analyzed, as well as non-qualified deferred compensation plans. Finally, issues that individuals face in retirement, such as lifestyle choices and medical issues are discussed.

HUEC 408 Online Estate Planning for Families Credit 3

The course focuses on the efficient conservation and transfer of wealth, consistent with the family's goals. It is a study of the legal, tax, financial and non-financial aspects of this process, covering topics such as trusts, wills, probate, advanced directives, charitable giving, family wealth transfers, and related taxes.

HUEC 409 Post-Internship Seminar Credit 1

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 Credit 1-5

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. OPEN TO MAJORS AND MINORS ONLY.

HUEC 451 Post Practicum Credit 1

This course is a seminar course. Reflections of practicum experience and guidance for topics occurring in HUEC 450 will be discussed. Discussions centering on current MSDE guidelines and current child care regulations will be discussed along with preparation for future employment in a child care setting. Concurrent registration with HUEC 450 is required. Prerequisite: HUEC 399; Co-requisite: HUEC 450. OPEN TO MAJORS ONLY.

HUEC 460 The Family and Aging Credit 3

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 463 Food, Clothing and Culture Credit 3

This course includes interdisciplinary examination of the socio-cultural and economic dimensions of choices related to food and clothing in multicultural family and community environments. Prerequisites: SOCI 101, PSYC 200, Junior or Senior standing.

HUEC 464 Social Psychology of Food, Clothing and Shelter Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

HUEC 474/Honors Research Methodology Credit 2

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/Honors Supervisory Management Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

HUEC 490/Honors Consumer Motivation Credit 3

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. OPEN TO MAJORS AND MINORS ONLY.

HUEC 495 Senior Seminar in Human Ecology Credit 1

This is a capstone course for Human Ecology majors. It is designed to evaluate the proficiency of senior level students in their major coursework. This course provides students with the opportunity to demonstrate their mastery of basic concepts, theories, and bodies of knowledge in their respective area of concentration. Pre-requisites: HUEC 100 or permission of instructor, HUEC 370, Senior status. OPEN TO MAJORS ONLY.

HUEC 499 Independent Study/Undergraduate Research Credit 1-3

Students who wish to get advanced experience in a particular area of their discipline and an opportunity to do supervised and 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 are determined by the student's major department. Department chair's approval is required. OPEN TO MAJORS ONLY.

NUTRITION AND DIETETICS

NUDT 210/Online Elements of Nutrition Credit 3

This is an introductory level nutrition course, which covers the fundamental concepts, nutrient functions, and human nutritional requirements.

NUDT 211 Scientific Principles of Food I Credit 3

This is a fundamental course in food preparation based on physical, chemical, and nutritional changes occurring in food. Government regulations governing food and food safety are also covered. Product evaluation using sensory techniques is emphasized. One lecture and two laboratories. OPEN TO MAJORS AND MINORS ONLY.

NUDT 212 Scientific Principles of Food II Credit 3

This is a continuation of NUDT 211. Students are required to carry out individual and group projects to further their understanding of the principles covered. Prerequisite: NUDT 211. One lecture and two laboratories. OPEN TO MAJORS AND MINORS ONLY.

NUDT 214 Infant and Child Nutrition Credit 3

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 Credit 1

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**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 310 Nutrition Education and Counseling**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 391 Nutritional Sciences I**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 392 Nutritional Sciences II**Credit 3**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 401 Clinical Nutrition I**Credit 4**

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 499I. OPEN TO MAJORS AND MINORS ONLY.

NUDT 402 Clinical Nutrition II**Credit 4**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 471 Foodservice Systems Management**Credit 3**

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. Open to Juniors and Seniors. Prerequisites: NUDT 211 and NUDT 212. This course is cross-listed with NUDT 499H.

NUDT 472 Foodservice Management Practicum**Credit 2**

This course focuses on the application of foodservice systems management strategies. Students explore applications of food safety principles, menu planning, purchasing, production, service, and resource management in an institutional foodservice setting. Senior level dietetics majors or permission of instructor is required. Students must have 40 clock hours for each credit hour of practicum field experience. Co-requisite: NUDT 471 (cross-listed with NUDT 499J).

NUDT 473 Community Nutrition**Credit 3**

This course involves a study of planning, implementation and evaluation of nutrition programs. Strategies and resources for community needs assessment, health promotion and disease prevention; programming and funding are also included. Prerequisites: NUDT 310 or permission of the instructor. This course is cross-listed with NUDT 499E.

NUDT 475 Senior Practicum**Credit 3**

This course involves experiential learning designed to allow students to observe and practice the role of a nutrition practitioner in a health care setting. Students will have experiences in community and clinical domains. Students must complete 40 clock hours for each credit hour. Prerequisite: Senior level status. OPEN TO MAJORS ONLY.

NUDT 484 Nutrition Research**Credit 3-5**

This course requires students to understand the principles of basic experimental design and plan and carry out a specific project in their area of interest. Prerequisites: Senior level status and permission of the instructor. This course is cross-listed with 499G.

NUDT 485 International Nutrition**Credit 3**

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**Credit 1-5**

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. OPEN TO MAJORS AND MINORS ONLY.

NUDT 499A Nutritional Science II**Credit 3****NUDT 499B Senior Practicum****Credit 4****NUDT 499C Nutritional Science I****Credit 3****NUDT 499D Clinical Nutritional II****Credit 3****NUDT499E Community Nutrition****Credit 3****NUDT 499F Nutrition Education & Counseling****Credit 3****NUDT499G Nutrition Research****Credit 3-5****NUDT499H Foodservice Systems Management****Credit 3****NUDT499I Clinical Nutrition I****Credit 3**

DIRECTORY OF FACULTY

Brooks, Jada, Assistant Professor

B.S., Virginia State University; M. Ed, Virginia State University; Ph.D., Virginia Polytechnic Institute & State University

Cecil, Malinda, Assistant Professor

B.S., Hood College; M.S., Virginia Tech; Ph.D., University of Maryland Eastern Shore

Clinton, Bridgett, Assistant Professor

B.S., University of Maryland Eastern Shore; M.S., Michigan State University; D.Mgt., University of Maryland University College

Ferraro, Cathy, Lecturer & Director, Dietetic Internship Program

B.Ss, Marywood University; M.S., Marywood University

Khoza, Lombuso, Associate Professor

B.S., University of Maryland Eastern Shore; M.S., University of California, Davis; M.S., University of Leeds; Ph.D., Southern Illinois University Carbondale

Kumelachew, Missale, Associate Professor

B.S., University of Minnesota; M.S., Howard University; Ph.D., University of Maryland College Park

Long, Donna, Assistant Professor & Director of Child & Family Development Center

B.A., Hood College; M.A., Trevecca Nazarene University; Ed.D., Wilmington College

Lyon-Bennett, Nina, Chair and Associate Professor

B.A., Clark College; M.S., Atlanta University; Ph.D., University of Georgia

Satterlee, Donna, Senior Lecturer

B.S., Beaver College; M.Ed., Old Dominion University, Ed.D., Field Graduate University

Shaw, Anugrah, Professor

B.S., Delhi University; M.S., Maharaja Sayajirao University; Ph.D., Texas Woman's University

Zoumenou, Virginie, Associate Professor; Joint Appointment Extension/Human Ecology

B.S., National University of Côte-d'Ivoire; M.S., National University of Côte-d'Ivoire; Ph.D., Florida International University and National University of Côte-d'Ivoire.

DEPARTMENT OF NATURAL SCIENCES

www.umes.edu/sciences/dns

Dr. Deborah Sauder, Chairperson

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 also prepare students for entry into graduate or professional schools.

DNS offers programs for students majoring in Biochemistry, Biology, Chemistry, and Environmental Science and minors in Biology, Chemistry and Physics. The Chemistry Program is certified by the American Chemical Society. Also offered are teaching programs in Biology and Chemistry.

Included in the Department's offerings is a two year pre-Pharmacy program and minors in Biology, Chemistry, and Physics. In cooperation with the University of Maryland Center for Environmental and Estuarine Studies (CEES), combined four-year B.S./ five-year M.S. programs in Marine Sciences and Environmental Chemistry are available.

The Department offers courses leading to M.S. and Ph.D. degrees in Toxicology and the University-wide graduate program in Marine-Estuarine-Environmental Sciences. 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.

OBJECTIVES

The objectives of the programs in DNS are to:

1. Provide students with academic curricula to develop a strong understanding of basic science.
2. Prepare students to be adaptable to new developments in science.
3. Train students to conduct scientific research through example, mentoring and personal experience.
4. Prepare students for employment in newly evolving and conventional scientific fields related to their majors.
5. Expose students to social, historical, and ethical issues through the science curricula.
6. Promote interaction between the university and the community through faculty and students in the department.
7. Promote faculty development to accomplish the objectives of the department.

DEGREES OFFERED

Bachelor of Science – Biochemistry Non-Teaching

Bachelor of Science – Biology Non-Teaching

Bachelor of Science – Biology Honors Non-Teaching, with Pre-Physical Therapy, Pre-Medicine, and Pre-Dental Concentrations

Bachelor of Science – Biology Education – Teaching

Bachelor of Science – Chemistry Non-Teaching (ACS Certification)

Bachelor of Science – Chemistry Honors Non-Teaching (ACS Certification), with Pre-Dentistry and Pre-Medicine Concentration

Bachelor of Science – Chemistry Non-Teaching (without ACS Certification)

Bachelor of Science – Chemistry Education –Teaching

Bachelor of Science – Environmental Sciences

Bachelor of Science – Environmental Sciences Honors

Bachelor of Science/Master of Science¹ (BS/MS) – Environmental Sciences
Bachelor of Science/Master of Science¹ (BS/MS) – Environmental Sciences Honors

NON DEGREE PROGRAMS OFFERED

Pre-Pharmacy
Minors – Biology, Chemistry, Physics

DEPARTMENT GENERAL PROGRAM REQUIREMENTS

Maryland Higher Education Commission has set a graduation requirement of 120 semester hours to obtain a four year baccalaureate degree. The Biology, Chemistry and Environmental Science Programs require that majors earn a minimum grade of “C” in each course of the Program Core Courses and Program Electives and an overall “C” grade average in General Education and Supportive Course Requirements.

DEPARTMENTAL REQUIREMENTS

Biochemistry Non-Teaching: Students majoring in Biochemistry Non – Teaching must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 50 semester hours of Departmental Core courses, 7 semester hours of program electives, 19 semester hours of supportive courses and 2 semester hours of free electives.

Biology Non-Teaching major: Students majoring in Biology non – Teaching must complete a total of 120² credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of supportive courses and 2 semester hours of free electives.

Biology Non-Teaching Honors: Students majoring in Biology non – Teaching Honors must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of supportive courses and 2 semester hours of free electives. The admission of students to the undergraduate program in Biology is based upon the general admission requirements of the University. Minimum requirements for application to the UMES Honors Program include a cumulative grade point average of 3.3 and minimum SAT score of 1650. Additionally, for retention in the Honors Program, each student must maintain a semester grade point average of 3.0 in their major courses and a cumulative GPA of 3.3. Students must complete a minimum of two honors courses each semester.

Biology Non-Teaching - Pre-Med/Pre- Dentistry Tracks: Students majoring in Biology with Pre-Med/Pre-Dentistry Tracks must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 19 semester hours of program electives and 34 semester hours of supportive courses.

Biology Non-Teaching - Pre-Physical Therapy Track: Students majoring in Biology Non-Teaching with pre-Physical Therapy Track must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of supportive courses and 2 semester hours of free electives.

¹It is a 5-year BS/MS combined program, Details are given later; also consult the UMES Graduate Catalog for clarification of the combined BS/MS degree programs.

²Minimum Maryland Higher Education Committee (MHEC) requirements for a Bachelor of Science degree.

Biology Teaching: Students in the major must complete a total of 131¹ credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 21 semester hours of Departmental Core courses, 7 semester hours of program electives, 42 semester hours of professional Education courses, and 19 semester hours of supportive courses.

¹The higher than 120 cr. hr. requirement for graduation is to meet the standards of NCATE (National Council for Accreditation of Teacher Education) and NSTA (National Science Teachers Association).

Students who meet University of Maryland Eastern Shore’s admission requirements can enroll in Biology Education. Prospective Biology Teacher Education candidates are not formally admitted to the Professional Education Unit until they have completed an Application to Teacher Education and have been accepted.

Teacher candidates who wish to major in Biology Education must have an overall and major content grade point average of 2.75 for admission into and retention in the program. For admission, overall GPA of 2.75 or higher in a minimum of 45 approved semester hours is required, passing the University’s English Proficiency Seminar, and also PRAXIS I (scheduled and administered by Educational Testing Services) while registered for Praxis preparation course (Credit 1) EDCI 201.

	Passing Praxis Scores	
	Paper/Pencil Test	Computer-Based Test
Reading	177	325
Mathematics	177	322
Writing	173	319

Applications must be completed for admission to the Biology Education teacher program within the scheduled deadline. The teacher education application lists specific course requirements and requires two essays which address potential candidate’s disposition toward teaching, as well as providing writing samples, and field experience recommendation. Four letters of recommendation from faculty (one has to be from the advisor) are also required.

Grades of “C” or above must be attained in each required course of the Biology Education major, the specialized content area combined with the professional educational courses. A candidate’s progress is monitored each semester by the academic advisor to ensure that the candidate continues to meet the minimum GPA of 2.75 in both the major and overall course work.

In order to be eligible for internship, Biology Education candidates are required to submit the following indicators: application for internship, field experience, and pre-internship recommendations, methods instructor recommendations, formal academic measures including a 2.75 or higher overall grade point average, a 2.75 grade point average in the major, with no grades lower than C in all courses, PRAXIS II passing scores in Biology, and working portfolio review.

All Biology Education candidates must satisfactorily complete the independent research project and manuscript prior to graduation. The candidates must satisfactorily complete the professional portfolio, which is started early in the program and revised and completed during the internship experience, is tied to the INTASC Principles, Unit’s Conceptual Framework, and NSTA standards prior to graduation. They must also complete an Exit Survey.

Chemistry non -Teaching with ACS Certification*: To obtain an ACS-certified chemistry degree, students must complete a total of 120 credit hours of University courses. This includes

a minimum of 53 semester hours of program core courses, 15 hours of supportive courses, 7 hours of program electives courses, 43 hours of general education courses, and 2 hours of free electives courses from the approved lists of requirements as outlined in the catalog. The students must also follow ACS guidelines for CHEM 499 (undergraduate research). This includes research project conducted at UMES and comprehensive research report. The report should be written to meet the ACS requirement as outlined in the ACS document “Guidelines for Preparing a Research Report.” For more information, please refer to the ACS website www.ACS.org.

Chemistry Non -Teaching with ACS Certification* with Pre–Medicine/Pre-Dentistry tracks: students must complete a total of 120 credit hours of University courses to obtain an ACS-certified chemistry degree. This includes 49 semester hours of program core courses, 19 hours of supportive courses, 7 hours of program electives courses, 43 hours of general education courses, and 2 hours of free electives courses from the approved lists of requirements as outlined in the catalog. The students must also follow ACS guidelines for CHEM 499 (undergraduate research). This includes a research project conducted at UMES and a comprehensive research report. The report should be written to meet the ACS requirement as outlined in the ACS document “Guidelines for Preparing a Research Report.” From more information, please refer to the ACS website, www.ACS.org.

Chemistry non -Teaching without ACS Certification: Students must complete a minimum of 120 credit hours which include 53 semester hours of program core courses, 15 hours of supportive courses, 7 hours of program electives courses, 43 hours of general education courses and 2 hours of free electives courses from the approved lists of requirements as outlined in the catalog. Students are not required to follow the ACS course guidelines since the degree is non-ACS certified.

Chemistry Teaching: Maryland Higher Education Commission has set a graduation requirement of 131¹ semester hours to obtain a 4 year baccalaureate degree. Students must complete 29 semester hours of program core courses, 15 hours of supportive courses, 3 hours of program electives courses, 42 hours of general education courses and 42 hours of professional education courses from the approved lists of requirements as outlined in the catalog. Students are not required to follow the ACS course guidelines since the degree is non-ACS certified. Teacher candidates who wish to major in Chemistry Education must have an overall and major content grade point average of 2.75 for admission into and retention in the program. For admission, overall GPA of 2.75 or higher in a minimum of 45 approved semester hours, passing the University’s English Proficiency Seminar, and PRAXIS I (scheduled and administered by Educational Testing Services) while registered for Praxis preparation course (Credit 1) EDCI 201 are required.

Any individual who meets University of Maryland Eastern Shore’s admission requirements can enroll in chemistry Education. Prospective Chemistry Teacher Education candidates are not formally admitted to the Professional Education Unit until they have completed an Application to Teacher Education and have been accepted.

Teacher candidates who wish to major in Chemistry Education must have an overall and major content grade point average of 2.75 for admission into and retention in the program. For admission, overall GPA of 2.75 or higher in a minimum of 45 approved semester hours is required, passing the University’s English Proficiency Seminar, and also PRAXIS I (scheduled and administered by Educational Testing Services) while registered for Praxis preparation course (Credit 1) EDCI 201.

¹The higher than 120 cr. hr. requirement for graduation is to meet the standards of NCATE (National Council for Accreditation of Teacher Education) and NSTA (National Science Teachers Association).

Passing Praxis Scores

	Paper/Pencil Test	Computer-Based Test
Reading	177	325
Mathematics	177	322
Writing	173	319

In order to be eligible for internship, Chemistry Education candidates are required to submit the following indicators: application for internship, field experience, and pre-internship recommendations, methods instructor recommendations, formal academic measures including a 2.75 or higher overall grade point average, a 2.75 grade point average in the major, with no grades lower than C in all courses, PRAXIS II passing scores in Chemistry, and working portfolio review.

All Chemistry Education candidates must satisfactorily complete the independent research project and manuscript prior to graduation. The candidates must satisfactorily complete the professional portfolio, which is started early in the program and revised and completed during the internship experience, is tied to the INTASC Principles, Unit's Conceptual Framework, and NSTA standards prior to graduation. They must also complete an Exit Survey.

Environmental Science - Environmental Chemistry Option: Students must complete 120 semester hours: 42 semester hours in general education courses, 29 semester of hours in program core courses, 46 semester hours in program supportive courses and 3 semester hours in program electives. Students are required, to take independent study and/or undergraduate research in their junior or senior year.

Environmental Science - Marine Science Option: Students must complete 120 semester hours: 42 semester hours in general education courses, 38 semester hours in program core courses, 34 semester hours in program supportive courses and 6 semester hours in electives. Students are required, to take an independent study or undergraduate research in their junior or senior year.

Dual Degree Program - Environmental Science (Marine Sciences Track) UMES - SU Dual Degree Program-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 in addition to other required courses at Salisbury University.

Combined Four-year/Five-year B.S./M.S. Degree Program with Environmental Chemistry and Marine Sciences options: The two options are 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 the requirements for the two programs. A student wishing to pursue the 5-year M.S. program must make a formal application to the MEES program in the first semester of the Junior year. Students must take the GRE (General Test) during their junior year. They have the option of being in residence at UMES or at a participating CEES campus during their senior and fifth years.

Students enrolled in the Environmental Chemistry option must complete 120 semester hours of undergraduate courses and 30 semester hours graduate courses for their degrees: 42 semester hours in general education courses, 33 semester hours in undergraduate program core courses and 45 semester hours of supportive courses. To receive the M.S. degree, students must satisfy degree requirements which include a total of 30 course credits: course work (27 credits) and Master's Thesis research (6 credits).

Students who enroll in the Marine Science option must complete 120 semester hours of undergraduate courses and 30 semester hours of graduate courses for their degrees: 42 semester hours of general education courses, 38 semester hours of undergraduate program core courses, 34 semester hours of supportive courses and 6 semester hours of program elective courses. 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).

Pre-Pharmacy Curriculum: Pre pharmacy students must complete 73 semester hours of courses with a grade of "C" or better, which include a minimum of 20 hours of biology and chemistry at the 200 level or above and 8 hours of physics courses.

Minors in Biology, Chemistry, Environmental Science, and Physics: A minor can be obtained with 20 semester hours of program courses with a grade of "C" or better in addition to those courses used to fulfill graduation requirements in a major program.

BIOCHEMISTRY (NON-TEACHING)

DEPARTMENTAL REQUIREMENTS

Students majoring in Biochemistry Non – Teaching must complete a total of 120 credit hours of University courses, which includes twelve alternative credits required for graduation. This includes a minimum of 43 semester hours of General Education Requirements, 49 semester hours of Departmental Core courses, 7 semester hours of program electives, 18 semester hours of Supportive courses and 3 semester hours of free electives.

OBJECTIVES

The goal of the Biochemistry Program is to prepare academically talented students to enter graduate and professional schools with the intention of obtaining terminal degrees (such as PhD, MD, PharmD, DVM, DOM, DDS). This goal is supported by the following objectives to:

- train students through demonstration, mentoring and personal experience to gain knowledge and develop chemical skills necessary to conduct scientific research;
- impart students with contemporary laboratory techniques and skills required to conduct scientific investigations; and
- provide students with the academic curricula necessary to develop a strong understanding and knowledge of chemical theory and practice.

CAREER OPPORTUNITIES

Students graduating with a Bachelor's of Science in Biochemistry will be employable in chemical, biological or biomedical fields. They may opt to apply for admission to medical or other health professional schools such as Pharmacy, Physician Assistant or Physical Therapy School. These students are also eligible to apply for admission to graduate school. Students who choose not to pursue a terminal degree can work in industry as chemists for biotechnology, pharmaceutical or environmental management companies. Graduates can also work for government agencies such as National Science Foundation, National Institutes of Health, Food and Drug Administration, Environmental Protection Agency, National Institute of Standards and Technology, National Oceanic and Atmospheric Administration, Federal Bureau of Investigation, and Central Intelligence Agency. Websites which describe careers in chemistry include: The ACS website www.ACS.org, <http://chemistry.about.com/cs/5/f/blcareers.htm>, and <http://www.chemistryguide.org/jobs-in-chemistry.html>. The students are encouraged to explore these agencies and websites.

GENERAL EDUCATION REQUIREMENTS

All biochemistry majors are expected to complete a common body of academic course work (43 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498 or BIOL 498) course, undergraduate research (CHEM 499 or BIOL 498) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy

the alternative credits requirement of 12 cr. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES **Credits 9**

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course from each of two different disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

Select either PHYS 121 to 124 series (Algebra and Trigonometry Based Series)

PHYS 121 General College Physics I 3

PHYS 122 General College Physics II 3

PHYS 123 General College Physics Laboratory I 1

PHYS 124 General College Physics Laboratory II 1

Or PHYS 181H to 184H series (Calculus Based Series)

PHYS 181H Introductory Physics I (Honors) 3

PHYS 182H Introductory Physics II (Honors) 3

PHYS 183H Introductory of Physics Laboratory I (Honors) 1

PHYS 184H Introductory of Physics Laboratory II (Honors) 1

Area IV: Mathematics **Credits 7**

MATH 110 Trigonometry & Analytical Geometry or HIGHER 3

MATH 112 Calculus I 4

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101/H Basic Composition I/Honors 3

ENGL 102/H Basic Composition II/Honors 3

ENGL 001/002/003 English Proficiency Exam 0

ENGL 305/H/Online Technical Writing/Honors/Online or 3

ENGL 310/H/Online Advanced Composition/Honors/Online 3

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES		Credits 4
Select DNSC 100 and one additional course.		
DNSC 100	Freshman Seminar	1
EXSC 111	Personalized Health Fitness	3
HUEC 230	Multicultural Perspectives on Families in the U.S.	3
TMGT 306	Ecology and Cultural Tourism	3

Total General Education Requirement **Credits 43**

PROGRAM REQUIREMENTS

CORE REQUIREMENTS **Credits 49**

A grade of “C” or better is required in each of the Program Core courses. Honors students may take Honors section of the course as advised.

BIOL	111/H	Principles of Biology I	3
BIOL	113/H	Principles of Biology Laboratory I	1
BIOL	222	Genetics	3
BIOL	223	Genetics Laboratory	1
CHEM	111/H	Principles of Chemistry I	3
CHEM	113/H	Principles of Chemistry Laboratory I	1
CHEM	112/H	Principles of Chemistry II	3
CHEM	114/H	Principles of Chemistry Laboratory II	1
CHEM	211/H	Fundamentals of Organic Chemistry I	3
CHEM	213/H	Fundamentals of Organic Chemistry Laboratory I	1
CHEM	212/H	Fundamentals of Organic Chemistry II	3
CHEM	214/H	Fundamentals of Organic Chemistry Laboratory II	1
CHEM	311	Analytical Chemistry I	4
CHEM	341/H	Biochemistry I	3
CHEM	343/H	Biochemistry Laboratory I	1
CHEM	342/H	Biochemistry II	3
CHEM	344/H	Biochemistry Laboratory II	1
CHEM	401	Principles of Physical Chemistry I	4
CHEM	431	Intermediary Metabolism	3
BIOL	497/H	Biology Seminar Or	
CHEM	497/H	Chemistry Seminar	1
BIOL	499/H	Undergraduate Research – Chemistry Or	
CHEM	499/H	Undergraduate Research - Biology	4
DNSC	400	Senior Proficiency Seminar	1

SUPPORTIVE COURSES **Credits 18**

A grade point average of “C” or better is required in supportive courses.

BIOL	301	Microbiology	3
BIOL	303	Microbiology Laboratory	1
BIOL	326	Cell Biology	3
BIOL	327	Cell Biology Laboratory	1
CHEM	421	Instrumental Analysis	4
CHEM	498	Independent Study – Chemistry or	
BIOL	498	Independent Study - Biology	3
BUED	212	Computer Concepts/Applications ¹ <u>or</u>	
CSDP	121	Microcomputer Applications ¹	3

PROGRAM ELECTIVES**Credits 7**

Choose any two courses from the following electives; one must have a laboratory component. A grade of "C" or better is required in each of the Program Elective courses.

CHEM	407	Protein Structure and Function	4
CHEM	420	Advanced Inorganic Chemistry	4
CHEM	422M	Bio-Inorganic Chemistry	3
CHEM	432	Advanced Organic Chemistry	3
CHEM	435	Introduction to Immunology	3
CHEM	436	Introduction to Immunology Laboratory	1
CHEM	670	Advanced Environmental Chemistry	4
BIOL	426M	Biotechnology	4
BIOL	436	General Endocrinology	3

FREE ELECTIVES²**3****Total Program Requirements:****Credits 120**

¹CSDP 220 may be substituted for CSDP 121 or BUED 212.

² Math 211 is strongly recommended as free elective.

CURRICULUM GUIDE FOR BIOCHEMISTRY (NON-TEACHING)

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111/H	3	BIOL 222	3
BIOL 113/H	1	BIOL 223	1
CHEM 111/H	3	CHEM 112/H	3
CHEM 113/H	1	CHEM 114/H	1
DNCS 100	1	ENGL 102/H	3
ENGL 101/H	3	ENGL 001/002/003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211/H	3	CHEM 212/H	3
CHEM 213/H	1	CHEM 214/H	1
Curriculum Area I	3	Curriculum Area I	3
PHYS 181H and PHYS 183H	3	PHYS 182H and PHYS 184H	3
Free Elective ²	1	ENGL 203	1
	<u>3</u>		<u>3</u>
	14		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	CHEM 342/H/M	3
CHEM 341/H/M	3	CHEM 344/H/M	1
CHEM 343/H/M	1	CHEM/BIOL 497	1
BIOL 326	3	BIOL 301	3
BIOL 327	1	BIOL 303	1
ENGL 305/Online or ENGL 310/Online	3	CSDP 121 or BUED 212 ³	3
Curriculum Area II	<u>3</u>	Curriculum Area II	<u>3</u>
	18		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNCS 400	1	Elective w/ Lab Component ⁴	4
CHEM 401	4	CHEM 407	3
CHEM/BIOL 498 ⁵	3	CHEM/BIOL 499 ⁵	4
CHEM 421	4	Program Elective	<u>3</u>
EXCS 111	<u>3</u>		14
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students and ENGL 003 is for students enrolling in 102H.)

²MATH 211 strongly recommended to fulfill 3 cr. hr. of Free Electives.

³CSDP 121 or BUED 212 may be substituted with CSDP 220.

⁴Elective with Laboratory Component must be in the area of Chemistry or Biology

⁵Students may take CHEM/BIOL 498 and CHEM/BIOL 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

BIOLOGY NON-TEACHING

DEPARTMENTAL REQUIREMENTS

Students majoring in Biology Non–Teaching must complete a total of 120¹ credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of Supportive courses and 2 semester hours of free electives. The specific courses taken in the undergraduate program are generally chosen based on the goals of the student for their future career.

OBJECTIVES

The objectives of the Biology Program are to:

1. Provide Biology majors in the Department of Natural Sciences with the knowledge and information necessary to achieve success in graduate and/or professional schools and the workforce;
2. Provide Biology majors with advanced knowledge and information in the fields general Biology and/or Ecology;
3. Increase the level of competency in laboratory techniques and skills of Biology majors in the Department of Natural Sciences; and
4. Develop technical communication and critical thinking skills of Biology majors in the Department of Natural Sciences and train the same through mentoring and personal experience to conduct scientific research.

CAREER OPPORTUNITIES

A Biology degree has many career opportunities based on a person's interests and undergraduate preparation. Biologists can pursue a biomedical or graduate degree for entrance into a specialized area of medicine, dentistry, academia, research or consulting careers. Three resources for careers opportunities are the following websites: Sciencecareers.sciencemag.org covers all sciences while www.aibs.org/careers covers all area of Biology and www.ecoemploy.com covers the ecological and environmental fields.

¹Minimum Maryland Higher Education Committee (MHEC) requirements for a Bachelor of Science Degree.

BIOLOGY **Required Courses**

GENERAL EDUCATION REQUIREMENTS

All biology majors 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. MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498 or BIOL 498) course, undergraduate research (CHEM 499 or BIOL 498) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or summer and winter sessions to satisfy the alternative credits requirement. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109 or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCIO 101 or SOCIO 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCIO 201

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES			Credits 8
PHYS	121	General College Physics I <i>and</i>	3
PHYS	123	General College Physics I Laboratory <i>or</i>	1
PHYS	181H*	Introductory Physics I <i>and</i>	3
PHYS	183H*	Introductory Physics I Laboratory <i>and</i>	1
PHYS	122	General College Physics II <i>and</i>	3
PHYS	124	General College Physics II Laboratory <i>or</i>	1
PHYS	182H*	Introductory Physics II <i>and</i>	3
PHYS	184H*	Introductory Physics II Laboratory	1

Curriculum Area IV – MATHEMATICS			Credits 6
MATH	110	Trigonometry & Analytical Geometry or Higher	3
MATH	210	Elementary Statistics	3

Curriculum Area V - ENGLISH COMPOSITION¹			Credits 9
ENGL	101 or ENGL 101H		3
ENGL	102 or ENGL 102H		3
ENGL	001/002/003		0
ENGL	305/H/Online or ENGL 310/H/Online		3

Curriculum Area VI - EMERGING ISSUES			Credits 4
Select DNSC 100 and one additional course.			
DNSC	100	Freshman Seminar	1
EXSC	111	Personalized Health Fitness	3
HUEC	230	Multicultural Perspectives on Families in the U.S.	3
TMGT	306	Ecology and Cultural Tourism	3

Total Required for General Education **Credits 42**

Program Requirements

CORE REQUIREMENTS **Credits 25**

A grade of “C” or better is required in each of the Program Core Requirements.

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
BIOL	498	Independent Study	3
BIOL	499	Undergraduate Research	4
DNSC	400	Senior Proficiency Seminar	1

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

PROGRAM ELECTIVES**Credits 20**

A minimum of 20 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 interest 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

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 Laboratory	1
BIOL	330	Evolution	3
BIOL	341	Introductory Physiology	4
BIOL	420	Animal Histology	3
BIOL	421	Animal Histology Laboratory	1
BIOL	426M	Biotechnology	4
BIOL	436	General Endocrinology	3
BIOL	466	Medical Parasitology	3
CHEM	422M	Bio-Inorganic Chemistry	3

ECOLOGY ELECTIVES

BIOL	201	Marine Zoology	4
BIOL	202	Marine Botany	3
BIOL	203	Marine Botany Laboratory	1
BIOL	261	Invertebrate Zoology	4
BIOL	311	Vertebrate Embryology	4
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	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

SUPPORTIVE COURSES**Credits 31**

A grade point average of “C” or better is required in supportive courses.

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
BUED	212	Computer Concepts/Applications*/Hybrid/Online <u><i>or</i></u>	
CSDP	121	Microcomputer Applications*	3
MATH	112	Calculus I	4

***CSDP 220 (4 cr.) may be substituted for BUED 212 or CSDP 121.**

FREE ELECTIVES **Credits 2**

Total Credits Required for Graduation **120**

CURRICULUM GUIDE FOR BIOLOGY - NON-TEACHING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DN SC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/002/003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 222	3	BIOL 301	3
BIOL 223	1	BIOL 303	1
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
EX SC 111	3	GEN ED CURR AREA I	
ENGL 203	3	CSDP 121 ² or	
GEN ED CURR. AREA II	<u>3</u>	BUED 212 ²	<u>3</u>
	17		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL Elective	4
BIOL Elective	4	PHYS 122 <i>and</i>	
ENGL 305/Online		PHYS 124 <i>or</i>	
ENGL 310/Online	3	PHYS 182H <i>and</i>	3
PHYS 121 <i>and</i>		PHYS 184	1
PHYS 123 <i>or</i>		GEN ED CURR AREA I	3
PHYS 181H <i>and</i>	3	GEN ED CURR AREA II	<u>3</u>
PHYS 183H	<u>1</u>		14
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL Elective	4
BIOL 497	1	BIOL 499 ³	4
BIOL 498 ³	3	CHEM 342	3
CHEM 341	3	CHEM 344	1
CHEM 343	1	MATH 210	<u>3</u>
DN SC 400	1		15
FREE Elective	<u>2</u>		
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students and ENGL 003 is for students enrolling in 102H.)

²CSDP 220 may be substituted for CSDP 121 or BUED 212

³Students may take BIOL 498 and BIOL 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

BIOLOGY HONORS - NON-TEACHING DEPARTMENTAL REQUIREMENTS

Students majoring in Biology Non – Teaching Honors must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of Supportive courses and 2 semester hours of free electives.

OBJECTIVES

The primary mission of The Honors Biology Program is to prepare academically talented students for entry into graduate and professional schools with an emphasis on admission into PhD graduate programs, and also professional schools that offer degrees in Doctor of Medicine*, Dental Surgery*, Pharmacy and Veterinary Medicine. The objectives are to:

1. Provide Biology majors with advanced knowledge and information in the fields of General Biology and/or Ecology in courses at an accelerated rate;
2. Develop competencies in laboratory techniques and skills that will be necessary upon entrance into the professional working environment; and
3. Develop technical, communication and critical thinking skills of Biology majors in the Department of Natural Sciences and train the same through mentoring and personal experience to conduct scientific research.

CAREER OPPORTUNITIES

The Honors Curriculum is challenging and facilitates acceptance into internships furthering the student's career at UMES. As graduates have a higher rate of entry into graduate programs nationwide, they can pursue a biomedical or graduate degree for entrance into a specialized area of medicine, dentistry, academia, research or consulting careers. Three resources for careers opportunities are the following websites: Sciencecareers.sciencemag.org covers all sciences while www.aibs.org/careers covers all area of Biology and www.ecoemploy.com covers the ecological and environmental fields. The specific courses taken in the undergraduate program are generally chosen based on the goals of the student for their future career.

BIOLOGY HONORS – NON-TEACHING Required Courses

GENERAL EDUCATION REQUIREMENTS

All biology majors 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. MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498 or BIOL 498) course, undergraduate research (CHEM 499 or BIOL 498) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or summer and winter sessions to satisfy the alternative credits requirement. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109 or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOC 201

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 121 General College Physics I <i>and</i>	3
PHYS 123 General College Physics I Laboratory <i>or</i>	1
PHYS 181H* Introductory Physics I <i>and</i>	3
PHYS 183H* Introductory Physics I Laboratory <i>and</i>	1
PHYS 122 General College Physics II and	3
PHYS 124 General College Physics II Laboratory <i>or</i>	1
PHYS 182H* Introductory Physics II <i>and</i>	3
PHYS 184H* Introductory Physics II Laboratory	1

Curriculum Area IV – MATHEMATICS	Credits 6
MATH 110 Trigonometry & Analytical Geometry or Higher	3
MATH 210 Elementary Statistics	3

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101 or ENGL 101H	3
ENGL 102 or ENGL 102H	3
ENGL 001/002/003	0
ENGL 305/H/Online or ENGL 310/H/Online	3

Curriculum Area VI - EMERGING ISSUES	Credits 4
Select DNSC 100 and one additional course.	
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
TMGT 306 Ecology and Cultural Tourism	3

Total Required for General Education Credits 42

PROGRAM REQUIREMENTS

CORE REQUIREMENTS Credits 25
 A grade of “C” or better is required in each of the Program Core Requirements.

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
BIOL 498 Independent Study	3
BIOL 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1

A minimum of 20 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 interest 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.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

PROGRAM ELECTIVES**Credits 20****GENERAL BIOLOGY ELECTIVES**

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 Laboratory	1
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Laboratory	1
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
CHEM 422M	Bio-Inorganic Chemistry	3

ECOLOGY ELECTIVES

BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Laboratory	1
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
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 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

SUPPORTIVE COURSE REQUIREMENTS**Credits 31**

A grade point average of "C" or better is required in supportive courses.

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 342H	Honors Biochemistry II	3
CHEM 344H	Honors Biochemistry II Laboratory	1
BUED 212	Computer Concepts/Applications*/Hybrid/Online <i>or</i>	
CSDP 121	Microcomputer Applications*	3

MATH 112	Calculus I	4
*CSDP 220 (4 cr.) may be substituted for BUED 212 or CSDP 121.		

FREE ELECTIVES **Credits 2**

Total Credits Required for Graduation: **120**

CURRICULUM GUIDE FOR BIOLOGY HONORS – NON-TEACHING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111H	3	BIOL 112H	3
BIOL 113H	1	BIOL 114H	1
CHEM 111H	3	CHEM 112H	3
CHEM 113H	1	CHEM 114H	1
DNCS 100	1	ENGL 102H	3
ENGL 101H	3	ENGL 003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 222	3	BIOL 301	3
BIOL 223	1	BIOL 303	1
CHEM 211H	3	BUED 212 ² or CSDP 121 ²	3
CHEM 213H	1	CHEM 212H	3
EXSC 111	3	CHEM 214H	1
ENGL 203	3	ENGL 305H/Online or	
GEN ED CURR AREA II (H)	<u>3</u>	ENGL 310H/Online	<u>3</u>
	17		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL Elective	4
BIOL Elective	4	GEN ED CURR AREA I (H) ³	3
GEN ED CURR AREA I/H ³	3	GEN ED CURR AREA II ³	3
PHYS 181H	3	PHYS 182H	3
PHYS 183H	<u>1</u>	PHYS 184H	<u>1</u>
	15		14

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 498H ³	3	BIOL Elective	4
BIOL Elective	4	BIOL 499H ⁴	4
BIOL 497H	1	CHEM 342H	3
CHEM 341H	3	CHEM 344H	1
CHEM 343H	1	MATH 210	<u>3</u>
DNCS 400	1		15
FREE Elective	<u>2</u>		
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²CSDP 220 may be substituted for CSDP 121 or BUED 212.

³Students in the Honors program are required to enroll in all sections designated “H”. If also following pre-Medicine or pre-Dentistry tracks, they are required to take the Medical College Admission Test (MCAT) or Dental Admission Test (DAT) during the Spring semester of the academic year preceding the year in which admission to medical school is sought. Applications to medical/dental schools should be made no later than the fall of the senior year. Cell Biology, Comparative Vertebrate Anatomy, Physiology, Embryology and Histology are strongly recommended.

⁴Students may take BIOL 498 and BIOL 499H for 1 to 3 and 1 to 4 cr. hr., respectively a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

**BIOLOGY NON-TEACHING
PRE-MEDICINE TRACK/PRE-DENTISTRY TRACK**

DEPARTMENTAL REQUIREMENTS

Students majoring in Biology with Pre-Med/Pre-Dentistry Tracks must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 19 semester hours of program electives and 34 semester hours of Supportive courses.

OBJECTIVES

The objectives of the Biology Program are to:

1. Provide Biology majors in the Department of Natural Sciences with the knowledge and information necessary to gain entry into medical school;
2. Provide Biology majors with a curriculum that would advance their general knowledge in the field of Biology that is necessary for successfully completing standardized examinations required for the entry into medical school;
3. Increase the level of competency in laboratory techniques and skills of Biology majors in the Department of Natural Sciences to ultimately prepare the student for the rigors of medical school; and
4. Develop technical communication and critical thinking skills of Biology majors in the Department of Natural Sciences and train the same through mentoring and personal experience to perform in medical programs.

CAREER OPPORTUNITIES

A Biology degree has many opportunities based on a person's interests and undergraduate preparation. Biologists can pursue a biomedical or graduate degree for entrance into a specialized area of medicine, dentistry, academia, research or consulting careers. Three resources for careers opportunities are the following websites: Sciencecareers.sciencemag.org covers all sciences while www.aibs.org/careers covers all area of Biology and www.ecoemploy.com covers the ecological and environmental fields. The specific courses taken in the undergraduate program are generally chosen based on the goals of the student for their future career.

**BIOLOGY NON-TEACHING
PRE-MEDICINE TRACK/PRE-DENTISTRY TRACK
Required Courses**

GENERAL EDUCATION REQUIREMENTS

All biology majors 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. MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498 or BIOL 498) course, undergraduate research (CHEM 499 or BIOL 498) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or summer and winter sessions to satisfy the alternative credits requirement. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109 **or**

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203.

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 121 General College Physics I <i>and</i>	
PHYS 123 General College Physics I Laboratory <i>or</i>	
PHYS 181H* Introductory Physics I <i>and</i>	3
PHYS 183H* Introductory Physics I Laboratory <i>and</i>	1
PHYS 122 General College Physics II and	
PHYS 124 General College Physics II Laboratory <i>or</i>	
PHYS 182H* Introductory Physics II <i>and</i>	3
PHYS 184H* Introductory Physics II Laboratory	1

Curriculum Area IV – MATHEMATICS	Credits 6
MATH 110 Trigonometry & Analytical Geometry or Higher	3
MATH 210 Elementary Statistics	3

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101 or ENGL 101H	3
ENGL 102 or ENGL 102H	3
ENGL 001/002/003	0
ENGL 305/H/Online or ENGL 310/H/Online	3

Curriculum Area VI - EMERGING ISSUES	Credits 4
Select DNSC 100 and one additional course.	
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
TMGT 306 Ecology and Cultural Tourism	3

Total Required for General Education Credits 42

PROGRAM REQUIREMENTS

CORE REQUIREMENTS Credits 25
A grade of “C” or better is required in each of the Program Core Requirements.

BIOL 111/H Principles of Biology I	3
BIOL 113/H Principles of Biology I Laboratory	1
BIOL 112/H Principles of Biology II	3
BIOL 114/H 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/H Biology Seminar	1
BIOL 498 Independent Study	3
BIOL 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1

PROGRAM ELECTIVES Credits 19

A minimum of 20 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 interest 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.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

GENERAL BIOLOGY ELECTIVES

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 Laboratory	1
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Laboratory	1
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
CHEM 422M	Bio-Inorganic Chemistry	3

ECOLOGY ELECTIVES

BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Laboratory	1
BIOL 261	Invertebrate Zoology	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

SUPPORTIVE COURSE REQUIREMENTS**Credits 34**

A grade point average of "C" or better is required in supportive courses.

CHEM 111/H	Principles of Chemistry I	3
CHEM 113/H	Principles of Chemistry I Laboratory	1
CHEM 112/H	Principles of Chemistry II	3
CHEM 114/H	Principles of Chemistry II Laboratory	1
CHEM 211/H	Fundamentals of Organic Chemistry I	3
CHEM 213/H	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212/H	Fundamentals of Organic Chemistry II	3
CHEM 214/H	Fundamentals of Organic Chemistry II Laboratory	1
CHEM 341/H	Biochemistry I	3
CHEM 343/H	Biochemistry I Laboratory	1
CHEM 342/H	Biochemistry II	3
CHEM 344/H	Biochemistry II Laboratory	1
BUED 212*	Computer Concepts, Applications <i>or</i>	
CSDP 121*	Microcomputer Applications	3
ENGL218	Approaches to Grammar	3
MATH 112	Calculus I	4

*CSDP 220 (4 cr.) may be substituted for BUED 212 or CSDP 121.

FREE ELECTIVES**0****Total Credits Required for Graduation: 120**

**CURRICULUM GUIDE FOR BIOLOGY
PRE-MEDICINE/PRE-DENTISTRY TRACK¹**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNSC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/002/003 ²	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211	3	BIOL 301	3
CHEM 213	1	BIOL 303	1
MATH 210	3	CHEM 212	3
PSYC 200	3	CHEM 214	1
GEN ED CURR AREA I	3	CSDP 121 ³ or	
BIOL 222	3	BUED212 ³	3
BIOL 223	<u>1</u>	ENGL 203	<u>3</u>
	17		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 311	4	BIOL 322	4
ENGL 218	3	BIOL 341	4
EXSC 111	3	ENGL 305/H/Online or	
PHYS 121/H or		ENGL 310/H/Online	3
PHYS 181/H	3	PHYS 122 or	
PHYS 123 or		PHYS 182/H	3
PHYS 183/H	<u>1</u>	PHYS 124 or	
	14	PHYS 184/H	<u>1</u>
			15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 326	3	BIOL 436	3
BIOL 327	1	BIOL 498 ⁴	3
BIOL 499	4	CHEM 342	3
BIOL 497	1	CHEM 344	1
CHEM 341	3	GEN ED CURR AREA I	3
CHEM 343	1	SOCI 101	<u>3</u>
DNSC 400	<u>1</u>		16
	14		

Total Credit Hours: 120

¹Students in the pre-Medicine or pre-Dentistry track programs should take the Medical College Admission Test (MCAT) or Dental Admission Test (DAT) during the Spring semester of the academic year preceding the year in which admission to medical school is sought. Applications to medical/dental schools should be made no later than the fall of the senior year. Cell Biology, Comparative Vertebrate Anatomy, Physiology, Embryology and Histology are Biology program electives selected in this track. These courses will build a solid foundation for courses taken in the first year of medical school.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students, and ENGL 003 is for Honors students enrolling in 102H.)

³CSDP 220 may be substituted for either CSDP 121 or BUED 212

⁴Students may take BIOL 498 and BIOL 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program, which are 3 and 4, respectively.

BIOLOGY
(PRE-PHYSICAL THERAPY CONCENTRATION)

DEPARTMENTAL REQUIREMENTS

Students majoring in Biology non – Teaching with pre-Physical Therapy track must complete a total of 120 credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 25 semester hours of Departmental Core courses, 20 semester hours of program electives, 31 semester hours of Supportive courses and 2 semester hours of free electives.

Students in this track should consider taking Human Anatomy and Physiology I & II, with laboratory – BIOL 231, 232, 233 & 234. They are required by the Department of Physical Therapy. However, they do not apply toward the B S degree in Biology and hence are not included among the required courses given below.

OBJECTIVE

The objective of the Biology Pre Physical Therapy Program is to prepare students to meet the requirements for application to professional programs leading to the DPT degree.

CAREER OPPORTUNITIES

Graduates of this program will be prepared for entry into the doctor of Physical therapy degree at UMES or any other institutions of their choice. Also, biologists can pursue a biomedical or graduate degree for entrance into a specialized area of medicine, dentistry, academia, research or consulting careers. Three resources for careers opportunities are the following websites: Sciencecareers.sciencemag.org covers all sciences while www.aibs.org/careers covers all area of Biology and www.ecoemploy.com covers the ecological and environmental fields.

The specific courses taken in the undergraduate program are generally chosen based on the goals of the student for their future career.

**BIOLOGY NON-TEACHING
PRE-PHYSICAL THERAPY CONCENTRATION
Required Courses**

GENERAL EDUCATION REQUIREMENTS

All biology majors 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. MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498 or BIOL 498) course, undergraduate research (CHEM 499 or BIOL 498) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109 **or**

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

PHYS 121	General College Physics I <i>and</i>	
PHYS 123	General College Physics I Laboratory <i>or</i>	
PHYS 181H*	Introductory Physics I <i>and</i>	3
PHYS 183H*	Introductory Physics I Laboratory <i>and</i>	1
PHYS 122	General College Physics II and	
PHYS 124	General College Physics II Laboratory <i>or</i>	
PHYS 182H*	Introductory Physics II <i>and</i>	3
PHYS 184H*	Introductory Physics II Laboratory	1

Curriculum Area IV – MATHEMATICS **Credits 6**

MATH 110	Trigonometry & Analytical Geometry or Higher	3
MATH 210	Elementary Statistics	3

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101 or ENGL 101H		3
ENGL 102 or ENGL 102H		3
ENGL 001/002/003		0
ENGL 305/H/Online or ENGL 310/H/Online		3

Curriculum Area VI - EMERGING ISSUES **Credits 4**

Select DNSC 100 and one additional course.		
DNSC 100	Freshman Seminar	1
EXSC 111	Personalized Health Fitness	3
HUEC 230	Multicultural Perspectives on Families in the U.S.	3
TMGT 306	Ecology and Cultural Tourism	3

Total Required for General Education **Credits 42****PROGRAM REQUIREMENTS****CORE REQUIREMENTS** **Credits 25**

A grade of “C” or better is required in each of the Program Core Requirements.

BIOL 111/H	Principles of Biology I	3
BIOL 113/H	Principles of Biology I Laboratory	1
BIOL 112/H	Principles of Biology II	3
BIOL 114/H	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/H	Biology Seminar	1
BIOL 498	Independent Study	3
BIOL 499	Undergraduate Research	4
DNSC 400	Senior Proficiency Seminar	1

PROGRAM ELECTIVES **Credits 20**

A minimum of 20 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 interest 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.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

GENERAL BIOLOGY ELECTIVES

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 – Laboratory	1
BIOL 330	Evolution	3
BIOL 341	Introductory Physiology	4
BIOL 420	Animal Histology	3
BIOL 421	Animal Histology Laboratory	1
BIOL 426M	Biotechnology	4
BIOL 436	General Endocrinology	3
BIOL 466	Medical Parasitology	3
CHEM 422M	Bio-Inorganic Chemistry	3

ECOLOGY ELECTIVES

BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Laboratory	1
BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
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 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

SUPPORTIVE COURSE REQUIREMENTS**Credits 31**

A grade point average of “C” or better is required in supportive courses.

CHEM 111/H	Principles of Chemistry I	3
CHEM 113/H	Principles of Chemistry I Laboratory	1
CHEM 112/H	Principles of Chemistry II	3
CHEM 114/H	Principles of Chemistry II Laboratory	1
CHEM 211/H	Fundamentals of Organic Chemistry I	3
CHEM 213/H	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212/H	Fundamentals of Organic Chemistry II	3
CHEM 214/H	Fundamentals of Organic Chemistry II Laboratory	1
CHEM 341/H	Biochemistry I	3
CHEM 343/H	Biochemistry I Laboratory	1
CHEM 342/H	Biochemistry II	3
CHEM 344/H	Biochemistry II Laboratory	1
BUED 212	Computer Concepts, Applications* <u>or</u>	
CSDP 121	Microcomputer Applications*	3
MATH 112	Calculus I	4

FREE ELECTIVES**Credits 2****Total Credits Required: 120**

*CSDP 220 (4 cr.) may be substituted for BUED 212 or CSDP 121. The extra 1 credit may be used toward free electives.

CURRICULUM GUIDE FOR BIOLOGY (NON-TEACHING)

PRE-PHYSICAL THERAPY TRACK

Students in this track should consider taking Human Anatomy and Physiology I & II, with laboratory – BIOL 231, 232, 233 & 234. They are required by the Department of Physical Therapy. However, they do not apply toward the B S degree in Biology and hence are not included among the required courses given below.

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNOSC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/002/ 003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL 222	3
CHEM 211	3	BIOL 223	1
CHEM 213	1	CHEM 212	3
EXSC 111	3	CHEM 214	1
ENGL 203	3	CSDP 121 or	
GEN ED CURR AREA I	<u>3</u>	BUED 212 ²	3
	17	ENGL 305/H/Online or	
		ENGL 310/H/Online	<u>3</u>
			14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL Elective	4
BIOL 301	3	PHYS 122 and	
BIOL 303	1	PHYS 124 or	
GEN ED CURR AREA II	3	PHYS 182H and	3
PHYS 121 and		PHYS 184 H	1
PHYS 123 or		GEN ED CURR AREA I	3
PHYS 181H	3	GEN ED CURR AREA II	<u>3</u>
PHYS 183H	<u>1</u>		14
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL Elective	4	BIOL Elective	4
BIOL 497	1	BIOL 499 ³	4
BIOL 498 ³	3	CHEM 342	3
CHEM 341	3	CHEM 344	1
CHEM 343	1	MATH 210	<u>3</u>
FREE Elective	2		15
DNOSC 400	<u>1</u>		
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H, and ENGL 002 is for transfer students.)

²CSDP may be substituted for CSDP 121 or BUED 212

³Students may take BIOL 498 and BIOL 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program, which are 3 cr. and 4 cr respectively.

BIOLOGY EDUCATION (TEACHING)

DEPARTMENTAL REQUIREMENTS

Students in the major must complete a total of 131¹ credit hours of University courses. This includes a minimum of 42 semester hours of General Education Requirements, 21 semester hours of Departmental Core courses, 10 semester hours of program electives, 42 semester hours of professional Education courses, and 16 semester hours of Supportive courses.

Students who meet University of Maryland Eastern Shore's admission requirements can enroll in Biology Education. Prospective Biology Teacher Education candidates are not formally admitted to the Professional Education Unit until they have completed an Application to Teacher Education and have been accepted.

Teacher candidates who wish to major in Biology Education must have an overall and major content grade point average of 2.75 or higher. A minimum of 45 approved semester hours is required, passing the University's English Proficiency Seminar, and also PRAXIS I (scheduled and administered by Educational Testing Services) while registered for PRAXIS preparation course (Credit I) EDCI 201.

	Passing Praxis Scores	
	Paper/Pencil Test	Computer-Based Test
Reading	177	325
Mathematics	177	322
Writing	173	319

Applications must be completed for admission to the Biology Education teacher program within the scheduled deadline. The teacher education application lists specific course requirements and requires two essays which address potential candidate's disposition toward teaching, as well as providing writing samples, and field experience recommendation. Four letters of recommendation from faculty (one had to be from the advisor) are also required.

Grades of "C" or above must be attained in each required course of the Biology Education major, the specialized content area combined with the professional educational courses. A candidate's progress is monitored each semester by the academic advisor to ensure that the candidate continues to meet the minimum GPA of 2.75 in both the major and overall course work.

In order to be eligible for internship, Biology Education candidates are required to submit the following indicator: application for internship, field experience, and pre-internship recommendations, methods instructor recommendations, formal academic measures including a 2.75 or higher overall grade point average, a 2.75 grade point average in the major, with no grades lower than C in all courses, PRAXIS II passing scores in Biology, and working portfolio review.

All Biology Education candidates must satisfactorily complete the independent research project and manuscript prior to graduation. The candidates must satisfactorily complete the professional portfolio, which is started early in the program and revised and completed during the internship experience, is tied to the INTASC Principles, Unit's Conceptual Framework, and NSTA standards prior to graduation. They must also complete an Exit Survey.

¹The higher than 120 cr. hr. requirement is to meet the standards of NCATE (National Council for Accreditation of Teacher Education) and NSTA (National Science Teachers Association).

OBJECTIVES

The objectives of the Biology Education Program are as to:

1. Expose teacher candidates in Biology from diverse cultural backgrounds to the breadth and depth of content knowledge in Biology and related sciences necessary for fulfilling requirements of teaching careers in diverse cultural settings.
2. Train future teachers in Biology who will be competent in the application of modern technological advances in innovative ways of thinking and approaching critical issues related to both science and education.
3. Provide future teachers the opportunity to acquire mastery of skills through constant reflection of their teaching and techniques that are used to obtain, analyze, and interpret scientific information.

CAREER OPPORTUNITIES

Apart from the employment opportunities outlined in Biology non-teaching program, the students receiving the teaching degree with Praxis I and II licensure can choose to enter a teaching career in secondary education.

BIOLOGY EDUCATION (TEACHING)

Required Courses

Grade of “C” or above must be attained in each required course of the Biology Education major, the specialized content area combined with the professional educational courses. A candidate’s progress is monitored each semester by the academic advisor to ensure that the candidate continues to meet the minimum GPA of 2.75 in both the core courses and overall program. Biology Education Program Course Requirements are divided into the following categories: General Education Requirements, Program Core Requirements, Supportive Course Requirements, and Core Program Electives. Students are required to complete a total of 131¹ credit hours in these categories for graduation. A research manuscript or an undergraduate thesis is required following completion of Undergraduate Research. The Research project has to be approved by a committee consisting of advisor who will serve as the thesis or project supervisor and another faculty member from the department of Natural Sciences.

Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology education or chemistry education. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details.

General Education Requirements: (42 cr.) 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. Biology Education Program candidates are required to complete a total of 42 credit hours for graduation in this category. These credit hours are divided into six areas. A grade of “C” or above is required in all GER courses.

Curriculum Area I - ARTS AND HUMANITIES**Credits 9**

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**ENGL 203²**Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES****Credits 6**

Students must select one course from each of two disciplines;

Discipline A: **SOCIAL SCIENCES**

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: **BEHAVIORAL SCIENCES**

CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 200, SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES**Credits 8**

PHYS 121 General College Physics I 3

PHYS 123 General College Physics I Laboratory 1

PHYS 122 General College Physics II 3

PHYS 124 General College Physics II Laboratory 1

Curriculum Area IV – MATHEMATICS**Credits 6**

MATH 110 Trigonometry & Analytical Geometry or Higher 3

MATH 210 Elementary Statistics 3

Curriculum Area V - ENGLISH COMPOSITION¹**Credits 9**

ENGL 101/H Basic Composition I/Honors 3

ENGL 102/H Basic Composition II/Honors 3

ENGL 001/002/003 English Proficiency Exam 0

ENGL 305/H/Online Technical Writing/Honors/Online or

ENGL 310/H/Online Advanced Composition/Honors/Online 3

Curriculum Area VI - EMERGING ISSUES**Credits 4**

DNSC 100 Freshman Seminar 1

EXSC 111 Personalized Health Fitness 3

¹The higher than the 120 cr. hr. requirement is to meet the standards of NCATE (National Council for Accreditation of Teacher Education and NSTA (National Science Teachers Association).

²Students must pass ENGL 101 and 102 with a grade of “C” or above before taking ENGL 203.

BIOLOGY CORE REQUIREMENTS**Credits 21**

There are six Biology Core Requirements. Candidates in Biology Education are required to earn at least a grade of C or better in each of these courses, and maintain a minimum GPA of **2.75** in the core courses.

BIOL 111/H ¹	Principles of Biology I and Laboratory	3
BIOL 113/H	Principles of Biology I Laboratory	1
BIOL 112/H	Principles of Biology II	3
BIOL 114/H	Principles of Biology II Laboratory	1
BIOL 222	Genetics	3
BIOL 223	Genetics Laboratory	1
BIOL 301/H	Microbiology	3
BIOL 303/H	Microbiology Laboratory	1
BIOL 497/H	Biology Seminar	1
BIOL 499/H	Undergraduate Research ²	4

SUPPORTIVE COURSE REQUIREMENTS**Credits 16**

Supportive courses are listed below that Biology Education candidates are required to complete for graduation. Candidates are required to earn a C or better in all of these courses, and maintain a minimum GPA of **2.75** in these courses.

CHEM 111/H	Principles of Chemistry I	3
CHEM 113/H	Principles of Chemistry I Laboratory	1
CHEM 112/H	Principles of Chemistry II	3
CHEM 114/H	Principles of Chemistry II Laboratory	1
CHEM 211/H	Fundamentals of Organic Chemistry I	3
CHEM 213/H	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212/H	Fundamentals of Organic Chemistry II	3
CHEM 214/H	Fundamentals of Organic Chemistry II Laboratory	1

CORE PROGRAM ELECTIVES**Credits 10**

The Department of Natural Sciences offers many electives. Candidates of Biology Education are required to take the following core electives BIOL 211, 213, ENVS 460) as they meet the National Science Teachers Association (NSTA) and National Science Education Standards (NSES) content standards. BUED 212 or its equivalent is a part computer literacy. Candidates are required to earn a minimum of C grade in all of these courses, and maintain a minimum GPA of **2.75** in the core electives.

BIOL 211	Principles of Biology III	3
BIOL 213	Principles of Biology III Laboratory	1
ENVS 460	Earth Science or equivalent	3
CSDP 121	Microcomputer Applications* or	
BUED 212	Computer Concepts/Applications*	3

*CSDP 220 may be substituted for CSDP 121 or BUED 212

¹Students in the Honors Program should take Honors Courses.

²Undergraduate Research with advisor can be taken either during junior or senior years, and has to be completed in two semesters.

PROFESSIONAL EDUCATION REQUIREMENTS**Credits 42**

Biology Education candidates are required to complete 43 credit hours under the Professional Education Requirements. However, **EDCI 201 (1 cr.)** does not count toward graduation. Candidates are required to earn no less than a C average in these courses, and maintain a minimum GPA of **2.75** in these courses.

EDCI 200	Introduction to Contemporary Education	3
EDCI 201	Praxis Preparation	1
PSYC 305	Developmental Psychology/online	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 409	Teaching Reading in the Content Areas I	3
EDCI 410	Teaching Reading in the Content Areas II	3
EDCI 406	Classroom Management	3
EDCI 425A	Curriculum and Instructional Methods in Natural Sciences	3
EDSP 428	Communication and Collaboration in Special Education	3
EDSP 400	Senior Seminar in Education	3*
EDCI 480X	Teaching Internship I: Teaching Biology in Mid Schools	6*
EDCI 490X	Teaching Internship II: Teaching Biology in High Schools	6*

*EDCI 400, EDCI 480 and EDCI 490 are taken concurrently during the last semester of the senior year. EDCI 201-Praxis Preparation does not count towards graduation

Total Credits Required (excluding EDCI 201): 131Field and Clinical Experiences

Clinical Experiences are those experiences which are based on a very specific purpose. They may consist of interviewing a student, teacher, or administrator, observing a meeting or a conference; visiting a school or community resource center; developing a case study; peer teaching; administering a test; or attending a meeting or a conference. Clinical Experiences generally require a limited amount of time in a school or with a student (10 hours). Teacher Candidates are asked to submit a report or a reflective journal that documents the completion of the assignment.

Field Experiences always occur in a school setting and consist of 10 to 25 hours of visitation per course. The times vary based on the course requirement. Field Experiences usually require a student to keep a reflective journal which is submitted as part of the final grade. Listed below are the clinical and field experiences required for all professional courses in Biology Education.

Course Number	Titles	Type of Experience/Hours
EDCI 200	Introduction to Contemporary Education	Field/10 hours
PSYC 305	Developmental Psychology	Clinical/10 hours
PSYC 307	Educational Psychology	Clinical/10 hours
EDCI 311	Comprehensive Assessment	Field/10 hours
EDCI 406	Classroom Management	Field/15 hours
EDCI 409	Teaching Reading in the Content Areas I	Field/15 hours
EDCI 410	Teaching Reading in the Content Areas II	Field/15 hours
EDCI 425A	Curriculum and Instructional Methods in Natural Sciences	Field/25 hours
EDSP 428	Communication and Collaboration in Special Education	Field/10 hours
Total	110 hours (Field Experience-90 hours; Clinical Experience-20 hours)	

Internships

EDCI 480/490 Internship -2 consecutive 7-8 week (5 days/week) placement at 2 different sites (Refer to the course description)

In EDCI 480/490 (Internship), the teacher candidates in Biology have a full semester of student teaching-a middle school experience and a high school experience. Candidates are under the direct supervision of a Science Cooperating Teacher in Biology and also supervised by the University Supervisor who also serves as the Teacher Educator (Instructor of Methods and Internship) of Biology Education. University supervisor is required to observe and conference with the candidate and cooperating teacher a minimum of eight times, four times per student teaching placement, with an additional introductory meeting for each placement. Candidates begin by taking one or two classes from their cooperating teacher's schedule of teaching, and gradually picking up more until they have the experience of teaching a full load. The candidates are expected to demonstrate effective teaching skills such as facilitating collaborative group learning, motivating, and encouraging student learning activities, and assessing students' responses. They are to design a bulletin board display, prepare appropriate instructional materials, observe teaching, interview school personnel, participate in parent meetings, evaluate student work using multiple assessments, and become involved in the life of the school and the full role of a teacher. Documentation of performance based outcomes, as well as summative evaluative reports are prepared by cooperating teachers, based on their day-to-day experiences with the candidate, and by the university supervisor based on the observational visits and discussions with the candidates and cooperating teachers.

CURRICULUM GUIDE FOR BIOLOGY EDUCATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
ENGL 101	3	ENGL 102	3
Curriculum Area II	3	ENGL 001/ENGL 003 ¹	0
DNSC 100	1	Curriculum Area I	3
MATH 110	3	PSYC 200	3
EXSC 111	<u>3</u>	BUED 212 or	
	17	CSDP 121	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 211	3	BIOL 222	3
BIOL 213	1	BIOL 223	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
MATH 210	3	BIOL 301	3
EDCI 200	3	BIOL 303	1
ENGL 203	3	ENVS 460	3
EDCI 201 ²	<u>1</u>	PSYC 305	<u>3</u>
	18		17

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305/Online or		PHYS 122	3
ENGL 310/Online	3	PHYS 124	1
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
EDCI 311	3	EDCI 406	3
PHYS 121	3	EDCI 409	3
PHYS 123	1	BIOL 499 ³	<u>4</u>
PSYC 307	<u>3</u>		18
	18		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 497	1	EDCI 400 ⁴	3
EDCI 410	3	EDCI 480 ⁴	6
EDCI 425A	3	EDCI 490 ⁴	<u>6</u>
EDSP 428	3		15
Curriculum Area I	<u>3</u>		
	13		

Total Credit Hours: 131⁵

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students, and ENGL 003 is for students enrolling in 102H.)

²EDCI 201 – Praxis Preparation does not count toward graduation.

³Students may take BIOL 499 for 1 to 4 cr. hr., a semester; but they must repeat the course to accumulate as many credits as required in the core program.

⁴EDCI 400, EDCI 480 and EDCI 490 are taken concurrently during the last semester of the senior year. EDCI 201-Praxis Preparation does not count towards graduation.

⁵The higher than 120 cr. hr. requirement is required to meet the standards of NCATE (National Council for Accreditation of Teacher Education) and NSTA (National Science Teachers Association).

CHEMISTRY NON-TEACHING ACS CERTIFICATION¹

DEPARTMENTAL REQUIREMENTS

To obtain an ACS-certified chemistry degree, students must complete a total of 120 credit hours of University courses. This includes a minimum of 53 semester hours of program core courses, 15 hours of supportive courses, 7 hours of program electives courses, 43 hours of general education courses, and 2 hours of free elective courses from the approved lists of requirements as outlined in the catalog. The students must also follow ACS guidelines for CHEM 499 (undergraduate research). This includes research project conducted at UMES and comprehensive research report. The report should be written to meet the ACS requirement as outlined in the ACS document "Guidelines for Preparing a Research Report." For more information, please refer to the ACS website www.ACS.org.

OBJECTIVES

The objectives of the Chemistry Program are to:

1. Train students through demonstration, mentoring and personal experience to gain knowledge and develop chemical skills necessary to conduct scientific research.
2. Impart students with contemporary laboratory techniques and skills required to conduct scientific investigations.
3. Provide students with the academic curricula necessary to develop a strong understanding and knowledge of chemical theory and practice.
4. Expose teacher candidates in Chemistry from diverse cultural backgrounds to the breadth and depth of content knowledge in Chemistry and related sciences necessary for fulfilling requirements of teaching careers in diverse cultural settings.
5. Train future teachers in Chemistry who will be competent in the application of modern technological advances in innovative ways of thinking and approaching critical issues related to both science and education.
6. Provide future teachers the opportunity to acquire mastery of skills through constant reflection of their teaching and techniques that are used to obtain, analyze, and interpret scientific information.
7. Provide development opportunities to faculty to accomplish the objectives above.

CAREER OPPORTUNITIES

Students graduating with a Bachelor's of Science in Chemistry will be employable in chemical related fields. They may opt to apply for admission to medical or other health professional schools such as Pharmacy, Physician Assistant or Physical Therapy School. These students are also eligible to apply for admission to graduate school. Students who choose not to pursue a terminal degree can work in industry as chemists for biotechnology, pharmaceutical or environmental management companies. Graduates can also work for government agencies such as NSF (National Science Foundation), NIH (National Institutes of Health), FDA (Food and Drug Administration), EPA (Environmental Protection Agency), NIST (National Institute of Standards and Technology), NOAA (National Oceanic and Atmospheric Administration), FBI (Federal Bureau of Investigation), and CIA (Central Intelligence Agency). Websites which describe careers in chemistry include: The ACS website www.ACS.org, <http://chemistry.about.com/cs/5/f/blcareers.htm>, and <http://www.chemistryguide.org/jobs-in-chemistry.html>. The students should look at the sites for each of companies listed above.

¹ACS Certification – The Chemistry Program received approval from the American Chemical Society (ACS) to grant ACS certified degrees in 2003.

GENERAL EDUCATION REQUIREMENTS

All chemistry majors are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I: ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two different disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 161 General Physics I and	
PHYS 163 General Physics Laboratory I or	
PHYS 181H Introductory Physics I (Honors) and	3
PHYS 183H Introductory Physics Laboratory I (Honors)	1
PHYS 262 General Physics II and	
PHYS 264 General Physics Laboratory II or	
PHYS 182H Introductory of Physics II (Honors) and	3
PHYS 184H Introductory of Physics Laboratory II (Honors)	1
Area IV: MATHEMATICS	Credits 7
MATH 110 Trigonometry & Analytical Geometry or HIGHER	3
MATH 112 Calculus I	4
Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101/H Basic Composition I/Honors	3
ENGL 102/H Basic Composition II/Honors	3
ENGL 001/002/003 English Proficiency Exam	0
ENGL 305/H/Online Technical Writing/Honors/Online or	
ENGL 310/H/Online Advanced Composition/Honors/Online	3
Curriculum Area VI - EMERGING ISSUES	Credits 4
Select DNSC 100 and one additional course.	
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
TMGT 306 Ecology and Cultural Tourism	3
Total Required for General Education	Credits 43
PROGRAM REQUIREMENTS	
CORE REQUIREMENTS	Credits 53
A grade of "C" or better is required in each of the Program Core courses.	
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 312 Analytical Chemistry II	4
CHEM 341 Biochemistry I	3
CHEM 343 Biochemistry Laboratory I	1
CHEM 401 Principles of Physical Chemistry I	4
CHEM 402 Principles of Physical Chemistry II	4
CHEM 420 Advanced Inorganic Chemistry	4
CHEM 421 Instrumental Analysis	4
CHEM 497/M Chemistry Seminar	1
CHEM 498 Independent Study	3
CHEM 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1

SUPPORTIVE REQUIREMENTS**Credits 15**

A grade point average of "C" or better is required in supportive courses.

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
BUED 212	Computer-Concepts/Application I* <u>or</u>	
CSDP 121	Microcomputer Applications *	3
MATH 211	Calculus II	4

*CSDP 220 may be substituted for CSDP 121 or BUED 212 and 1 credit may be used as free elective credit.

PROGRAM ELECTIVES**Credits 7**

Choose any two courses from the following electives; one must have a laboratory component.

A grade of "C" or better is required in each of the Program Elective courses.

CHEM 342	Biochemistry II <u>and</u>	3
CHEM 344	Biochemistry II Laboratory	1
CHEM 422M	Bio-Inorganic Chemistry	3
CHEM 432	Advanced Organic Chemistry	3
CHEM 488A	Advanced Environmental Chemistry	4

FREE ELECTIVES**Credits 2****Total Required Credits: 120**

**CURRICULUM GUIDE FOR CHEMISTRY - NON-TEACHING
ACS CERTIFICATION**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNSC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
GEN ED CURR AREA I ²	3	GEN ED CURR AREA I ²	3
PHYS 161 <i>and</i>		PHYS 262 <i>and</i>	
PHYS 163 <i>or</i>		PHYS 264 <i>or</i>	
PHYS 181H <i>and</i>	3	PHYS 182H <i>and</i>	3
PHYS 183H	1	PHYS 184H	1
MATH 211	<u>4</u>	ENGL 203	<u>3</u>
	15		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	CHEM 312	4
CHEM 341	3	CHEM 497	1
CHEM 343	1	CHEM 498 ⁵	3
ENGL 305/Online <i>or</i>		CHEM Elective	3
ENGL 310/Online	3	CSDP 121 <i>or</i>	
Curriculum Area II	<u>3</u>	BUED 212 <i>or</i>	
	14	CSDP 220 ³	3
		Curriculum Area II	<u>3</u>
			17

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNSC 400	1	Elective with Lab Component ⁴	4
CHEM 401	4	CHEM 402	4
CHEM 420	4	CHEM 499 ⁵	4
CHEM 421	4	FREE Elective	<u>2</u>
Curriculum Area VI	<u>3</u>		14
	16		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H, ENGL 002 for Transfer students.)

²Two semesters of foreign language are required to fulfill Chemistry major requirement but only one course counts toward general education requirement. Student should take another course in Curriculum Area I to meet the Gen. Ed. Requirement.

³CSDP 220 may be substituted for either CSDP 121 or BUED 212.

⁴Elective with Laboratory Component must be in the area of Advanced Chemistry Courses

⁵Students may take CHEM 498 and CHEM 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program, 3 cr. and 4 cr. respectively.

CHEMISTRY HONORS (NON TEACHING – ACS CERTIFICATION¹) HONORS²/PREMEDICINE³/PRE DENTISTRY³ CONCENTRATION

DEPARTMENTAL REQUIREMENTS

Students must complete a total of 120 credit hours of University courses to obtain an ACS-certified chemistry degree. This includes 49 semester hours of program core courses, 19 hours of supportive courses, 7 hours of program elective courses, 43 hours of general education courses, and 2 hours of free elective courses from the approved lists of requirements as outlined in the catalog. The students must also follow ACS guidelines for CHEM 499 (undergraduate research). This includes a research project conducted as UMES and a comprehensive research report. The report should be written to meet the ACS requirement as outlined in the ACS document “Guidelines for Preparing a Research Report.” For more information, please refer to the ACS website, www.ACS.org.

OBJECTIVES

The goal of the Chemistry Honors²/pre-Medicine/pre-Dentistry Program is to prepare academically talented students to enter graduate and professional schools with the intention of obtaining terminal degrees (such as PhD, MD, PharmD, DVM, DOM, DDS). This goal is supported by the following objectives:

- to train students through demonstration, mentoring and personal experience to gain knowledge and develop chemical skills necessary to conduct scientific research;
- impart students with contemporary laboratory techniques and skills required to conduct scientific investigations; and
- provide students with the academic curricula necessary to develop a strong understanding and knowledge of chemical theory and practice.

CAREER OPPORTUNITIES

Students graduating with a Bachelor’s of Science in Chemistry will be employable in chemical or chemically-related fields. They may opt to apply for admission to medical or other health professional schools such as Pharmacy, Physician Assistant or Physical Therapy School. These students are also eligible to apply for admission to graduate school. Students who choose not to pursue a terminal degree can work in industry as chemists for biotechnology, pharmaceutical or environmental management companies. Graduates can also work for government agencies such as National Science Foundation, National Institutes of Health, Food and Drug Administration, Environmental Protection Agency, National Institute of Standards and Technology, National Oceanic and Atmospheric Administration, Federal Bureau of Investigation, and Central Intelligence Agency. Websites which describe careers in chemistry include: The ACS website www.ACS.org, <http://chemistry.about.com/cs/5/f/blcareers.htm>, and <http://www.chemistryguide.org/jobs-in-chemistry.html>. The students are encouraged to explore these agencies and websites.

¹ACS Certification - The Chemistry Program received approval from the American Chemical Society (ACS) to grant ACS certified degrees in 2003.

²Students in the Honors Program are strongly encouraged to enroll in Honors courses.

³To obtain ACS (American Chemical Society) certified degree; students must follow ACS guidelines for CHEM 499 and CHEM 498. This includes a research project conducted at UMES and a comprehensive research report. The report should be written to meet the ACS requirements as outlined in the ACS document “Guidelines for preparing a Research Report.”

³Students in the Pre-Medicine or Pre-Dentistry track are advised to take the Medical College Test (MCAT) or the Dental Admission Test (DAT), as applicable, during the Spring semester of their junior year as applications to medical/dental schools are typically due in the Fall of the student’s senior year. Genetics, Cell Biology, Comparative Vertebrate Anatomy, Histology, and Microbiology are strongly recommended.

GENERAL EDUCATION REQUIREMENTS

All chemistry majors are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two different disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 161 General Physics I and	
PHYS 163 General Physics Laboratory I or	
PHYS 181H Introductory Physics I (Honors) and	3
PHYS 183H Introductory Physics Laboratory I (Honors)	1
PHYS 262 General Physics II and	
PHYS 264 General Physics Laboratory II or	
PHYS 182H Introductory of Physics II (Honors) and	3
PHYS 184H Introductory of Physics Laboratory II (Honors)	1

Curriculum Area IV - MATHEMATICS	Credits 7
MATH 110 Trigonometry & Analytical Geometry or HIGHER	3
MATH 112 Calculus I	4

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101/H Basic Composition I/Honors	3
ENGL 102/H Basic Composition II/Honors	3
ENGL 001/002/003 English Proficiency Exam	0
ENGL 305/H/Online Technical Writing/Honors/Online or	
ENGL 310/H/Online Advanced Composition/Honors/Online	3

Curriculum Area VI - EMERGING ISSUES	Credits 4
Select DNSC 100 and one additional course.	
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
TMGT 306 Ecology and Cultural Tourism	3

Total Required for General Education Credits 43

PROGRAM REQUIREMENTS

CORE REQUIREMENTS	Credits 53
A grade of "C" or better is required in each of these courses.	
CHEM 111H Principles of Chemistry I/Honors	3
CHEM 113H Principles of Chemistry Laboratory I/Honors	1
CHEM 112H Principles of Chemistry II/Honors	3
CHEM 114H Principles of Chemistry Laboratory II/Honors	1
CHEM 211H Fundamentals of Organic Chemistry I/Honors	3
CHEM 213H Fundamentals of Organic Chemistry Laboratory I/Honors	1
CHEM 212H Fundamentals of Organic Chemistry II/Honors	3
CHEM 214H Fundamentals of Organic Chemistry Laboratory II/Honors	1
CHEM 311 Analytical Chemistry I	4
CHEM 312 Analytical Chemistry II	4
CHEM 341H Biochemistry I/Honors	3
CHEM 343H Biochemistry Laboratory I/Honors	1
CHEM 401 Principles of Physical Chemistry I	4
CHEM 420 Advanced Inorganic Chemistry	4
CHEM 402 Principles of Physical Chemistry II	4
CHEM 421 Instrumental Analysis	4
CHEM 497H/M Chemistry Seminar/Honors/MARC	1
CHEM 498 Independent Study	3
CHEM 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1

SUPPORTIVE COURSE REQUIREMENTS**Credits 15**

A grade point average of "C" or better is required in supportive courses.

BIOL 111H	Principles of Biology I	3
BIOL 113H	Principles of Biology I Laboratory	1
BIOL 112H	Principles of Biology II	3
BIOL 114H	Principles of Biology II Laboratory	1
BUED 212	Computer-Concepts/Applications* <u>or</u>	
CSDP 121	Microcomputer Applications*	3
MATH 211	Calculus II	4

*CSDP 220 may be substituted for CSDP 121 or BUED 212; the extra credit may be used as free elective.

PROGRAM ELECTIVES**Credits 7**

(Choose any two courses from the following electives but one with a laboratory):

A grade of "C" or better is required in each of these courses.

CHEM 342H	Biochemistry II <u>and</u>	3
CHEM 344H	Biochemistry II Laboratory	1
CHEM 422M	Bio-Inorganic Chemistry	3
CHEM 432	Advanced Organic Chemistry	3
CHEM 488A	Advanced Environmental Chemistry	4

FREE ELECTIVES**Credits 2****Total Required Credits: 120**

**CURRICULUM GUIDE FOR CHEMISTRY HONORS¹
PREMEDICINE/PRE DENTISTRY CONCENTRATION
(NON-TEACHING - ACS CERTIFICATION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111H	3	BIOL 112H	3
BIOL 113H	1	BIOL 114H	1
CHEM 111H	3	CHEM 112H	3
CHEM 113H	1	CHEM 114H	1
DNSC 100	1	ENGL 102H	3
ENGL 101H	3	ENGL 003 ³	0
MATH 111H ²	<u>4</u>	MATH 112	<u>4</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211H	3	CHEM 212H	3
CHEM 213H	1	CHEM 214H	1
GEN ED CURR AREA I	3	GEN ED CURR AREA I	3
MATH 211	4	CSDP 121 or	
PHYS 181H	3	BUED 212 ⁴	3
PHYS 183H	<u>1</u>	PHYS 182H	3
	15	PHYS 184H	<u>1</u>
			14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	CHEM 312	4
CHEM 341H	3	CHEM 497H	1
CHEM 343H	1	CHEM 498H ⁶	3
ENGL 203	3	CHEM Elective	3
GEN ED CURR AREA II	<u>3</u>	ENGL 305H or	
	14	ENGL 310H	3
		FREE Elective	<u>1</u>
			15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 421	4	GEN ED CURR AREA II	3
CHEM 420	4	Elective with Lab Component ⁵	4
CHEM 401	4	CHEM 402	4
DNSC 400	1	CHEM 499H ⁶	<u>4</u>
EXSC 111	<u>3</u>		15
	16		

Total Credit Hours: 120

¹Students in the Honors/Pre-Medicine/Pre-Dentistry program are to enroll in all sections designated "H".

²Students may take MATH 110 (3 cr) and add the extra credit to free elective.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. ENGL 002 is for transfer students and ENGL 003 is for students enrolling in 102H.)

⁴CSDP 220 may be substituted for either CSDP 121 or BUED 212.

⁵Elective with Laboratory Component must be in the area of Chemistry.

⁶Students may take CHEM 498H and CHEM 499H for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

CHEMISTRY NON-TEACHING WITHOUT ACS CERTIFICATION

DEPARTMENTAL REQUIREMENTS

Students must complete a minimum of 120 credit hours which include 53 semester hours of program core courses, 15 hours of supportive courses, 7 hours of program electives courses, 43 hours of general education courses and 2 hours of free electives courses from the approved lists of requirements as outlined in the catalog. Students are not required to follow the ACS course guidelines since the degree is non-ACS certified.

OBJECTIVES

The objectives of the Chemistry Program are to:

1. Train students through demonstration, mentoring and personal experience to develop chemical skills and to conduct scientific research.
2. Impact students with contemporary laboratory techniques and skills required to conduct scientific investigations.
3. Provide students with the academic curricula necessary to develop a strong understanding and knowledge of chemical theory and practice.

CAREER OPPORTUNITIES

Students graduating with a Bachelor's of Science in Chemistry will be employable in chemical or chemically-related fields. They may opt to apply for admission to medical or other health professional schools such as Pharmacy, Physician Assistant or Physical Therapy School. These students are also eligible to apply for admission to graduate school. Students who choose not to pursue a terminal degree can work in industry as chemists for biotechnology, pharmaceutical or environmental management companies. Graduates can also work for government agencies such as National Science Foundation, National Institutes of Health, Food and Drug Administration, Environmental Protection Agency, National Institute of Standards and Technology, National Oceanic and Atmospheric Administration, Federal Bureau of Investigation, and Central Intelligence Agency. Websites which describe careers in chemistry include: The ACS website www.ACS.org, <http://chemistry.about.com/cs/5/f/blcareers.htm>, and <http://www.chemistryguide.org/jobs-in-chemistry.html>. The students are encouraged to explore these agencies and websites.

GENERAL EDUCATION REQUIREMENTS

All chemistry majors are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General education requirements are distributed as follows:

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two different disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 161 General Physics I and	
PHYS 163 General Physics Laboratory I or	
PHYS 181H Introductory Physics I (Honors) and	3
PHYS 183H Introductory Physics Laboratory I (Honors)	1
PHYS 262 General Physics II and	
PHYS 264 General Physics Laboratory II or	
PHYS 182H Introductory of Physics II (Honors) and	3
PHYS 184H Introductory of Physics Laboratory II (Honors)	1

Curriculum Area IV: MATHEMATICS	Credits 7
MATH 110 Trigonometry & Analytical Geometry or HIGHER	3
MATH 112 Calculus I	4

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101/H Basic Composition I/Honors	3
ENGL 102/H Basic Composition II/Honors	3
ENGL 001/002/003 English Proficiency Exam	0
ENGL 305/H/Online Technical Writing/Honors/Online or	
ENGL 310/H/Online Advanced Composition/Honors/Online	3

Curriculum Area VI - EMERGING ISSUES	Credits 4
Select DNSC 100 and one additional course.	
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
TMGT 306 Ecology and Cultural Tourism	3

Total Required for General Education Credits 43

PROGRAM REQUIREMENTS

CORE REQUIREMENTS Credits 53

A grade of "C" or better is required in each of the Program Core Requirements.

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 312 Analytical Chemistry II	4
CHEM 341 Biochemistry I	3
CHEM 343 Biochemistry Laboratory I	1
CHEM 401 Principles of Physical Chemistry I	4
CHEM 402 Principles of Physical Chemistry II	4
CHEM 420 Advanced Inorganic Chemistry	4
CHEM 421 Instrumental Analysis	4
CHEM 497/M Chemistry Seminar	1
CHEM 498 Independent Study	3
CHEM 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

SUPPORTIVE REQUIREMENTS**Credits 15**

A grade point average of "C" or better is required in supportive courses.

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
BUED 212	Computer Concepts/Applications* <u>or</u>	
CSDP 121	Microcomputer Applications*	3
MATH 211	Calculus II	4

*CSDP 220 may be substituted for CSDP 121 or BUED 212. The additional credits may be used as Free Elective credit.

PROGRAM ELECTIVES**Credits 7**

(Choose any two courses from the electives and one must have a laboratory component).

A grade of "C" or better is required in each of the Program Elective requirement.

CHEM 342	Biochemistry II <u>and</u>	3
CHEM 344	Biochemistry II Laboratory	1
CHEM 422M	Bio-Inorganic Chemistry	3
CHEM 432	Advanced Organic Chemistry	3
CHEM 488A	Advanced Environmental Chemistry	4

FREE ELECTIVES**Credits 2****Total Required Credits: 120**

**CURRICULUM GUIDE FOR CHEMISTRY
(NON-TEACHING – WITHOUT ACS CERTIFICATION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNCS 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
Curriculum Area I ²	3	Curriculum Area I ²	3
PHYS 181H	3	PHYS 182H	3
PHYS 183H	1	PHYS 184H	1
MATH 211	<u>4</u>	ENGL 203	<u>3</u>
	15		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	CHEM 312	4
CHEM 341	3	CHEM 497	1
CHEM 343	1	CHEM 498 ⁵	3
ENGL 305/Online or		CSDP 121 or	
ENGL 310/Online	3	BUED 212 ³	3
Curriculum Area II	3	Curriculum Area II	<u>3</u>
EXSC 111	<u>3</u>		14
	17		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNCS 400	1	Elective with Lab Component ⁴	4
CHEM 401	4	CHEM 402	4
CHEM 420	4	CHEM 499 ⁵	4
CHEM 421	4	Free Elective	<u>2</u>
CHEM Elective	<u>3</u>		14
	16		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students; ENGL 003 is for students enrolling in 102H.)

²Two courses must be selected from two different areas as listed under Curriculum Area I, one of which may be a foreign language. If the student needs to take another foreign language, the free elective credits may be used.

³CSDP 220 may be substituted for either CSDP 121 or BUED 212.

⁴Elective with Laboratory Component must be in the area of Chemistry.

⁵Students may take CHEM 498 and CHEM 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program

CHEMISTRY EDUCATION (TEACHING)

DEPARTMENTAL REQUIREMENTS

Maryland Higher Education Commission has set a graduation requirement of 131¹ semester hours to obtain a 4 year baccalaureate degree. Students must complete 29 semester hours of program core courses, 15 hours of supportive courses, 3 hours of program electives courses, 42 hours of general education courses and 42 hours of professional education courses from the approved lists of requirements as outlined in the catalog. Students are not required to follow the ACS course guidelines since the degree is non-ACS certified. Teacher candidates who wish to major in Chemistry Education must have an overall and major content grade point average of 2.75 for admission into and retention in the program. For admission, overall GPA of 2.75 or higher in a minimum of 45 approved semester hours, passing the University's English Proficiency Seminar, and PRAXIS I (scheduled and administered by Educational Testing Services) while registered for Praxis preparation course EDCI 201(1 credit) are required.

Any individual who meets University of Maryland Eastern Shore's admission requirements can enroll in Chemistry Education. Prospective Chemistry Teacher Education candidates are not formally admitted to the Professional Education Unit until they have completed an Application to Teacher Education and have been accepted.

OBJECTIVES

The objectives of the Chemistry Teaching Program are to:

1. Train students through demonstration, mentoring and personal experience to develop chemical skills and to conduct scientific research.
2. Impart students with contemporary laboratory techniques and skills required to conduct scientific investigations.
3. Provide students with the academic curricula necessary to develop a strong understanding and knowledge of chemical theory and practice.
4. Expose teacher candidates in Chemistry from diverse cultural backgrounds to the breadth and depth of content knowledge in Chemistry and related sciences necessary for fulfilling requirements of teaching careers in diverse cultural settings.
5. Train future teachers in Chemistry who will be competent in the application of modern technological advances in innovative ways of thinking and approaching critical issues related to both science and education.
6. Provide future teachers the opportunity to acquire mastery of skills through constant reflection of their teaching and techniques that are used to obtain, analyze, and interpret scientific information.

CAREER OPPORTUNITIES

Students graduating with the NCATE-certified Chemistry Education (Teaching) Degree with Praxis I and II Licensure can choose to enter a teaching career in secondary education

CHEMISTRY EDUCATION (TEACHING) General Required Courses

Grades of “C” or above must be attained in each required course of the Chemistry Education major, the specialized content area combined with the professional educational courses. A candidate’s progress is monitored each semester by the academic advisor to ensure that the candidate continues to meet the minimum GPA of 2.75 in both the core courses and overall program. Chemistry Education Program Requirements are as follow: General Education Requirements, Program Core Requirements, Supportive Courses Requirements, Core Program Electives and Professional Education Requirements. Students are required to complete a total of 131¹ credit hours in these categories for graduation. A research manuscript or undergraduate thesis is required following completion of Undergraduate Research. The Research project has to be approved by a committee consisting of advisor who will serve as the thesis or project supervisor and another faculty member from the Department of Natural Sciences.

Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology education or chemistry education. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing credit by exam, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details.

General Education Requirements: (42 cr.) 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. Biology Education Program candidates are required to complete a total of 42 credit hours for graduation in this category. These credit hours are divided into six areas. A grade of “C” or above is required in all GER courses.

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – E):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203

¹The higher than the 120 cr. hr. requirement is to meet the standards of NCATE (National Council for Accreditation of Teacher Education and NSTA (National Science Teachers Association).

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course from each of two disciplines;

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200/H, POLI 220H, POLI 342

SOVI 101, SOVI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200, SOVI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

PHYS 181H Introductory Physics I 3

PHYS 183H Introductory Physics I Laboratory 1

PHYS 182H Introductory Physics II 3

PHYS 184H Introductory Physics II Laboratory 1

Curriculum Area IV – MATHEMATICS **Credits 6**

MATH 110 Trigonometry & Analytical Geometry or Higher 3

MATH 210 Elementary Statistics 3

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101/H Basic Composition I/Honors 3

ENGL 102/H Basic Composition II/Honors 3

ENGL 001/002/003 English Proficiency Exam 0

ENGL 305/H/Online Technical Writing/Honors/Online or 3

ENGL 310/H/Online Advanced Composition/Honors/Online 3

Curriculum Area VI - EMERGING ISSUES **Credits 4**

DNSC 100 Freshman Seminar 1

EXSC 111 Personalized Health Fitness 3

CORE REQUIREMENTS **Credits 29**Candidates in Chemistry Education are required to earn at least a grade of C or above in each of these courses, and maintain a minimum GPA of **2.75** in the core courses.

CHEM 111 Principles of Chemistry I 3

CHEM 112 Principles of Chemistry II 3

CHEM 113 Principles of Chemistry I Laboratory 1

CHEM 114 Principles of Chemistry II 1

CHEM 211 Fundamentals of Organic Chemistry I 3

CHEM 212 Fundamentals of Organic Chemistry II 3

CHEM 213 Fundamentals of Organic Chemistry I Laboratory 1

CHEM 214 Fundamentals of Organic Chemistry II Laboratory 1

CHEM 311 Analytical Chemistry I 4

CHEM 401 Principles of Physical Chemistry 4

CHEM 497 Chemistry Seminar 1

CHEM 499 Undergraduate Research¹ 4¹Students must pass ENGL 101 and 102 with a grade of “C” or above before taking ENGL 203.

SUPPORTIVE COURSE REQUIREMENTS

Credits 15

Candidates are required to earn at least a grade of C or better in each of the supporting courses, and maintain a minimum GPA of **2.75** in these courses.

BIOL 111	Principles of Biology I	3
BIOL 113	Principles of Biology I Laboratory	1
CSDP 121	Microcomputer Applications or	
BUED 212	Computer Concepts/Applications I/Hybrid/Online*	3
MATH 112	Calculus I	4
MATH 211	Calculus II	4

*** CSDP 220 may be substituted for CSDP 121 or BUED 212.**

CORE PROGRAM ELECTIVES

Credits 3

The Department of Natural Sciences offers many electives. Candidates of Chemistry Education are required to take the following core elective as this meets the National Science Teachers Association (NSTA) and National Science Education Standards (NSES) content standards. Candidates are required to earn no less than a C in this course.

<u>Course & No.</u>	<u>Title</u>	<u>Credits</u>
ENVS 460	Earth Science or equivalent	3

PROFESSIONAL EDUCATION REQUIREMENTS

Credits 42

Chemistry Education candidates are required to complete 42 credit hours under the Professional Education Requirements. Candidates are required to earn no less than a C in any course, and maintain a minimum GPA of **2.75** in these courses. EDCI 201-Praxis Preparation (1 cr. hour) does not count toward graduation.

EDCI 200	Introduction to Contemporary Education	3
EDCI 201	Praxis Preparation**	1
PSYC 305	Developmental Psychology/online	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment in Education	3
EDCI 409	Teaching Reading in the Content Areas I	3
EDCI 410	Teaching Reading in the Content Areas II	3
EDCI 406	Classroom Management	3
EDCI 425A	Curriculum and Instructional Methods in Natural Sciences	3
EDSP 400	Senior Seminar in Education	3*
EDSP 428	Communication and Collaboration in Special Education	3
EDCI 480	Teaching Internship I: Teaching Chemistry in middle school	6*
EDCI 490	Teaching Internship II: Teaching Chemistry in high school	6*

*EDCI 400, EDCI 480 and EDCI 490 are to be taken concurrently during the last semester of the Senior year. **EDCI 201 does not count toward graduation. Its inclusion makes the total 132 credits.

Total Credits Required

Credits 131

Field and Clinical Experiences

Clinical Experiences are those experiences which are based on a very specific purpose. They may consist of interviewing a student, teacher, or administrator, observing a meeting or a conference; visiting a school or community resource center; developing a case study; peer teaching; administering a test; or attending a meeting or a conference. Clinical Experiences generally require a limited amount of time in a school or with a student (10 hours). Teacher Candidates are asked to submit a report or a reflective journal that documents the completion of the assignment. **Field Experiences** always occur in a school setting and consist of 10 to 25 hours of visitation per course. The times vary based on the course requirement. Field

Experiences usually require a student to keep a reflective journal which is submitted as part of the final grade. Listed below are the clinical and field experiences required for all professional courses in Biology Education.

Course Number	Titles	Type of Experience/Hours
EDCI 200	Introduction to Contemporary Education	Field/10 hours
PSYC 305	Developmental Psychology	Clinical/10 hours
PSYC 307	Educational Psychology	Clinical/10 hours
EDCI 311	Comprehensive Assessment	Field/10 hours
EDCI 406	Classroom Management	Field/15 hours
EDCI 409	Teaching Reading in the Content Areas I	Field/15 hours
EDCI 410	Teaching Reading in the Content Areas II	Field/15 hours
EDCI 425A	Curriculum and Instructional Methods in Natural Sciences	Field/25 hours
EDSP 428	Communication and Collaboration in Special Education	Field/10 hours
Total	110 hours (Field Experience-90 hours; Clinical Experience-20 hours)	

Internships

EDCI 480/490 Internship -2 consecutive 7-8 week (5 days/week) placement at 2 different sites (Refer to the course description)

In EDCI 480/490 (Internship), the teacher candidates in Biology have a full semester of student teaching-a middle school experience and a high school experience. Candidates are under the direct supervision of a Science Cooperating Teacher in Biology and also supervised by the University Supervisor who also serves as the Teacher Educator (Instructor of Methods and Internship) of Biology Education. University supervisor is required to observe and conference with the candidate and cooperating teacher a minimum of eight times, four times per student teaching placement, with an additional introductory meeting for each placement. Candidates begin by taking one or two classes from their cooperating teacher's schedule of teaching, and gradually picking up more until they have the experience of teaching a full load. The candidates are expected to demonstrate effective teaching skills such as facilitating collaborative group learning, motivating, and encouraging student learning activities, and assessing students' responses. They are to design a bulletin board display, prepare appropriate instructional materials, observe teaching, interview school personnel, participate in parent meetings, evaluate student work using multiple assessments, and become involved in the life of the school and the full role of a teacher. Documentation of performance based outcomes, as well as summative evaluative reports are prepared by cooperating teachers, based on their day-to-day experiences with the candidate, and by the university supervisor based on the observational visits and discussions with the candidates and cooperating teachers.

CURRICULUM GUIDE FOR CHEMISTRY EDUCATION (TEACHING)

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	ENGL 102	3
BIOL 113	1	ENGL 001/ENGL 003 ¹	0
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNSC 100	1	PSYC 200	3
ENGL 101	3	MATH 210	3
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CSDP 121 or BUED 212 ²	3	CHEM 212	3
CHEM 211	3	CHEM 214	1
CHEM 213	1	PSYC 305	3
ENGL 203	3	EXSC 11	3
EDCI 200	3	ENVS 460	3
EDCI 201 ³	1	GEN ED CURR AREA I	<u>3</u>
MATH 211	<u>4</u>		16
	18		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	PHYS 182H	3
CHEM 497	1	PHYS 184 H	1
PHYS 181H	3	EDCI 406	3
PHYS 183H	1	EDCI 409	3
ENGL 305/H/Online or ENGL 310/H/Online	3	GEN ED CURR AREA II	3
PSYC 307	3	CHEM 499 ⁴	<u>4</u>
EDCI 311	<u>3</u>		17
	18		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 401	4	EDCI 400	3
EDCI 410	3	EDCI 480	6
EDCI 425A	3	EDCI 490	<u>6</u>
EDSP 428	3		15
GEN ED CURR AREA I	<u>3</u>		
	16		

Total Credit Hours: 131⁵ (The total excludes EDCI 201.)

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²CSDP 220 may be substituted for CSDP 121 or BUED 212.

³Credit does not count toward graduation.

⁴Students may take CHEM 499 for 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program

⁵The higher than 120 cr. hr. requirement is to meet the standards of NCATE (National Council for Accreditation of Teacher Education) and NSTA (National Science Teachers Association).

ENVIRONMENTAL SCIENCES

The Environmental Sciences major has two options Chemistry or Marine Science. The concept of each Option is indicated below.

DEPARTMENTAL REQUIREMENTS

Environmental Sciences majors (environmental chemistry option) must complete 120 semester hours: 42 semester hours in general education courses, 29 semester of hours in program core courses, 46 semester hours in program supportive courses and 3 semester hours in electives. Marine Science option must complete 120 semester hours: 42 semester hours in general education courses, 38 semester of hours in program core courses, 34 semester hours in program supportive courses and 6 semester hours in electives. Students are required, to take independent study and/or undergraduate research in their junior or senior year. Most faculty are actively involved in research projects with undergraduate students. Students must receive a grade of “C” or better in both lecture and laboratory component to progress to the next sequence course.

OBJECTIVES

The program in Environmental Sciences has been developed to:

1. Create in the student abilities of critical and reflective thought relating to the many aspects of environmental concerns.
2. Train students to use the interdisciplinary approach involving the areas of Biology, Chemistry, Physics, Computer Sciences and Economics.
3. Provide students with the academic curricula necessary to develop a strong understanding and knowledge of the environment.
4. Impart students with laboratory techniques and skills required to conduct scientific investigation.
5. Train students, through example, mentoring and personal experience, to develop chemical, biological, physical and social skills to conduct environmental research.

CAREER OPPORTUNITIES

A degree in Environmental Sciences prepares students for employment in newly evolving and conventional scientific fields related to Environmental Sciences or to pursue graduate and professional degrees. Graduates are employed as Water Treatment Plant Managers, Air Pollution Supervisors, Marine Biologists, Energy & Environment Specialists, Environmental Chemists/Biologists, Oceanographers, Soil Conservationists and Fisheries Scientists. The program offers two options.

ENVIRONMENTAL SCIENCE - ENVIRONMENTAL CHEMISTRY OPTION

Students must complete 120 semester hours: 42 semester hours in general education courses, 29 semester of hours in program core courses, 46 semester hours in program supportive courses and 3 semester hours in program electives. Students are required, to take independent study and undergraduate research in their junior or senior year. Most faculty are actively involved in research projects with undergraduate students. Students must receive a grade of “C” or better in both lecture and laboratory component to progress to the next sequence course.

ENVIRONMENTAL SCIENCES – CHEMISTRY OPTION Required Courses

GENERAL EDUCATION REQUIREMENTS

All environmental science majors with chemistry option are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing ‘credit by exam’, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General Education Requirements are distributed as follows:

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – D):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**
 Students must select one course from each of two disciplines:

Discipline A: **SOCIAL SCIENCES**

- GEOG 201 or GEOG 202
- HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201
- POLI 200 or POLI 200H,
- POLI 220H or POLI 342
- SOCI 101 or SOCI 101H

Discipline B: **BEHAVIORAL SCIENCES**

- CRJS 101
- HUEC 203, HUEC 220, HUEC 361
- PSYC 200
- SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

- BIOL 111/H Principles of Biology I 3
- BIOL 113/H Principles of Biology I Laboratory 1
- BIOL 112/H Principles of Biology II 3
- BIOL 114/H Principles of Biology II Laboratory 1

Curriculum Area IV – MATHEMATICS **Credits**

- MATH 110 Trigonometry & Analytical Geometry or Higher 3

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

- ENGL 101 or ENGL 101H 3
- ENGL 102 or ENGL 102H 3
- ENGL 001/002/003 0
- ENGL 305/H/Online or ENGL 310/H/Online 3

Curriculum Area VI - EMERGING ISSUES **Credits 7**

- DNSC 100 Freshman Seminar 1
- EXSC 111 Personalized Health Fitness 3
- HUEC 230 Multicultural Perspectives on Families in the U.S. 3

Total Required for General Education **Credits 42**

PROGRAM REQUIREMENTS

CORE REQUIREMENTS **Credits 29**

A grade of “C” or better is required in each of the Program Core Requirements.

- 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 403 Ecotoxicology 3
- ENVS 405 Ecotoxicology Laboratory 1
- BIOL 301 Microbiology 3
- BIOL 303 Microbiology Laboratory 1
- ENVS 497 Senior Seminar 1
- ENVS 498 Independent Study 3
- ENVS 499 Undergraduate Research 4
- DNSC 400 Senior Proficiency Seminar 1

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203.

SUPPORTIVE REQUIREMENTS**Credits 46**

A grade point average of "C" or better is required in supportive courses.

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
ENVS 460	Earth Science	3
CHEM 341	Biochemistry I	3
CHEM 343	Biochemistry Laboratory I	1
CHEM 488A	Advanced Environmental Chemistry	4
CSDP 220	Introduction to Computer Programming ¹	4
PHYS 121	General College Physics I and	
PHYS 123	General College Physics I Laboratory <i>or</i>	
PHYS 181H	Introductory Physics I (Honors) and	3
PHYS 183H	Introductory Physics I (Honors) Laboratory	1
PHYS 122	General College Physics II	
PHYS 124	General College Physics II Laboratory <i>or</i>	
PHYS 182H	Introductory Physics II (Honors)	3
PHYS 184H	Introductory Physics II (Honors) Laboratory	1
MATH 112	Calculus I	4
MATH 210	Elementary Statistics	3

PROGRAM ELECTIVES (Choose any course from the following electives) Credits 3

A grade of "C" or better is required in each of the Program Elective Requirements.

BIOL 402	Ecology	4
BIOL 426M	Biotechnology	4
CHEM 342	Biochemistry II and	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
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Laboratory	1
ENVS 333	Energy, Environment & Economics	3
ENVS 456	Future Sources of Energy	3
ENVS 498	Independent Study	1-3
MATH 211	Calculus II	4

FREE ELECTIVES**Credits 0****Total Required Credits: 120**

¹CSDP 121 or BUED 212 may be substitute for CSDP 220, and makeup 1 cr. somewhere else.

CURRICULUM GUIDE FOR ENVIRONMENTAL SCIENCES CHEMISTRY OPTION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
MATH 110	3	ENGL 001/ENGL 003 ¹	0
CHEM 111	3	MATH 112	4
CHEM 113	1	CHEM 112	3
BIOL 111	3	CHEM 114	1
BIOL 113	1	BIOL 112	3
DNCS 100	<u>1</u>	BIOL 114	1
	15	EXSC 111	<u>3</u>
			18

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
CSDP 220 ²	4	MATH 210	3
ECON 201	3	ECON 200	3
PHYS 121 <i>and</i>		ENGL 203	3
PHYS 123 <i>or</i>		PHYS 122 <i>and</i>	
PHYS 181H <i>and</i>	3	PHYS 124 <i>or</i>	
PHYS 183H	<u>1</u>	PHYS 182H <i>and</i>	3
	15	PHYS 184H	<u>1</u>
			17

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 301	3	ENGL 305 <i>or</i>	
BIOL 303	1	ENGL 310	3
CHEM 311	4	ENVS 221	3
CHEM 341	3	ENVS 222	1
CHEM 343	1	CHEM 312	4
HUEC 230	<u>3</u>	Elective ³	<u>3</u>
	15		14

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNCS 400	1	CHEM 488A	4
ENVS 403	3	ENVS 498 ⁴	3
ENVS 405	1	GEN ED CURR AREA I	3
ENVS 497	1	ENVS 460	<u>3</u>
ENVS 499 ⁴	4		13
GEN ED CURR AREA I	<u>3</u>		
	13		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H, and ENGL 002 is for transfer students.)

²CSDP 121 or BUED 212 may be substitute for CSDP 220 and 1 cr. made up somewhere else

³Students must choose a Program Elective.

⁴Students may take CHEM 498 and CHEM 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

ENVIRONMENTAL SCIENCE - MARINE SCIENCE OPTION¹

Students must complete 120 semester hours: 42 semester hours in general education courses, 38 semester hours in program core courses, 34 semester hours in program supportive courses and 6 semester hours in electives. Students are required, to take an independent study or undergraduate research in their junior or senior year. Most faculty are actively involved in research projects with undergraduate students. Students must receive a grade of “C” or better in both lecture and laboratory components of core and program electives to progress to the next sequence course.

ENVIRONMENTAL SCIENCES – MARINE SCIENCE OPTION

Required Courses

GENERAL EDUCATION REQUIREMENTS

All environmental science majors with marine science option are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing ‘credit by exam’, by taking courses during summer and winter sessions, on-line courses, independent study (CHEM 498) course, undergraduate research (CHEM 499) course, and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General Education Requirements are distributed as follows:

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – D):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

¹Students must pass ENGL 101 and 102 with a grade of “C” or above before taking ENGL 203.

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course from each of two disciplines:

Discipline A: **SOCIAL SCIENCES**

GEOG 201 or GEOG 202
HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201
POLI 200 or POLI 200H,
POLI 220H or POLI 342
SOVI 101 or SOVI 101H

Discipline B: **BEHAVIORAL SCIENCES**

CRJS 101
HUEC 203, HUEC 220, HUEC 361
PSYC 200
SOVI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 8**

PHYS 121	General College Physics I <i>and</i>	
PHYS 123	General College Physics I Laboratory <i>or</i>	
PHYS 181H ¹	Introductory Physics I <i>and</i>	3
PHYS 183H ¹	Introductory Physics I Laboratory <i>and</i>	1
PHYS 122	General College Physics II <i>and</i>	
PHYS 124	General College Physics II Laboratory <i>or</i>	
PHYS 182H ¹	Introductory Physics II <i>and</i>	3
PHYS 184H ¹	Introductory Physics II Laboratory	1

Curriculum Area IV – MATHEMATICS **Credits 3**

MATH 110	Trigonometry & Analytical Geometry or Higher	3
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Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101/H	Basic Composition I/ (Honors)	3
ENGL 102/H	Basic Composition II/ (Honors)	3
ENGL 001/002/003	English Proficiency Exam	0
ENGL 305/H/Online	Technical Writing/Honors/Online <i>or</i>	
ENGL 310/H/Online	Advanced Composition/Honors/Online	3

Curriculum Area VI - EMERGING ISSUES **Credits 7**

DNVC 100	Freshman Seminar	1
EXSC 111	Personalized Health Fitness	3
HUEC 230	Multicultural Perspectives on Families in the U.S.	3

Total Required for General Education **Credits 42**

PROGRAM REQUIREMENTS

CORE REQUIREMENTS **Credits 38**

A grade of “C” or better is required in each of these courses.

BIOL 201	Marine Zoology	4
BIOL 202	Marine Botany and	3
BIOL 203	Marine Botany Laboratory	1
BIOL 301	Microbiology	3
BIOL 303	Microbiology Laboratory	1
BIOL 402	Ecology	4
ENVS 202	General Oceanography <i>and</i>	3
ENVS 204	General Oceanography Laboratory	1

¹Students must pass ENGL 101 and 102 with a grade of “C” or above before taking ENGL 203

ENVS 221	Principles of Environmental Science I	3
ENVS 222	Principles of Environmental Science Laboratory I	1
ENVS 403	Ecotoxicology	3
ENVS 405	Ecotoxicology Laboratory	1
ENVS 460	Earth Science	3
ENVS 497	Senior Seminar	1
ENVS 498	Independent Study	2
ENVS 499	Undergraduate Research	3
DNSC 400	Senior Proficiency Seminar	1

SUPPORTIVE REQUIREMENTS

Credits 34

A grade point average of “C” or better is required in supportive courses.

BIOL 111	Principles of Biology I and	3
BIOL 113	Principles of Biology Laboratory I	1
BIOL 112	Principles of Biology II and	3
BIOL 114	Principles of Biology Laboratory II	1
CHEM 111	Principles of Chemistry I and	3
CHEM 113	Principles of Chemistry Laboratory I	1
CHEM 112	Principles of Chemistry II and	3
CHEM 114	Principles of Chemistry Laboratory II	1
CHEM 211	Fundamentals of Organic Chemistry I and	3
CHEM 213	Fundamentals of Organic Chemistry Laboratory I	1
CHEM 212	Fundamentals of Organic Chemistry II and	3
CHEM 214	Fundamentals of Organic Chemistry Laboratory II	1
MATH 112	Calculus I	4
MATH 210	Elementary Statistics	3
BUED 212	Computer Concepts and Applications ¹ or	
CSDP 121	Microcomputer Applications ¹	3

PROGRAM ELECTIVES (Choose any course from the following electives)

Credits 6

A grade of “C” or better is required in any course you choose.

BIOL 261	Invertebrate Zoology	4
BIOL 311	Vertebrate Embryology	4
BIOL 322	Comparative Vertebrate Anatomy	4
BIOL 326	Cell Biology and	3
BIOL 327	Cell Biology Laboratory	1
BIOL 330	Evolution	3
BIOL 335	Biogeography	3
BIOL 341	Introductory Physiology	4
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 463	Wildlife Management	4
CHEM 311	Analytical Chemistry I	4
CHEM 312	Analytical Chemistry II	4
CHEM 341	Biochemistry I and	3
CHEM 343	Biochemistry Laboratory I	1
CHEM 342	Biochemistry II and	3
CHEM 344	Biochemistry Laboratory II	1
CHEM 401	Principles of Physical Chemistry I	4
CHEM 402	Principles of Physical Chemistry II	4

¹CSDP 220 may be substituted for CSDP 121 or BUED 212

CHEM 421	Instrumental Analysis	4
CHEM 422M	Bio-Inorganic Chemistry	3
MATH 211	Calculus II	4

FREE ELECTIVES **Credits 0**

Total Required Credits: 120

CURRICULUM GUIDE FOR MARINE SCIENCE OPTION¹

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
DNCS 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ²	0
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 202	3	CHEM 212	3
BIOL 203	1	CHEM 214	1
CHEM 211	3	BIOL 201	4
CHEM 213	1	BIOL 301	3
ENVS 202	3	BIOL 303	1
ENVS 204	1	EXSC 111	<u>3</u>
GEN ED CURR AREA I	<u>3</u>		15
	15		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 121	3	PHYS 122	3
PHYS 123	1	PHYS 124	1
ENVS 221	3	Curriculum Area II	3
ENVS 222	1	ENGL 305/Online or	
CSDP 121 or		ENGL 310/Online	3
BUED 212 ³	3	ENVS 498 ⁵	2
ENGL 203	<u>3</u>	MATH 210	<u>3</u>
	14		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNCS 400	1	ENVS 460	3
BIOL 402	4	Elective ⁴	3
ENVS 403	3	Elective ⁴	3
ENVS 405	1	ENVS 499 ⁵	3
ENVS 497	1	HUEC 230	<u>3</u>
GEN ED CURR AREA I	3		15
GEN ED CURR AREA II	<u>3</u>		
	16		

Total Credit Hours: 120

¹Students in the Honors Program are to enroll in courses designated by "H".

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 002 is for transfer students; ENGL 003 is for students enrolling in 102H.)

³BUED 212 or CSDP 121 may be substituted with CSDP 220.

⁴Students must choose a Program Elective.

⁵Students may take ENVS 498 and ENVS 499 for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

DUAL DEGREE PROGRAM

ENVIRONMENTAL SCIENCE - MARINE SCIENCES TRACK

Students enrolled at Salisbury University in the Biology Program may also earn a degree in Environmental Sciences from UMES by taking 30 hours of prescribed coursework in Environmental Science at UMES. Of the 30 hours, 7 hours of approved courses successfully completed at SU may be transferred to UMES. The required courses are listed below.

Courses to be taken by SU students at UMES		Credits 30
<u>Course & No.</u>	<u>Title</u>	<u>Credit</u>
BIOL 201	Marine Zoology	3
BIOL 202	Marine Botany	3
BIOL 203	Marine Botany Laboratory	1
ENVS 202	General Oceanography	3
ENVS 204	General Oceanography Laboratory	1
ENVS 403	Marine Ecotoxicology	3
ENVS 405	Marine Ecotoxicology Laboratory	1
ENVS 411	Water Pollution and Purification	3
ENVS 413	Water Pollution and Purification Laboratory	1
ENVS 460	Earth Science	3
DNVC 400	Senior Proficiency Seminar	1
Transfer Hours of Approved Courses		7

Total Credits: 31

COMBINED B.S./M.S. PROGRAM ENVIRONMENTAL SCIENCES

The combined four-year/five-year B.S./M.S. degree program offers two options: Environmental Chemistry and Marine Sciences. The two options are 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 the requirements for the two programs. This is an accelerated program with students wishing to pursue this option beginning under the Environmental Sciences (Environmental Chemistry or Marine Sciences) program but following the curriculum guide for the Combined B.S./M.S. program (Environmental Chemistry or Marine Sciences). At the end of the sophomore year for the student to qualify for the Combined B.S./M.S. program he or she must have a 3.0 GPA. The student can then request to be changed to the combined program prior to the start of their Junior year. A student wishing to pursue the 5-year M.S. program must make a formal application to the MEES program in the first semester of the Senior year. Students must take the GRE (General Test) during the junior year. When applying for admission into the MEES program students must select an Area of Specialization which for the Environmental Sciences track would be Environmental Chemistry, Environmental Science or Oceanography (Chemical) and for the Marine Sciences track would be Ecology, Environmental Molecular Biology/Biotechnology, Fisheries Science, or Oceanography (Biological).

ENVIRONMENTAL CHEMISTRY OPTION

This program is designed to enable students to earn both the B.S. and M.S. degrees in five years. The curriculum is more advanced in the traditional B.S. degree program, and students become involved in directed research earlier. The Environmental Chemistry track provides students with training in environmental contamination and toxicology, air and water pollution, waste treatment and disposal, and energy resources.

Students in the first two years of the 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. Majors who choose the B.S. program will graduate at the end of the fourth year with the requisite 120 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.

DEPARTMENTAL REQUIREMENTS

Students enrolled in the Environmental Chemistry option must complete 120 semester hours of undergraduate courses and 30 semester hours graduate courses for their degrees: 42 semester hours in general education courses, 29 semester hours in undergraduate program core courses, and 45 semester hours of supportive courses. 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).

BS/MS IN ENVIRONMENTAL SCIENCES – CHEMISTRY OPTION
Required Courses

GENERAL EDUCATION REQUIREMENTS

All environmental science majors with chemistry option are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing 'credit by exam', by taking courses during summer and winter sessions, on-line courses, Independent Study course (CHEM 498), Undergraduate Research (CHEM 499), and courses completed while studying abroad.

Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General Education Requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – D):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, ASLS 204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines:

Discipline A: **SOCIAL SCIENCES**

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: **BEHAVIORAL SCIENCES**

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹ENGL 001 is English proficiency exam; transfer students should take ENGL 003, and those in ENGL 102H should take ENGL 002.

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
BIOL 111/H Principles of Biology I	3
BIOL 113/H Principles of Biology I Laboratory	1
BIOL 112/H Principles of Biology II	3
BIOL 114/H Principles of Biology II Laboratory	1

Curriculum Area IV – MATHEMATICS	Credits 3
MATH 110 Trigonometry & Analytical Geometry or Higher	3

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101/H English Composition I	3
ENGL 102/H English Composition II	3
ENGL 001/002/003 English Proficiency Exam *	0
ENGL 305/H/Online Technical Writing/Honors/Online Or	
ENGL 310/H/Online Advanced Composition/Honors/Online	3

Curriculum Area VI - EMERGING ISSUES	Credits 7
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3

Total Required for General Education Credits 42

PROGRAM REQUIREMENTS

CORE REQUIREMENTS Credits 33

A grade of "C" or better is required in each of the Program Core Requirements.

CHEM 311 Analytical Chemistry I	4
CHEM 312 Analytical Chemistry II	4
CHEM 621 Advanced Environmental Chemistry	3
CHEM 622 Advanced Environmental Chemistry Laboratory	1
ENVS 221 Principles of Environmental Science	3
ENVS 222 Principles of Environmental Science Laboratory	1
ENVS 497 ENVS Seminar	1
ENVS 498 Independent Study	3
ENVS 499 Undergraduate Research	4
DNSC 400 Senior Proficiency Seminar	1
ENVS 603 Marine Ecotoxicology	3
ENVS 405 Marine Ecotoxicology Laboratory	1
ENVS 660 Earth Science	4*

*Student may substitute ENVS 460 (3 cr.) and make up 1 cr. somewhere else.

SUPPORTIVE REQUIREMENTS Credits 45

A grade point average of "C" or better is required in supportive courses.

BIOL 301 Microbiology	3
BIOL 303 Microbiology Laboratory	1
CHEM 111 Principles of Chemistry I	3
CHEM 112 Principles of Chemistry II	3
CHEM 113 Principles of Chemistry I Laboratory	1
CHEM 114 Principles of Chemistry Laboratory II	1
CHEM 211 Fundamentals of Organic Chemistry I	3
CHEM 212 Fundamentals of Organic Chemistry II	3
CHEM 213 Fundamentals of Organic Chemistry Laboratory I	1
CHEM 214 Fundamentals of Organic Chemistry Laboratory II	1
CHEM 341 Biochemistry I	3

CHEM 343	Biochemistry Laboratory I	1
BUED 212	Computer Concepts and Applications* or	
CSDP 121	Microcomputer Applications*	3
ECON 200	Principles of Microeconomics	3
MATH 112	Calculus I	4
MATH 210	Elementary Statistics	3
PHYS 121	General College Physics I and	
PHYS 123	General College Physics Laboratory I Or	
PHYS 181H	Introductory Physics I (Honors) and	3
PHYS 183H	Introductory Physics I (Honors) Laboratory	1
PHYS 122	General College Physics II and	
PHYS 124	General College Physics II Laboratory Or	
PHYS 182H	Introductory Physics II (Honors) and	3
PHYS 184H	Introductory Physics II (Honors) Laboratory	1

*CSDP220 may be substituted for CSDP 121 or BUED 212.

MEES REQUIREMENTS

Credits 30

PROGRAM ELECTIVES (Choose any course from the following elective groups):

A grade of "C" or better is required in each of these courses.

Undergraduate Elective

Credits 7

BIOL 402	Ecology	4
BIOL 426M	Biotechnology	4
CHEM 401	Physical Chemistry I	4
CHEM 402	Physical Chemistry II	4
CHEM 422M	Bio-Inorganic Chemistry	3
ENVS 456	Future Sources of Energy	3
ENVS 498	Independent Study ¹	1-3
MATH 211	Calculus II ²	4

¹ENVS 498 is repeatable; students may take 1, 2 or 3 credits and accumulate to the required 3 credits.

²MATH 211 is required for admission into the MEES program; but it does not count toward credits for B.S. or M.S. degree. Students are advised to take it in addition to 7 cr.

MEES (AOS: Environmental Chemistry) ELECTIVES

Credits 11

Select MEES 608 (1 cr.) and 10 cr. of additional courses.

MEES 608		1
CHEM 632	Applied Water Chemistry	3
CHEM 670	Advanced Biochemistry	3
BIOL 600	Marine and Estuarine Ecology	4
BIOL 601	Environmental Microbiology	4
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

STATISTICS ELECTIVE

Credits 3

MATH 410	Mathematical Statistics II or	
CSDP 604	Computer Methods in Statistics	3

MANAGEMENT ELECTIVE

Credits 3

ENVS 684	Natural Resource Management	3
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THESIS RESEARCH
MEES 799 Thesis Research

Credits 6
6

FREE ELECTIVES

Credits 0

Total Required Credits: 150

**CURRICULUM GUIDE B.S./M.S.
(ENVIRONMENTAL CHEMISTRY OPTION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111/H	3	BIOL 112/H	3
BIOL 113/H	1	BIOL 114/H	1
CHEM 111/H	3	CHEM 112/H	3
CHEM 113/H	1	CHEM 114/H	1
DNSC 100	1	EXSC 111	3
ENGL 101/H	3	ENGL 102/H	3
MATH 110	3	ENGL 001/002H/003*	0
Curriculum Area I	<u>3</u>	MATH 112	<u>4</u>
	18		18

* ENGL 001 is English proficiency exam; transfer students should take ENGL 003 and those in ENGL 102H should take ENGL 002.

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211/H	3	CHEM 212/H	3
CHEM 213/H	1	CHEM 214/H	1
PHYS 121 and		ENGL 203	3
PHYS 123 or		MATH 210	3
PHYS 181H* and	3	PHYS 122 and	
PHYS 183 H	1	PHYS 124 or	
MATH 211	4	PHYS 182 H* and	3
CSDP 121 ¹ or		PHYS 184H	1
BUED 212	3	ECON 201	<u>3</u>
ECON 200	<u>3</u>		17
	18		

*PHYS 181 H and PHYS 182 H require MATH 112, Calculus I, as pre-requisite.

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 311	4	Curriculum Area I	3
BIOL 301	3	ENVS 221	3
BIOL 303	1	ENVS 222	1
ENVS 660	4	CHEM 312	4
ENGL305/H/Online or		ENVS 498 ²	3
ENGL 310/H/Online	3	Elective (Undergraduate)	<u>4</u>
HUEC 230	<u>3</u>		18
	18		

SUMMER OF JUNIOR YEAR

<i>Session I</i>	<i>Credit</i>
ENVS 499 ²	4

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 341	3	CHEM 621	3
CHEM 343	1	CHEM 622	1
DNVC 400	1	MEES 608	1
ENVS 603	3	ENVS 684	3
ENVS 405	1	CSDP 604 or	
ELECTIVE (Undergraduate)	3	MATH 410	3
Curriculum Area II	3	MEES AOS ³	<u>4</u>
ENVS 497	<u>1</u>		15
	16		

Total Required for B.S.- Credit 120⁴

¹CSDP 220 may be substituted for either CSDP 121 or BUED 212.

² Students may take CHEM 498 and CHEM 499 for 1, 2, 3 and 1, 2, 3, 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate required credits of 3 and 4, respectively.

³AOS (Area of Specialization) requirements must meet specific AOSs applicable under the program the student chooses. For Environmental Chemistry these are Environmental Chemistry, Environmental Science and Oceanography (Chemical).

⁴Credits in excess of 120 carry over to meet the MS requirements.

SUMMER SESSION

<i>First Semester</i>	<i>Credits</i>
MEES AOS	3
MEES 799	<u>3</u>
	6

FIFTH YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MEES AOS	<u>3</u>	MEES799	<u>3</u>
	3		3

Total Requirement for BS/MS

Credits 150**

**The total adds up to 154 cr. which includes MATH 211 (4 cr.). MATH 211 is required for getting admission into the MEES program but it does not count toward credits for M.S. degree in Environmental Sciences.

Total Credit Hours: 150

**COMBINED B.S./M.S.
ENVIRONMENTAL SCIENCE MARINE SCIENCE OPTION**

This program is designed to enable students to earn both the B.S. and M.S. degrees in five years. The curriculum is more advanced in the traditional B.S. degree program, and students become involved in directed research earlier. The Marine Science track provides students with training in biological oceanography, fisheries, quantitative fisheries, ecology and other related disciplines.

Students in the first two years of the 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. Majors who choose the B.S. program will graduate at the end of the fourth year with the requisite 120 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. Students enrolled in the Environmental Science Marine Science option must complete 120 semester hours of undergraduate courses and 30 semester hours graduate courses for their degrees: 42 semester hours in general education courses, 40 semester hours in undergraduate program core courses, 34 semester hours of supportive courses, and 4 semester hours in program elective courses. 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).

General Required Courses

BS/MS IN ENVIRONMENTAL SCIENCES – MARINE SCIENCE OPTION

GENERAL EDUCATION REQUIREMENTS

All BS/MS environmental science majors with marine science option are expected to complete a common body of academic course work (42 cr.). 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. Fundamental courses, MATH 101 and 109 do not meet the General Education Requirement for a degree in biology, chemistry or environmental sciences; and do not apply toward graduation requirements. However, students placed in MATH 101 or MATH 109 should take these courses to prepare them for the required Math 110 and higher level Math courses.

Alternative Credits

All students who enroll in degree programs are required to complete 12 alternative credits before graduation. Alternative credits can be earned by establishing 'credit by exam', by taking courses during summer and winter sessions, on-line courses, Independent Study course (ENVS 498), undergraduate research (ENVS 499), and courses completed while studying abroad. Students in the Honors program should take honors courses designated by H. Students are encouraged to take a couple of courses On-line or during summer and winter sessions to satisfy the alternative credits requirement of 12 cr. Discuss with your advisor for details. General Education Requirements are distributed as follows:

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH plus one course from each of two *different* disciplines (A – D):

Discipline A: **ARTS**

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

Discipline B: **HISTORY**

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: **LANGUAGE**

FREN 101, FREN 102, SPAN 101, SPAN 102, ASLS 203, SLS204

Discipline D: **LITERATURE**

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: **SPEECH**

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of two disciplines;

Discipline A: **SOCIAL SCIENCES**

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: **BEHAVIORAL SCIENCES**

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

¹Students must pass ENGL 101 and 102 with a grade of "C" or above before taking ENGL 203.

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES	Credits 8
PHYS 121 General College Physics I <i>and</i>	
PHYS 123 General College Physics I Lab <i>or</i>	
PHYS 181H ¹ Introductory Physics I <i>and</i>	3
PHYS 183H ¹ Introductory Physics I Lab <i>and</i>	1
PHYS 122 General College Physics II <i>and</i>	
PHYS 124 General College Physics II Lab <i>or</i>	
PHYS 182H ¹ Introductory Physics II <i>and</i>	3
PHYS 184H ¹ Introductory Physics II Lab	1
Curriculum Area IV – MATHEMATICS	Credits 3
MATH 110 Trigonometry & Analytical Geometry or Higher	3
Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101/H Basic Composition I/ (Honors)	3
ENGL 102/H Basic Composition II/ (Honors)	3
ENGL 001 ² English Proficiency Exam	0
ENGL 305/H/Online Technical Writing/Honors/Online <i>or</i>	
ENGL 310/H/Online Advanced Composition/Honors/Online	3
Curriculum Area VI - EMERGING ISSUES	Credits 7
DNSC 100 Freshman Seminar	1
EXSC 111 Personalized Health Fitness	3
HUEC 230 Multicultural Perspectives on Families in the U.S.	3
Total Required for General Education	Credits 42
PROGRAM CORE REQUIREMENTS	Credits 40
A grade of “C” or better is required in each of these courses.	
ENVS 202 General Oceanography	3
ENVS 204 General Oceanography Lab	1
ENVS 221 Principles of Environmental Science <i>and</i>	3
ENVS 222 Principles of Environmental Science Laboratory	1
ENVS 497 Environmental Science Seminar	1
ENVS 498 Independent Study	3
ENVS 499 Undergraduate Research ¹	4
ENVS 460 Earth Science	3
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
ENVS 603 Marine Ecotoxicology	3
ENVS 405 Marine Ecotoxicology Lab	1
DNSC 400 Senior Proficiency Seminar	1

¹Requires MATH 112 – Calculus I as prerequisite

²ENGL 001 is English proficiency exam; transfer students should take ENGL 003 and those in ENGL 102H should take ENGL 002.

SUPPORTIVE REQUIREMENTS**Credits 34**

A grade point average of "C" or better is required in supportive courses.

BIOL 111/H	Principles of Biology I	3
BIOL 113/H	Principles of Biology I Laboratory	1
BIOL 112/H	Principles of Biology II	3
BIOL 114/H	Principles of Biology II Laboratory	1
CHEM 111/H	Principles of Chemistry I	3
CHEM 113/H	Principles of Chemistry Laboratory I	1
CHEM 112/H	Principles of Chemistry II	3
CHEM 114/H	Principles of Chemistry Laboratory II	1
CHEM 211/H	Fundamentals of Organic Chemistry I	3
CHEM 213/H	Fundamentals of Organic Chemistry I Laboratory	1
CHEM 212/H	Fundamentals of Organic Chemistry II	3
CHEM 214/H	Fundamentals of Organic Chemistry II Laboratory	1
MATH 112	Calculus I	4
BUED 212	Computer Concepts and Applications* or	
CSDP 121	Microcomputer Applications*	3
MATH 210	Elementary Statistics	3
MATH 211	Calculus II**	4

*CSDP 220 may be substituted for BUED 212 or CSDP 121

**Math 211 is required for admission into the MEES program but does not count toward credits for the B. S. or M. S. in Environmental Sciences.

PROGRAM ELECTIVES (Choose from the following electives)**Credits 4**

A grade of "C" or better is required in each of these courses.

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 and	3
CHEM 343	Biochemistry Laboratory I	1
CHEM 342	Biochemistry II and	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

MEES REQUIREMENTS **Credits 30**

MEES AOS (Area of Specialization) ELECTIVES **Credits 21**

MEES 608	Seminar	2
BIOL 600	Marine & Estuarine Ecology	4
BIOL 601	Environmental Microbiology	4
BIOL 633	Adaptation to Marine Environment	3
BIOL 681	Barrier Island Management	4
BIOL 683	Wild Life Management	4
BIOL 688A	Community Ecology	4
BIOL 688B	Ichthyology	

STATISTICS ELECTIVE **Credits 3**

MATH 410	Mathematical Statistics II or	
CSDP 604	Computer Methods in Statistics	3

THESIS RESEARCH **Credits 6**

MEES 799		6
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FREE ELECTIVES **Credits 0**

Total Required Credits: 150**

**The total adds up to 154 cr. which includes MATH 211 (4 cr.). MATH 211 is required getting admission into the MEES program but it does not count toward credits for M.S. degree in Environmental Sciences

**CURRICULUM GUIDE FOR B.S./M.S. ENVIRONMENTAL SCIENCE
(MARINE SCIENCE OPTION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111/H	3	BIOL 112/H	3
BIOL 113/H	1	BIOL 114/H	1
CHEM 111/H	3	CHEM 112/H	3
CHEM 113/H	1	CHEM 114/H	1
DNSC 100	1	EXSC 111	3
ENGL 101/H	3	ENGL 102/H	3
MATH 110	3	ENGL 001/002H/003 ¹	0
Curriculum Area I	<u>3</u>	MATH 112	<u>4</u>
	18		18

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211/H	3	BIOL201	4
CHEM 213/H	1	CHEM212/H	3
ENGL 203	3	CHEM214/H	1
ENVS 202	3	ENGL305/H/Online	3
ENVS 204	1	BUED212 ³ or	
MATH 211 ²	4	CSDP 121 ³	3
Curriculum Area II	<u>3</u>	BIOL 202	3
	18	BIOL 203	<u>1</u>
			18

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Curriculum Area I	3	BIOL 301	3
BIOL 402	4	BIOL 303	1
PHYS 121 or PHYS 181H	3	ENVS 221	3
PHYS 123 or PHYS 183H	1	ENVS 222	1
ENVS 603	3	MATH 210	3
ENVS 405	1	PHYS 122 or PHYS 182H	3
Curriculum Area II	<u>3</u>	PHYS 124 or PHYS 184H	1
	18	ENVS 498	<u>3</u>
			18

SUMMER OF JUNIOR YEAR

<i>Session I</i>	<i>Credit</i>
ENVS 499	<u>4</u>
	4

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
DNSC 400	1	ENVS 460 ⁵	3
Program Elective (Undergraduate)	4	MEES 608	1
ENVS 497	1	MEES AOS	4
Curriculum Area VI	3	MEES AOS	<u>4</u>
MEES AOS ⁴	4		12
HUEC 230	<u>3</u>		
	16		

Total: 120 cr. for B.S. completed; the extra credits carry over to the M.S. part of the program
¹ENGL 001 is English proficiency exam; transfer students should take ENGL 003 and those in ENGL 102H should take ENGL 002.

²MATH 211 is required for admission into the MEES program but it does not count toward credits for the B. S. or M. S. in Environmental Sciences

³CSDP 220 may be substituted with either CSDP 121 or BUED 212.

⁴AOS (Area of Specialization) requirements must meet specific AOSs applicable under the program the student chooses. For Environmental Chemistry these are Ecology, Environmental Molecular Biology/Biotechnology, Fisheries Science, or Oceanography (Biological).

⁵ENVS 660 may be substituted for ENVS 460.

SENIOR SUMMER

<i>Session 1</i>	<i>Credit</i>
MEES AOS	3
MEES799	<u>3</u>
	6

FIFTH YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MEES AOS	<u>4</u>	MEES 608	1
	4	MEES 799	<u>3</u>
			4

Total Required Credits: 150**

**The total adds up to 154 cr. which includes MATH 211 (4 cr.). MATH 211 is required for getting admission into the MEES program, but it does not count toward credits for M.S. degree in Environmental Sciences.

PRE-PHARMACY¹

DEPARTMENTAL REQUIREMENTS

Pre-Pharmacy students must complete 73 semester hours of courses with a grade of “C” or better, which include a minimum of 20 hours of biology and chemistry at the 200 level or above and 8 hours of physics courses.

OBJECTIVES

The objectives of the pre pharmacy program are to:

1. Provide the prerequisite courses for admission into the pharmacy program; and,
2. Prepare students interested in the pharmacy program for the courses they will encounter in the PharmD curriculum.

CAREER OPPORTUNITIES

A PharmD degree prepares students to work in chain drug stores, corporate community setting such as a hospital pharmacy, an independent pharmacist in their own business, pharmaceutical industry, conduct research and educational institutions.

CURRICULUM FOR PRE-PHARMACY PRE-PROFESSIONAL PROGRAM

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
DNSC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
HIST 201	3	MUSI 101	3
MATH 110	<u>3</u>	MATH 112	<u>4</u>
	18		18

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 211	3	CHEM 212	3
CHEM 213	1	CHEM 214	1
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
PHYS 121	3	PHYS 122	3
PHYS 123	1	PHYS 124	1
PSYC 200	3	BIOL 301	3
SOCI 101	<u>3</u>	BIOL 303	1
	18	ENGL 203	<u>3</u>
			19

Total Credit Hours: 73

¹Students are strongly encouraged to research the pre-requisites required for admission into selected pharmacy schools and supplement the above curriculum accordingly. **This program is not a major.**

MINOR PROGRAMS

BIOLOGY

The Minor Program in Biology is designed to provide supportive instruction for biology and mathematics majors. Students must complete 20 credit hours for a minor with a grade of “C” or better. Courses in Biology that are used to satisfy requirements for science majors may not count towards the minor curriculum. In addition to the curriculum for Non-Science majors, students must select any three (3) additional courses (12 cr. hours) from the Biology Program Electives.

BIOL 111 BIOL 112 Program Electives¹
BIOL 113 BIOL 114

CHEMISTRY

A minor can be obtained with 20 semester hours of program courses with a grade of “C” or better in addition to those courses used to fulfill graduation requirements in a major program. Chemistry courses used to satisfy requirements for science majors may not be used for the minor curriculum. Courses for a minor in Chemistry for science majors will depend on the student’s desired professional/graduate program. Minor courses for Non-Science majors include:

CHEM 111 CHEM 211 CHEM²
CHEM 112 CHEM 212
CHEM 113 CHEM 213
CHEM 114 CHEM 214

ENVIRONMENTAL SCIENCES

The Minor program in Environmental Sciences is designed to provide supportive instruction for Biology, Chemistry and Physics. Courses that are used to satisfy requirements for science majors may not count towards the minor curriculum. Students must select three (3) additional courses from the Biology Program Electives for a total of eight (8) credits.

BIOL 402 ENVS 202 ENVS 221
 ENVS 204 ENVS 222
Program Elective³

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 minor curriculum. Students must select any other physics courses above the 200 level (PHYS 498, 499 are recommended) for a total of two (2) credits making a total of 20 credits. Courses for minor in physics include:

PHYS 161/181H PHYS 262/182H PHYS 283
PHYS 163/183H PHYS 264/184H PHYS 423
 PHYS 263 PHYS⁴
 PHYS 265

¹Student must select three courses to satisfy this requirement for a total of twelve (12) credits.

²Select one additional course at or above 300 level in Chemistry.

³Student must select three additional courses from the Biology Program Electives for a total of eight (8) credits.

⁴Student may select any other courses above the 200 level to satisfy this course for a total of two (2) credits.

COURSE DESCRIPTIONS

BIOLOGY¹

BIOL 101/Online Theories and Applications of Biological Sciences Credit 3

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 Credit 3

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/Honors Principles of Biology I Credit 3

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. 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/Honors Principles of Biology II Credit 3

This course is an introduction to the basic concepts of biology with emphasis on structure and function, focusing on adaptations of plants and animals. Representative animal systems are discussed and contrasted with representative plant systems. Included in the course is the study of the animal physiology and plant physiology. Prerequisites: BIOL 111/111H (grade of C or better). This course is comprised of three hours of lecture per week.

BIOL 113/Honors Principles of Biology I Laboratory Credit 1

This laboratory course is designed to accompany BIOL 111/111H and to reinforce the basic biological concepts of cellular biology, molecular biology, and 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/Honors Principles of Biology II Laboratory Credit 1

This laboratory course is designed to accompany BIOL 112/112H. Laboratory gives consideration to biological concepts related to the physiological mechanisms of living organisms both plants and animals. Selected systems are studied in a functional perspective. 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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 201 Marine Zoology**Credit 4**

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**Credit 3**

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 macro algae, 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. Prerequisite for this course includes: BIOL 112/112H (grade of C or higher). Co-requisite: 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**Credit 1**

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-requisite: 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**Credit 3**

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. Prerequisite: 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**Credit 1**

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. Prerequisite: BIOL 111/111H (grade of C or higher). Co-requisite: BIOL 211. This course is comprised of one three-hour laboratory per week. The Laboratory fee associated with this course is \$25.00.

BIOL 222 Genetics**Credit 3**

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. Prerequisite: BIOL 111/111H (grade of C or higher). This course is comprised of three hours lecture per week.

BIOL 223 Genetics Laboratory**Credit 1**

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**Credit 3**

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 111/113, BIOL 112/114) or for allied health program students (grade of C or higher). 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**Credit 3**

This course provides discussion of the respiratory, circulatory, excretory, endocrine, digestive, and reproductive functions of the human body. Pre-requisites: BIOL 231/233. 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 laboratory per week.

BIOL 233 Human Anatomy and Physiology Laboratory I**Credit 1**

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 111/113. This course is comprised of two hours of laboratory per week. This course must be taken concurrently with BIOL 231. The laboratory fee associated with this course is \$25.00.

BIOL 234 Human Anatomy and Physiology Laboratory II**Credit 1**

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. Pre-requisites: 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**Credit 4**

This course is presented as a survey of invertebrate animals with emphasis on the relationship between structure and function and evolution of major groups. Life history, strategies, and behaviors and are major topics of discussion. Laboratory emphasis is on examination of animals. Pre-requisites: 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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 301 Microbiology**Credit 3**

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 provides 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. Prerequisites: BIOL112/ BIOL112H 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**Credit 1**

This course is designed to expose students to laboratory activities that will acquaint them 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/Honors Vertebrate Embryology**Credit 4**

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**Credit 4**

This course is a study of the general features of chordate development, and a 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, biomedical science 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**Credit 3**

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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 327 Cell Biology Laboratory**Credit 1**

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**Credit 3**

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**Credit 3**

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**Credit 4**

An examination of the mechanisms involved in control of body functions. Basic chemical and physical principles of animal function will be discussed. Prerequisites: BIOL 111/113, BIOL 112/114, BIOL 211/213 (grade of C or higher), and one year of Chemistry and a course in vertebrate anatomy. 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**Credit 4**

This course investigates 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) and BIOL 211/213 is recommended. 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**Credit 4**

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). BIOL 211/213 is recommended. 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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 404 Conservation Biology**Credit 3**

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**Credit 3**

This course is a study of the microscopic structure of vertebrate tissues and organs. Functional correlates are discussed. Prerequisites: BIOL 111/113, BIOL112/114, BIOL 211/213 (grade C or better) a course in vertebrate anatomy and consent of the instructor. This course is comprised of three hours of lecture per week.

BIOL 421 Animal Histology Laboratory**Credit 1**

This course is designed to accompany BIOL 420 and provides hands-on experience using the light microscope to examine vertebrate tissues discussed in lecture. Co-requisites for this course is BIOL 420. BIOL 421 must be taken concurrently. The laboratory fee associated with this course is \$25.00.

BIOL 426M Biotechnology**Credit 4**

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**Credit 4**

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**Credit 3**

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**Credit 3**

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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 441 Comparative Physiology**Credit 4**

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**Credit 4**

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**Credit 4**

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**Credit 4**

This course provides a study of the arthropod (especially insects) species that are an economically important pest, 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**Credit 3**

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/Honors/M Biology Seminar/Honors/MARC**Credit 1**

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.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology.

BIOL 498/Honors Independent Study Credit 1-3

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. Student may register for 1, 2, or 3 cr. but should repeat the course to accumulate the number of credits required in the core program Prerequisites: Junior or Senior level classification and permission of the instructor.

BIOL 499/Honors Undergraduate Research Credit 1-4

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. Student may register for 1, 2, or 3 cr. but should repeat the course to accumulate the number of credits required in the core program Prerequisites: Junior and Senior level classification and permission of instructor.

CHEMISTRY¹

CHEM 101/Online General Chemistry I Credit 3

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 majors. Note: Students requiring a laboratory-based course must also register for CHEM 103. Prerequisite or Co-requisite: MATH 101 or equivalent.

CHEM 102/Online General Chemistry II Credit 3

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 majors. Note: Students requiring a laboratory-based course must also register for CHEM 104. Prerequisite or Co-requisite: CHEM 101 or equivalent.

CHEM 103¹ General Chemistry Laboratory I Credit 1

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 Laboratory). This course is recommended for the non-science major, pre-health professionals, (including pre-nursing students and nutrition majors), agriculture and home economics majors. Prerequisite or Co-requisite: CHEM 101. Laboratory Fee: \$25.00

CHEM 104 General Chemistry Laboratory II Credit 1

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 Laboratory). This course is recommended for the non-science major, pre-health professionals (including nursing students and nutrition majors), agriculture and home economics majors. Pre-requisite or Co-requisite: CHEM 102. Laboratory Fee: \$25.00

CHEM 102. Laboratory Fee: \$25.00

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Biology and Chemistry.

²Students may take BIOL 498/H and BIOL49/H for 1 to 3 and 1 to 4 cr. hr., respectively, a semester; but they must repeat the courses to accumulate as many credits as required in the core program.

CHEM 111/Honors Principles of Chemistry I Credit 3

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. Co-requisite: CHEM 113/113H or consent of instructor.

CHEM 112/Honors Principles of Chemistry II Credit 3

This course explores more advanced topics in chemistry, building on the concepts covered in CHEM 111/111H. 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. Co-requisite: CHEM 114/CHEM 114 or consent of instructor.

CHEM 113/Honors Principles of Chemistry Laboratory I Credit 1

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 laboratory period will be a three-hour session. Prerequisite or Co-requisite CHEM 111/111H or consent of instructor. Laboratory Fee: \$25.00

CHEM 114/Honors Principles of Chemistry Laboratory II Credit 1

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 laboratory period will be a three-hour session. Pre or Co-requisite CHEM 112/112H or consent of instructor. Laboratory Fee: \$25.00

CHEM 211/Honors Fundamentals of Organic Chemistry I Credit 3

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 laboratory (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/Honors Fundamentals of Organic Chemistry I Laboratory Credit 1

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 notebooks, 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 laboratory period will be a three-hour session. Pre or Co-requisite: CHEM 211/211H or consent of instructor. Laboratory Fee: \$25.00.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

CHEM 212/Honors¹ Fundamentals of Organic Chemistry II Credit 3

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/Honors Fundamentals of Organic Chemistry Laboratory II Credit 1

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 laboratory period will be a three-hour session. Prerequisites: CHEM 211/211H, 213/213H. Co-requisite: CHEM 212/212H or consent of instructor. Laboratory Fee: \$25.00

CHEM 311 Analytical Chemistry I Credit 4

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 Credit 4

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 Credit 4

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. Prerequisites: CHEM 101 and CHEM 102 or consent of instructor. Laboratory Fee: \$25.00

CHEM 332 Biochemistry Credit 4

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 three hours laboratory per week. Prerequisite: CHEM 211 or CHEM 331 or consent of instructor. Laboratory Fee: \$25.00

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

CHEM 341 Biochemistry I**Credit 3**

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 341 Honors Biochemistry**Credit 3**

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 with 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**Credit 3**

This course is a continuation of CHEM 341. It is a more intense study of 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 342 Honors¹ Biochemistry II**Credit 3**

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**Credit 1**

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 343 Honors Biochemistry Laboratory I**Credit 1**

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**Credit 1**

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

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

CHEM 344 Honors Biochemistry Laboratory II**Credit 1**

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**Credit 4**

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. Co-requisites: PHYS 161/181H, PHYS262/182H, MATH 211 or consent of instructor Laboratory Fee: \$25.00

CHEM 402 Principles of Physical Chemistry II**Credit 4**

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 of 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 407 Protein Structure and Function**Credit 4**

This course deals with the study of protein structure from primary to quaternary and the structure correlation to function. Techniques for the study of protein structures will be extensively examined. Prerequisites: CHEM 211/213 CHEM 212/213, CHEM 341/343 CHEM 342/344, ENGL 305/310, MATH 112. Laboratory Fee: \$150.00

CHEM 420 Advanced Inorganic Chemistry**Credit 4**

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: CHEM 112/112H, CHEM 114/114H or permission of the instructor. Laboratory Fee: \$25.00

CHEM 421 Instrumental Analysis**Credit 4**

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 MARC**Credit 3**

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.

A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

CHEM 431 Intermediary Metabolism**Credit 3**

Intermediary metabolism is a vast subject within biochemistry. The first half of this course will deal mostly with general principles and with pathways discussed in general textbooks such as: glycolysis, gluconeogenesis, pentose phosphate pathway, integration of carbohydrate and fatty acid metabolism, citric acid cycle, fatty acid oxidation, fatty acid synthesis, serine and glycine metabolism, urea cycle, purine biosynthesis, purine salvage pathway, pyrimidine biosynthesis, calvin cycle, threonine to isoleucine conversion, glyoxylate cycle, and Entner-Doudoroff Pathway. The second half of this course will be devoted to group work on Case Study/ Problem-based Learning Problems. Prerequisites: CHEM 211/213 CHEM 212/213, CHEM 341/343 CHEM 342/344, ENGL 305/310.

CHEM 432 Advanced Organic Chemistry**Credit 3**

This course is a continuation of CHEM 211/211/H and CHEM 212/212H. This course includes advanced organic reactions (controlled radical processes, carbon – carbon bond formation, pericyclic reactions); advanced NMR analysis of organic molecules (one and two dimensional NMR methods, DEPT, COSY, HetCorr and others); reaction involving organometallic reagents (organometallic complexes and their structure, 18 electron rule, oxidative addition and reductive elimination, C-H bond activation and others). In addition, the course covers principles of multistep synthesis and retro-synthetic analysis. Pre-requisites: CHEM211/213 and CHEM 212/214.

CHEM 435 Introduction to Immunology**Credit 3**

Introduction to Immunology is designed to present a complete overview of the process regulating the immune response. Lecture will first provide an overview of the immune system organization, cellular and organ components, and general function. The evolution of the immune system is emphasized through the major scientific discoveries that have contributed to the current understanding of the immune system. Mechanisms of innate immunity will be introduced followed by discussion of antibodies and antibody diversity, antigens, and antigen-antibody interactions. Adaptive immunity will also be discussed: major histocompatibility complex function, B and T cell development and differentiation, antigen recognition by B and T cell receptors, generation of lymphocyte antigen receptors, antigen presentation to T lymphocytes, and the development and survival of lymphocytes. Lectures will transition to an introduction to cytokines and their role in regulation of immune responses and the role of the complement system and cell-mediated effector response. Lastly, this course will explore the roles of the immune system in disease prevention with a focus on adaptive immunity to infection, vaccination, and cancer immunology. Consequences of abnormal immune responses such as mechanisms for rejection of transplanted tissue and autoimmunity will also be reviewed. Prerequisites: BIOL 326/327, CHEM 341/343, CHEM 342/344.

CHEM 436 Introduction to Immunology, Laboratory**Credit 1**

Introduction to Immunology Laboratory is designed to provide students with an opportunity to learn and participate in common immunological laboratory protocols and procedures. Such protocols will include the identification of rodent lymphoid organs, immunization of rodents for antibody production, cell type staining and identification, enzyme-antibody conjugation, analysis of antibodies and titers of immunized rodents by ELISA and Western Blot. Prerequisites: BIOL 326/327, CHEM 341/343, CHEM 342/344. Co-requisite: CHEM 435. Laboratory fee: \$150

CHEM 488A/621 Advanced Environmental Chemistry**Credit 4**

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/Honors Chemistry Seminar/Honors/MARC Credit 1

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/H² Independent Study Credit 1-3

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. Student may register for 1, 2, or 3cr. but should repeat the course to accumulate the number of credits required in the core program. Prerequisite: CHEM 112/112H and consent of instructor.

CHEM 499 Undergraduate Research Credit 3-4

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 must 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. . Student may register for 1, 2, 3 or 4 cr. but should repeat the course to accumulate the number of credits required in the core program. Pre- or Co-requisite: CHEM 498 or consent of instructor.

DEPARTMENT OF NATURAL SCIENCES

DNCS 100 Freshman Seminar Credit 1

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.

DNCS 400 Senior Proficiency Seminar Credit 1

DNCS 400 is a one credit-hour core requirement for biology, chemistry, and environmental science majors, designed to evaluate the proficiency of senior level students in their major coursework. It is a capstone course which provides students with the opportunity for the comprehensive review of the basic concepts of their major courses. Prerequisite: Students must have completed 84 credit hours or above with a cumulative GPA of 2.0 or higher.

¹A grade of "C" or better is required in all prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

²Students may take CHEM 498H for 1 to 3 a semester; but they must repeat the courses to accumulate as many credits as required in the core program. All prerequisite courses (lecture and laboratory) to continue with sequence classes in Chemistry.

ENTOMOLOGY

ENTO 313 Entomology

Credit 3

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/Online Introduction to Environmental Sciences

Credit 3

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

Credit 3

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

Credit 1

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

Credit 3

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 Laboratory

Credit 1

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**Credit 3**

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. Pre-requisite: BIOL 111/111H, BIOLL13/113H and CHEM 212/212H, CHEM 214/214H.

ENVS 333 Energy, Environment and Economics**Credit 3**

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**Credit 3**

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. Prerequisites: CHEM 112/112H, CHEM 211/211H, BIOL 112/112H and MATH 210.

ENVS 405 Marine Ecotoxicology Laboratory**Credit 1**

This course is comprised of two hours of laboratory per week and is designed to accompany ENVS 403. The course will provide hands-on research training to students in Marine Ecotoxicology. Students will learn, among other things, including wet chemistry, instrumental analysis, environmental data analysis and environmental modeling. Prerequisites: CHEM 112, CHEM 211, BIOL 112, MATH 210 and Co-requisite : ENVS 403. The laboratory fee associated with this course is \$25.00

ENVS 411 Water Pollution and Purification**Credit 3**

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 Laboratory**Credit 1**

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 422 Solid and Hazardous Waste Management**Credit 3**

The course introduces fundamentals of solid and hazardous waste management that include their source characterization, collection, transportation, storage and final disposal. It also deals with resource recovery and utilization, risk assessment, biological, physical and chemical waste treatment methods/technologies and various waste legislation and implementation.

ENVS 434 Air Pollution**Credit 4**

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 hands-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**Credit 3**

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**Credit 3**

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**Credit 1**

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/H Independent Study**Credit 1-3**

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. Student may register for 1, 2, 3 or 4 cr. but should repeat the course to accumulate the number of credits required in the core program.

ENVS 499 Undergraduate Research**Credit 1-4**

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. Student may register for 1, 2, 3 or 4 cr. but should repeat the course to accumulate the number of credits required in the core program.

PHYSICS

PHYS 101 Theories and Applications of Physical Science Credit 3

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. This course 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 Credit 1

This 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 Credit 3

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.

PHYS 122 General College Physics II Credit 3

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 Laboratory Credit 1

This 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 Credit 1

This 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 Credit 3

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**Credit 1**

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 181/Honors Introductory Physics I**Credit 3**

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 182/Honors Introductory Physics II**Credit 3**

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 183//Honors Introductory Physics Laboratory I**Credit 1**

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 184/Honors Introductory Physics Laboratory II**Credit 1**

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**Credit 3**

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 DC 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**Credit 3**

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**Credit 1**

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**Credit 1**

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**Credit 3**

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**Credit 3**

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**Credit 1**

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**Credit 1-3**

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. Student may register for 1, 2, 3 or 4 cr. but should repeat the course to accumulate the number of credits required in the core program.

PHYS 499 Undergraduate Research**Credit 1-4**

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. Student may register for 1, 2, 3 or 4 cr. but should repeat the course to accumulate the number of credits required in the core program. Prerequisite: One year of Physics with "B" or better grade.

DIRECTORY OF FACULTY

Ayuk, Mary, Lecturer

B.Sc. & M.Sc., University of Jos, Nigeria; Ph.D., Howard University

Chen, Nianhong, Assistant Professor

B.S., U. Sci. Tech. of China, Chem.; M.S.; U. Southern Mississippi, Mar. Sci.; Ph.D., Tulane University, Geochem

Cheney, Marcos, Associate Professor

B.S., Univ. of Baja Chem., .M. Sci. Bio-Inorg., U.C. Davis, Ph.D. Anal & Envir. Chem., U.C. Davis

Chigbu, Paulinus, Director, LMRCSC & Professor

B.Sci. & M. Sci.; University of Benin, Nigeria; Ph.D., University of Washington, Seattle

Dodoo, Joseph, Lecturer

B.Sc. Polytechnic of South Bank; M. Sci., Bedford College University of London; Ph.D., King's College, University of London

Elnaiem, Dia-Eldin A., Associate Professor

B.Sc., M.Sc., University of Khartoum, Sudan; Ph.D., University of Liverpool, Liverpool, UK

Hearne, Jennifer Associate Professor

B.S., University of Maryland Eastern Shore; Ph.D., University of Delaware

Ishaque, Ali B., Associate Professor

B.Sc., University of Science & Technology, Ghana; M.Sc.; Ph.D., Free University of Brussels

Johnson, Andrea, Research Assistant Professor

B.S., University of Miami; M.S., University of South Florida; Ph.D., North Carolina State University

Johnson, Linda, Associate Professor

B.S., Lincoln University; M.S., & Ph.D., Temple University School of Medicine

May, Eric, Associate Professor

B.S., Oregon State University; M.S., North Arizona State University; Ph.D., Oregon State University

Mazzaccaro, Anthony, Lecturer

B.S., University of Maryland College Park; M.S., Texas A&M University; Ph. D., Texas A&M University

Mitra, Madhumi, Associate Professor

B.S., Presidency College, India; M.S., Calcutta University, India; Ph.D. North Carolina State University

Morales-Nunez, Andres, Research Associate

B.S., Universidad de Bogota, Jorge Tadeo Lozano; M.S. & Ph.D., University of Puerto Rico; Ph.D.

Nyame, Anthony, Professor

B.S., University of Science & Technology, Kumasi, Ghana; M.S., Tulane University School of Public Health & Tropical Medicine; Ph.D., University of Georgia

Okulate, Mobolaji, Associate Professor

B.Sc., Ph.D., University of Lagos, Lagos, Nigeria

Pitula, Joseph, Associate Professor

B.S., Rutgers University; M.S., Ph.D., University of Buffalo, New York

Potter, Amelia, Lecturer

B.S., Birmingham Southern University; M.S., University of Maryland Eastern Shore

Ruby, Douglas, Professor

B.S., Gettysburg College; M.S., Ph.D., University of Michigan

Singh, Gurbax, Acting Chair and Professor

B.S., M.S., Delhi University; Ph.D., University of Maryland College Park

Singleton, Jeurel, Associate Professor

B.S., M.S., University of North Dakota; Ph.D., University of Ottawa, Canada

Stevens, Bradley, Professor

S.B., University of Cincinnati; M.S., College of Charleston; Ph.D., University of Washington

Taabodi, Maryam, Lecturer

B.S., Salisbury University; M.S., University of Maryland Eastern Shore; Ph. D., University of Maryland Eastern Shore

Uche, Udeochu, Associate Professor

B.Sc. & M.Sc. University of Ibadan, Nigeria; Ph.D., Howard University

Volkis, Victoria, Assistant Professor

B.A. and M.S., Leningrad Institute of Chemical Technology; M.S. Chemistry & Ph.D., The Technion – Israeli Institute of Technology

Waguespack, Yan, Professor

B.S., Beijing Polytechnic University; Ph.D., Tulane University

Xia, Meng, Assistant Professor

B.S., Ocean University of Qingdao; M.S., First Institute of Oceanography, State Oceanic Administration of China; Ph.D., North Carolina State University

DEPARTMENT OF CRIMINAL JUSTICE

<http://www.umes.edu/Criminal>

Dr. Robert A. Harleston, Interim Chair

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 programs in criminology and criminal justice.

OBJECTIVES

The objectives of the Criminal Justice Department are to:

1. Prepare students for careers in a variety of Criminal Justice related settings; and,
2. Prepare its graduates to enter master's level programs in criminology and criminal justice.

The specific objectives of the Criminal Justice program are to develop in each student:

1. 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;
2. the ability to think clearly, independently, and critically about the fundamental issues in criminal justice;
3. the ability to do research, analysis and writing about criminal justice issues;
4. the foundations necessary for graduate study, and for careers in the field of criminal justice.

DEGREES OFFERED

Criminal Justice – Bachelor of Science

Criminology and Criminal Justice – Master of Science¹

DEPARTMENT GENERAL PROGRAM REQUIREMENTS

The admission of students to the undergraduate program in the Department of Criminal Justice is based upon the general admission requirements of the University.

The Criminal Justice Major – Students majoring in Criminal Justice must complete 120 semester hours of University coursework. Included in the 120 hours are a minimum of 41 semester hours of General Education Requirements, 30 hours of major Criminal Justice core courses, 18 semester hours of major elective courses, 15 semester hours of supportive courses, and 16 semester hours of free elective courses. Major electives are criminal justice courses at the 300-400 level which are applicable to one or more of the three strand options available for the degree program.

A minimum grade of “C” must be achieved in the core and the major elective courses. Students must maintain a grade point average of “C” or better for the supportive courses and for courses completed for graduation that are outside the major or minor such as the General Education Requirements and the free electives.

¹ See *Graduate Catalog*

² A minimum grade of “C” is required for each course.

CAREER OPPORTUNITES

A degree in Criminal Justice prepares students to work in any of the Criminal Justice systems' component areas at local, state or national levels, i.e. law enforcement, corrections, parole and probation, the courts and juvenile services. It also prepares students to pursue graduate and law degrees.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH, ENGL 203¹ plus:

One course from each of two other disciplines:

Discipline A: ARTS

ARTS 101, MUSI 100, MUSI 101, MUSI 109

Discipline B: HISTORY

HIST 201, HIST 202, HIST 333, HIST 334, HIST 360, HIST 361

Discipline C: LANGUAGE:

FREN 101, FREN 102, SPAN 101, SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course from each of the two disciplines:

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

ECON 200 or ECON 201

HIST 101 or HIST 102; POLI 200

Discipline B: BEHAVIORAL SCIENCES

SOWK 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select two science courses, one of which must be a laboratory course, from the following:

BIOL 101 (LAB-BIOL 103), BIOL 111 (LAB- BIOL 113)

CHEM 101 or CHEM 102 (LAB-CHEM 103), CHEM 111 (LAB-CHEM 113)

ENVS 101 (no LAB)

PHYS 101 (LAB-PHYS 103)

Curriculum Area IV – MATHEMATICS²

Credits 3

MATH 102 or above

Curriculum Area V - ENGLISH COMPOSITION

Credits 9

ENGL 001 or ENGL 002 (transfer students)

ENGL 101

ENGL 102

ENGL 305 or ENGL 310

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203.

²MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area VI - EMERGING ISSUES	Credits 7
CRJS 100	
EXSC 111	
HUEC 230 or CRJS 302	

Total Required for General Education	Credits 41
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Major Core Courses	Credits 30
CRJS 101 Introduction to Criminal Justice	3
CRJS 200 Law Enforcement	3
CRJS 201 Introduction to Corrections	3
CRJS 204 Courts	3
CRJS 300 Criminal Law/Honors	3
CRJS 312 Criminology/Honors	3
CRJS 326 Juvenile Delinquency/Honors	3
CRJS 370 Statistical Methods in Criminal Justice and Criminology	3
CRJS 401 Research Methods in Criminology and Criminal Justice	3
CRJS 495 Senior Capstone in Criminology and Criminal Justice	3

Major Electives	Credits 18
With the exception of CRJS 300, CRJS 312, CRJS 326, CRJS370, CRJS 401, and CRJS 495, students can select any 300 or 400 level criminal justice courses.	

Support Course Requirements	Credits 15/16
BUED 212 Computer-Concepts/Applications I/Hybrid/Online OR	3
CSDP 220 Introduction to Computer Programming	4
PSYC 200 Introduction to Psychology	3
PSYC 371 Abnormal Psychology/Online or	3
CRJS 435 Psychology of Criminal Behavior	3
SOCI 101 Introduction to Sociology/Online	3
SOCI 201 Social Problems/Online OR	3
SOCI 202 Social Deviance and Social Control	3

Free Electives	Credits 16
With the exception of the EXSC 111 courses, which cannot be repeated for credit, students may take any course at the University for which they meet the prerequisites	

TOTAL PROGRAM REQUIREMENTS	Credits 120
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CURRICULUM GUIDE FOR CRIMINAL JUSTICE

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credits</i>
CRJS 101	3	CRJS 200	3
EXSC 111 ¹	3	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ³	0
CRJS 100	1	GEN ED CURR AREA III	4
MATH 102	3	PSYC 200 ²	3
SOCI 101 ²	<u>3</u>	SOCI 201 ² or	
	16	SOCI 202 ²	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credits</i>
CRJS 370	3	BUED 212 ² or	3
ENGL 203	3	CSDP 220 ²	4
GEN ED CURR AREA I	3	CRJS 204	3
GEN ED CURR AREA II	3	CRJS 201	3
GEN ED CURR AREA III	<u>3</u>	GEN ED CURR AREA I	3
	15	Free Elective ⁴	<u>3</u>
			15/16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credits</i>
CRJS Elective ⁵	3	CRJS Elective ⁵	3
CRJS Elective ⁵	3	CRJS 326	3
CRJS 312	3	ENGL 305 or	
CRJS 401	3	ENGL 310	3
GEN ED CURR AREA VI	<u>3</u>	GEN ED CURR AREA II	3
	15	PSYC 371 ²	<u>3</u>
			15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credits</i>
CRJS Elective ⁵	3	CRJS 495	3
CRJS Elective ⁵	3	Free Elective ⁴	3
CRJS Elective ⁵	3	Free Elective ⁴	3
Free Elective ⁴	3	Free Elective ⁴	<u>3/4</u>
Free Elective ⁴	<u>3</u>		12/13
	15		

Total Credit Hours: 120

¹EXSC 111 cannot be repeated for credit.

²Students must select a minimum of 15 credit hours from the supportive courses listed: BUED 212, CSDP 220, PSYC 200, PSYC 371, SOCI 101, SOCI 201, SOCI 202.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Students may take any course at the University for which they meet the prerequisites.

⁵Students may select any 300 or 400 Level CRJS course except CRJS 300, 312, 326, 370, 401, and 495.

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 to (1) promote informed understanding of the manner in which the criminal justice system functions, (2) closely examine the fundamental issues in criminal justice, and (3) explore criminological theory. The program consists of eighteen (18) credit hours in the following Criminal Justice courses:

REQUIRED MINOR¹ COURSES

CRJS 101 CRJS 200 CRJS 312 CRJS 430
 CRJS 201
 CRJS 204

¹A minimum grade of “C” is required for each course.

²Course offered at Salisbury University.

COURSE DESCRIPTIONS CRIMINAL JUSTICE

CRJS 100 First Year Experience Credit 3

This course is to provide an opportunity for students to make a seamless transition from high school to college. Essential skill for transition will be explored and discussed. This course will assist students in developing cognitive skills and will assist them in adjusting personally and socially to the college environment. This course will enable first-year students to develop creative and critical thinking skills, and information literacy skills needed to facilitate a successful transition from high school to university.

CRJS 101/Online Introduction to Criminal Justice Credit 3

This course presents an overview of the functioning of the criminal justice system and its relationship to society.

CRJS 200 Law Enforcement Credit 3

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 201/Online Introduction to Corrections Credit 3

Philosophical foundations of punishment, historical developments in the American penology. Corrections in contemporary American. Prerequisite: CRJS 101.

CRJS 204 Courts Credit 3

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 234/Honors Law of Evidence Credit 3

This course involves the study and evaluation of evidence and proof. Prerequisite: CRJS 101.

CRJS 300/Honors/Online Criminal Law Credit 3

An examination of the central principles of criminal law, which includes the substantive elements defining criminal conduct for specific crimes and various exculpatory conditions for criminal liability. Prerequisite: CRJS 101.

CRJS 302 Criminal Procedure Credit 3

General application of U.S. constitution principles to investigate and prosecutorial process of the criminal justice system. Emphasis will be placed on the Bill of Rights and its application in justice administration. Prerequisites: CRJS 204, Sophomore, Junior or Senior standing.

CRJS 306 Victimology Credit 3

This course examines the impact of victimization upon the victim; new emphasis of the role of the victim in criminal justice practice and victim impact statement, assistance, and restitution. Prerequisite: CRJS101 for CRJS majors or permission from instructor for non-majors, and Sophomore, Junior or Senior standing.

CRJS 312/Honors Criminology Credit 3

Theoretical explanations of crime: the nature and extent of crime, historical development of criminological theory; and analysis of crime control and implications. Prerequisite: CRJS 101, SOCI 201, or SOCI 202 and Sophomore, Junior, or Senior standing.

CRJS 320 Introduction to Forensics and Criminalistics Credit 3

A study in crime scene investigation including procedures for preservation, processing, and analysis of physical, chemical, biological, and forensic evidence to determine association to crime. Prerequisites: Sophomore, Junior or Senior standing, CRJS 204; and 3 to 4 credit hour science course with labs such as BOIL 101, CHEM 101, ENVS 101, PHYS 101 or equivalent course applicable to forensic evidence.

CRJS 323/Honors Organizational and Governmental Deviance Credit 3

Analysis of internal (pilfering, embezzlement, corruption, violence, drug abuse, etc.) and external (chemical dumping, hazardous product sales, etc.) forms of state-sponsored terrorism and organizational deviance and control. Prerequisites: Sophomore, Junior or Senior standing.

CRJS 325 Economics and Crime Credit 3

This course will provide students with the fundamentals of economics particularly as it pertains to crime in society. Theory and cost analysis will be emphasized. Prerequisites: Sophomore, Junior or Senior standing.

CRJS 326 Juvenile Delinquency/Honors Credit 3

This course is an analysis of historical and contemporary factors underlying juvenile delinquency, its treatment, and its prevention. Prerequisites: Sophomore, Junior or Senior standing.

CRJS 333 Law Enforcement Community Relations Credit 3

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 of community/police distance will be analyzed. Prerequisites: CRJS 200 and Sophomore, Junior, or Senior standing.

CRJS 347 Terrorism and Contemporary Society Credit 3

This course focuses on the history of terrorism, the dynamics of terrorism and society's reaction to terrorism. It includes world view of terrorism, the cause, typologies (including environmental/ecological, economic, industrial, and state-sponsored terrorism), proliferation, and global initiatives in combating terror. It also covers the definitional dilemma of the US laws on terrorism in relation to contemporary terror. It also covers the definitional dilemma of the US laws on terrorism in relation to contemporary society. Prerequisites: Sophomore, Junior or Senior standing.

CRJS 350/Honors/Online Parole and Probation Credit 3

An examination of historical development, decision-making processes, management, and supervision of Probation and Parole. The course discusses judicial diversion to community intervention and treatment programs as a rational alternative to prison overcrowding quagmire. Prerequisite: CRJS 201 and Sophomore, Junior or Senior standing.

CRJS 359 Field Training in Criminology and Criminal Justice Credit 1-6

This is a service-learning course which requires students to serve as mentors to juvenile delinquents.

CRJS 360 Field Training in Criminology and Criminal Justice (with Juvenile Services) Credit 3

This course entails a supervised research project in a criminal justice agency. Prerequisite: Junior or Senior Standing.

CRJS 370 Statistical Methods in Criminal Justice and Criminology Credit 3
Management philosophies for administration of criminal justice agencies; focus on organizational behavior, theories of management, planning and budgeting, administrative legal issues, and administrative problems unique to the criminal justice system. This course deals with the principles of structure, process, and procedure in criminal justice administration. Prerequisite: Sophomore, Junior and Senior standing.

CRJS 373/Online Criminal Justice Administration Credit 3
Management philosophies for administration of criminal justice agencies; focus on organizational behavior, theories of management, planning and budgeting, administrative legal issues, and administrative problems unique to the criminal justice system. This course deals with the principles of structure, process, and procedure in criminal justice administration. Prerequisite: Sophomore, Junior and Senior standing

CRJS 375 Judicial Process Credit 3
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 204, Sophomore, Junior or Senior standing.

CRJS 401/Online Research Methods in Criminology and Criminal Justice Credit 3
Basic methodological and statistical (applied) issues in Criminology and Criminal Justice. Designed to provide students with a foundation in social science research methods. Prerequisite: CRJS 370, Junior or Senior standing.

CRJS 406/Honors Law of Corrections Credit 3
This course examines the evolution and current status of the law governing correctional institutions, prisoners' rights, and their relationship to society. Prerequisites: Junior or Senior Standing

CRJS 415/Online Dynamics of Planned Change in Criminal Justice Credit 3
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.

CRJS 430/Honors/Online Contemporary Criminological Theory Credit 3
This course examines advances in criminological theory and research from biological, psychological, and sociological perspectives. Prerequisites: Junior or Senior Standing, CRJS 312.

CRJS 435/Online Psychology of Criminal Behavior Credit 3
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 312.

CRJS 450/Honors Treatment of Control of Criminals and Delinquents Credit 3
This course examines alternative institutional and non-institutional approaches to treatment and control of criminal and delinquent populations. Prerequisites: Junior Standing, CRJS 312

CRJS 451/Honors/Online Crime and Delinquency Prevention Credit 3
In-depth history and typologies of crime and delinquency prevention strategies in the United States. Theoretical and practical strategies for crime prevention through mechanical construction, social engineering or environmental designs. The role of the agencies of the Criminal Justice System is analyzed in terms of current effectiveness and future potential for crime prevention. Prerequisite: Junior or Senior Standing, CRJS 401.

CRJS 460 Minority Groups and the Criminal Justice System Credit 3

The involvement of minorities, especially African Americans and Hispanics, in crime and in the criminal justice system will be analyzed. Special attention will be paid to the role of racism in theories of crime and in American law and to the treatment of minorities by various components of the criminal justice system. Prerequisite: Junior or Senior Standing.

CRJS 465 Comparative Criminal Justice System Credit 3

An examination, in comparative analysis, of the criminal justice and penal methods of pertinent countries and the United States. Major emphasis will be given to the issues of intent, criminal responsibility, individual and public interests, purposes, and modes of prevention, repression and punishment, methods of trial, punishment and pardon. Prerequisite: Junior or Senior Standing.

CRJS 470 Independent Study Credit 3

An individualized approach to selected topics by guided reading and critical evaluation. A student registered for this course must submit a prospectus, outline, and bibliography and meet with the professor on weekly basis. Prerequisite Junior or Senior Standing, CRJS 401.

CRJS 489 Internship in Criminology and Criminal Justice Credit 3-9

Field placement in an approved criminal justice or social service agency for integration of theory and practice through participant observation study. Prerequisite: Junior or Senior standing.

CRJS 492/ Online¹ Special Topics in Criminology and Criminal Justice Credit 3

Special topics in criminology and criminal justice. Topic to be explored is determined by the professor. Each professor will have special designation pertaining to their course when offered. Prerequisite: Junior or Senior and CRJS 312.

CRJS 492 Special Topics: Criminology & Corrections

CRJS 492 Special Topics: Women in Corrections

CRJS 492 Special Topics: Crime, Class, and Ideology

CRJS 492 Special Topics: Unequal Justice

CRJS 492 Special Topics: Drugs and Crime

CRJS 492 Special Topics: Police, Law and Society

CRJS 492 Special Topics: Variable

CRJS 495 Senior Capstone in Criminology and Criminal Justice Credit 3

Senior Capstone in Criminology and Criminal Justice is the culminating course in the study of criminal justice and criminology. The class will review materials relevant to the field. Students will have the opportunity demonstrate all they have learned in the major. Students will be required to take a comprehensive final examination at the conclusion of the course. In addition, students will be required to complete a research paper as their senior project. Prerequisites: Senior status and CRJS 401.

¹All CRJS 492 courses are three credits.

DIRECTORY OF FACULTY

Bynum, Evita G, Assistant Professor

B.S. Xavier University of Louisiana; M.S. American University; Ph.D. American University

Dahlgren, Daniel C., Assistant Professor

B.A., M.A., Kent State University; Ph.D., Kent State University/University of Akron

Harleston, Robert A., Visiting Associate Professor, Interim Chair

B.A., Howard University, M.S., Michigan State University, J.D., Georgetown University Law Center

Mosley, Thomas S., Associate Professor

B.A., University of Memphis; M.A., University of Memphis; Ph.D., Howard University

Onyeozili, Emmanuel C., Professor

B.A., University of Ibadan; M.A., Clark-Atlanta University; Ph.D., Florida State University

Spinner, David, Associate Professor

B.A., Delaware State University; M.A., Alabama State University; Ph.D., University of Maryland, College Park

Tsai, Lily Chi-Fang, Assistant Professor

LL.B, Soochow University; LL.M National Taipei University; Ph.D, Sam Houston State University

Walters-Jones, Nelseta V., Assistant Professor

B.S., Prairie View A&M University; M.S., Prairie View A&M University; Ph.D Prairie View A&M University

DEPARTMENT OF EDUCATION

<http://www.umes.edu/Education>

Dr. Karen A. Verbeke, Chairperson

MISSION

The mission of the Department of Education and Professional Education Unit is to advance the science and practice of education, and to promote related careers in counseling and mental health. Toward this end, the Department and Unit offer state-of-the-art undergraduate and graduate teacher education programs, a graduate counselor education program, and a doctoral program in Education Leadership. The Department of Education and Professional Education Unit seek to nurture minds, advance knowledge, promote life-long learning, and prepare skilled educators and counselors to meet the needs of the twenty-first century.

OBJECTIVES

The objectives of the Department of Education are to prepare teachers, counselors, and administrators who:

1. Have the professional knowledge base of change strategies that enables them to participate in school restructuring;
2. Become engaged critical and creative thinkers, problem solvers, and reflective professionals;
3. Review and embrace their personal heritage in order to facilitate learning for individuals from diverse ethnic and cultural backgrounds;
4. Are consumers, brokers, and generators of school-based research;
5. Are innovative users of and advocates for content technology-based instruction;
6. Integrate state, national, and international priorities into instructional and assessment strategies;
7. Incorporate national and state professional standards into their practice;
8. Incorporate the Professional Education Unit's Conceptual Framework into their practice;
9. Demonstrate appropriate human, conceptual, and technical skills when working with students and other educational stakeholders; and
10. Have 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 from all ethnic and religious groups, as well as those with disabilities, those for whom English is a second language, and those who are gifted and talented.

DEGREES OFFERED IN DEPARTMENT OF EDUCATION

Bachelor of Science - Special Education

Master of Arts in Teaching¹ (Agriculture, Art, Biology, Business, Chemistry, English, Family and Consumer Sciences, Mathematics, Music, Social Studies, Technology)

Master of Education – Counselor Education¹

Master of Education – Special Education¹

Doctorate of Education – Education Leadership¹

¹Consult the UMES Graduate Catalog for details.

GENERAL PROGRAM REQUIREMENTS

The initial admission of students to the undergraduate programs in the Department of Education and Teacher Education is based upon the general admission requirements of the University. The program requirements increase as students move through their teacher education program. The only teacher education program housed in the Department of Education is Special Education. However, all 12 undergraduate teacher education programs (i.e., Agriculture, Art, Biology, Business, Chemistry, English, Family and Consumer Sciences, Mathematics, Music, Social Studies, Special Education, and Technology) are administered in collaboration with the Department of Education.

The undergraduate teacher education programs lead to the Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree in a variety of areas. The 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 sophisticated clinical skills to work with a diverse population. This program reflects current research-based trends in the field of education and emphasizes excellence in both the theoretical and applied domains.

DEPARTMENTAL AND TEACHER EDUCATION REQUIREMENTS

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*, found on the departmental website (www.umes.edu/Education) and in the *UMES Undergraduate Catalog*.

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 *UMES Undergraduate Catalog* for the specific courses in their majors. **TOTAL NUMBER OF SEMESTER HOURS REQUIRED: 44 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. A total of **15** credits is required. Students must also pass a criminal background check at this phase in the program and purchase the Unit's electronic assessment system. Professional education courses in phases two, three, and four may be repeated only once.

EDCI 200	EDCI 201¹	EDSP 200³
PSYC 303⁴	PSYC 305⁵	PSYC 307

¹Does not count toward graduation

²Or approved substitute course

³Special Education majors only

⁴Secondary Majors only

⁵Special Education and Specialty Education majors only

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 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 (or passing scores on other Maryland State approved tests) for program entry, in addition to meeting other requirements.** Students must complete and submit a **Teacher Education Application** which can be obtained online 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. Once admitted to Teacher Education, teacher candidates must maintain a minimum overall grade point average of 2.75 as well as a minimum 2.75 grade point average in their major, with no grade of "D" or lower in the major or in education courses.

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 content area. A total of 18 semester hours is required in specialization courses for Specialty majors. A total of 39 semester hours is required for specialization courses for Special Education Majors. These requirements are listed in the *Teacher Education Handbook*.

COMMON REQUIRED SPECIALIZATION COURSES FOR SPECIALTY¹

(Except Special Education Majors)

EDCI 311	EDCI 406	EDCI 409
EDCI 410	EDCI 4XX	EDSP 428

Note: EDCI 306 is also required for Art, English, Music, and Social Studies.

COMMON REQUIRED SPECIALIZATION COURSES FOR SPECIAL EDUCATION MAJORS

A total of 39 semester hours is required for specialization courses for Special Education Majors. These requirements are listed in the *Teacher Education Handbook*.

EDSP 401	EDSP 402	EDSP 403	EDSP 404	EDCI 306
EDSP 414	EDSP 416	EDSP 422	EDSP 426	
EDSP 428	EDSP 430	EDSP 431	PSYC 406	

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. Students who wish to become teacher education majors will need to successfully complete a criminal background check prior to any field placements in a school setting.

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 submitted 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) Interview with faculty that includes review of candidate's professional dispositions and cultural competencies.
- 8) 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. Each student must also attend a 3-4 day workshop in preparation for the internship.**

SPECIALTY EDUCATION

Art/Music (PreK-12)

EDCI 440 EDCI 450 EDCI 400

Special Education (1-8; 6-12)

EDSP 442 (E) EDSP 450 (S) EDSP 400

SECONDARY EDUCATION

Secondary (7-12)

EDCI 460X/480X (Middle) EDCI470X/490X (High) EDCI 400

¹Other Specialty courses are required by specific programs

SPECIAL EDUCATION
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109
and

One course from:

Discipline B: HISTORY

HIST HIST 201, HIST 202, PHIL 201

Or:

Discipline C: LANGUAGE

SPAN 101; SPAN 102; ASLS 203, ASLS 204

Or:

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Students must select one course in each of two disciplines. Those required are in bold.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101, HIST 102POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

Those suggested are in bold. ANPT 114, ANPT 114H

BIOL 101, BIOL 103 (lab); or BIOL 111, BIOL 113 (lab); or BIOL 112, BIOL 114 (lab),

CHEM 101, CHEM 102, CHEM 103 (lab), CHEM 104 (lab)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 6

MATH 102 or higher; if a student needs MATH 101, he/she **must** take it before taking Math 102 or higher;

MATH 210

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**
 ENGL 101
 ENGL 102
 ENGL 001/002
 ENGL 305 or ENGL 310

Curriculum Area VI - EMERGING ISSUES **Credits 4**
 EDCI 100 First Year Experience Course
 In addition, students must take 3 credits that include:
 EXSC 111

Total Required for General Education **Credits 44**

PROGRAM OR MAJOR CORE REQUIREMENTS **Credits 18**

*EDCI 201 does not count toward graduation and is taken only if the PRAXIS I or state-approved basic skills test has not been passed.

EDCI 200	Introduction to Contemporary Education	3
EDCI 201*	PRAXIS Preparation	1
EDSP 200	Introduction to Special Education	2
PSYC 305	Developmental Psychology or	3
HUEC 203	Human Development: A Lifespan Perspective	3
PSYC 307	Educational Psychology	3
PSYC 371	Abnormal Psychology	3
POLI 200	American Government or	3
HIST 201 or 202	U.S. History	3

PROFESSIONAL COURSES (SPECIAL EDUCATION MAJORS) **Credits 54**

EDUC 306	Integrating Technology into the Curriculum	3
EDSP 401	Processes and Acquisition of Reading and Language for Students with Disabilities	3
EDSP 402	Instruction of Reading and Language for Students with Disabilities	3
EDSP 403	Materials for Teaching Reading and Language for Students with Disabilities	3
EDSP 404	Assessment, Diagnosis, and Remediation of Reading Problems for Students with Disabilities	3
EDSP 414	Psychoeducational Assessment I	3
EDSP 416	Program Development and Instructional Delivery in Special Education	3
EDSP 422	Psychoeducational Assessment II	3
EDSP 426	Instruction of Mathematics for Students with Disabilities	3
EDSP 428	Communication and Collaboration in Special Education	3
EDSP 430	Technique in Special Education	3
EDSP 431	Instruction of Prevocational/Vocational and Transition Programs in Special Education	3
PSYC 406	Applied Behavior Analysis	3
EDSP 400	Senior Seminar in Special Education	3
EDSP 442	Internship in Special Education (Elementary)	6
EDSP 450	Internship in Special Education (Secondary)	6

PROGRAM OR MAJOR ELECTIVES **Credits 6**

Any 6 credits

TOTAL **Credits 122**

CURRICULUM GUIDE FOR SPECIAL EDUCATION

Preparing Teachers to Work with Students with
Mild and Moderate Disabilities (grades 1-8; 6-12)

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
MATH 102 or higher	3	ENGL 001/ENGL 003 ¹	0
ENVS 101	3	SOCI 101	3
HIST 101	3	BIOL 101	3
ARTS 101	3	BIOL 103	1
EDCI 100	<u>1</u>	EXSC 111	3
	16	PSYC 200	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	PSYC 371	3
EDCI 200	3	EDSP 200	3
EDCI 201 ²	1	PSYC 307	3
Elective	3	MATH 210	3
POLI 200	3	ELECTIVE (IB, C, or D)	<u>3</u>
PSYC 305	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDSP 401	3	EDSP 402	3
EDSP 414	3	EDSP 403	3
EDSP 416	3	EDSP 422	3
EDSP 426	3	PSYC 406	3
EDCI 306	<u>3</u>	ENGL 305 or 310	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDSP 404	3	EDSP 400	3
EDSP 428	3	EDSP 442	6
EDSP 430	3	EDSP 450	<u>6</u>
EDSP 431	3		15
Elective	<u>3</u>		
	15		

Total Hours: 122

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Does not count towards graduation.

COURSE DESCRIPTIONS EDUCATION

EDCI 100 First Year Experience

Credit 1

This course is to provide an opportunity for students to make a seamless transition from high school to University by enabling first-year students to develop creative and critical thinking skills, and information literacy skills needed to facilitate the successful transition. Further skill development will include cognitive skills, self-awareness and interpersonal communication skills to assist them in adjusting personally and socially to the University environment. In addition, to providing information needed for student success at the University, this course serves as a conduit for students entering the field of teacher education. Students will be provided with the prerequisite needed to make a successful transition into the teacher education program. It is designed for all teacher education majors: Agriculture, Art, Biology, Business Education, Chemistry, English, Family and Consumer Sciences, Mathematics, Music, Social Studies, Special Education and Technology Education.

EDCI 200/Online Introduction to Contemporary Education

Credit 3

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 provide 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.

EDCI 201 PRAXIS Preparation

Credit 1

This course provides training in the content and skills assessed in Praxis I testing in the areas of Reading, Writing, and Mathematics. This course is taken concurrently with EDCI 200. Credit for this course does not count towards graduation.

EDCI 306 Integrating Technology into the Curriculum

Credit 3

This course emphasizes the use of technologies to promote teaching and learning in the P-12 environment. Major software applications, 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. Prerequisite: Teacher Candidacy Status.

EDCI 311 Comprehensive Assessment in Education

Credit 3

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

Credit 3

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**Credit 3**

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**Credit 3**

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: I**Credit 3**

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: II**Credit 3**

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**Credit 3**

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**Credit 3**

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 Credit 6

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 Credit 6

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 Teaching Internship: Secondary Program (7-12): Middle School Credit 6

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 Teaching Internship: Secondary Programs (7-12) (High School) Credit 6

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 Credit 3

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 Credit 1-6

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 100 First Year Experience for Teacher Education Majors Credit 1

This course is to provide an opportunity for students to make a seamless transition from high school to University by enabling first-year students to develop creative and critical thinking skills, and information literacy skills needed to facilitate the successful transition. Further skill development will include cognitive skills, self-awareness and interpersonal communication skills to assist them in adjusting personally and socially to the University environment. In addition, to providing information needed for student success at the University, this course serves as a conduit for students entering the field of teacher education. Students will be provided with the prerequisite needed to make a successful transition into the teacher education program. It is designed for all teacher education majors: Agriculture, Art, Biology, Business Education, Chemistry, English, Family and Consumer Sciences, Mathematics, Music, Social Studies, Special Education and Technology Education.

EDSP 200 Introduction to Special Education Credit 3

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 Credit 3

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 Credit 3

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

Credit 3

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 Credit 3

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 Credit 3

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 Credit 3

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 presentation and reporting 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.

EDSP 416 Program Development and Instructional Delivery for Students with Disabilities Credit 3

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**Credit 3**

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 presentation and reporting 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**Credit 3**

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**Credit 3**

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**Credit 3**

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 Credit 3

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) Credit 6

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) Credit 6

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 Credit 3

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 Credit 1-6

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.

PSYCHOLOGY

PSYC 200/Online Introduction to Psychology Credit 3

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**Credit 3**

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/Online Adolescent Psychology**Credit 3**

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/Online Developmental Psychology**Credit 3**

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**Credit 3**

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/Online Abnormal Psychology**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

This course explores 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.

DIRECTORY OF FACULTY

Agnew, Mary L., Associate Professor

B.A., Central Michigan University; M.Ed., University of New Hampshire; Ph.D., University of Georgia

Bowers, Cheryl D., Assistant Professor

B.A., Mount Holyoke College; M.S., University of Pennsylvania; Ph.D., University of Pennsylvania

Carrington, Andrew T., Professor

B.S., Hampton University; M.A., Hampton University; Ed.D., Virginia Polytechnic Institute and State University

Goslee, Patricia A., Assistant Professor

B.S., University of Maryland Eastern Shore; M.Ed., Wilmington College; Ed.D., Wilmington University

Foust, Gretchen, Assistant Professor

B.A., M.Ed., and Ph.D., The Pennsylvania State University

Larson, Wilbert C., Associate Professor

B.S., Augustana College; M.Ed., Creighton University; Ph.D., University of Nebraska

Nugent, Michael A., Lecturer II

B.A., Marist College; M.Ed., St. John's University; Ph.D., University of Maryland Eastern Shore

Patterson, Michael, Assistant Professor

B.A., Hampshire College; M.A. and Ph.D., Claremont Graduate University

Poole-Sykes, Kimberly J., Associate Professor

B.S., University of Maryland Eastern Shore; M.S., Southern Illinois University at Carbondale; Rh.D., Southern Illinois University at Carbondale

Stufft, Derry, Associate Professor

B.A., Rutgers College; M.Ed., Indiana University of Pennsylvania; Ed.D., Indiana University of Pennsylvania

Verbeke, Karen A., Professor, Chair & Director of Teacher Education

B.A., The Pennsylvania State University; M.Ed., Ph.D., University of Maryland

Williams, Charles, Professor

B.S., M.S., North Carolina Agricultural and Technical State University; Ph.D., Iowa State University

DEPARTMENT OF ENGLISH & MODERN LANGUAGES

<http://www.umes.edu/English/>

Dr. Jacqueline Brice-Finch, Chairperson

MISSION

The mission of the Department of English & Modern Languages is to prepare individuals for graduate schools, professional schools, and career opportunities; to prepare teachers of English for middle and secondary schools; to provide service courses for the various departments; and to provide outreach services for surrounding schools and communities.

OBJECTIVES

The objectives of the Department of English & Modern Languages are as follows:

1. To provide opportunities for students to develop facility in communicative skills: reading, writing, speaking and listening;
2. To provide opportunities for students to speak and write a foreign language effectively;
3. To provide opportunities for students to understand, interpret, and analyze literary material;
4. To prepare students for graduate study and professional careers;
5. To prepare students for teaching middle and secondary school English.

DEGREES OFFERED

Bachelor of Arts – English (Non-Teaching)

Bachelor of Arts – English Education

ENGLISH (NON-TEACHING)

DEPARTMENTAL REQUIREMENTS

In addition to the completion of the 41 required credits in General Education, all students are expected to complete 79 credit hours from a common body of academic coursework. The 79 credit hours must consist of 33 credit hours selected from the program core requirements, 12 credit hours of English electives, 12 credit hours in either French or Spanish language instruction, and 22 credit hours of free electives.

All English majors will be required to complete 12 alternative credits before graduating. Alternative credits can be earned by completing internships, summer and winter session courses, on-line courses, independent study, undergraduate research, credit by examination, and courses completed while studying abroad.

Departmental internships may be earned in 3 credit increments (3, 6, 9, or 12 credits), but no combination of academic internships may exceed a total of 12 credits.

CAREER OPPORTUNITIES

Because of literature's emphasis on human values and human interaction, graduates are prepared to work in a variety of occupations, including publicity, personnel, research, sales, teaching, and training. Students with backgrounds in liberal studies are potential candidates for executive and management positions. Undergraduate English majors often elect to enter graduate school in English, journalism, and media communications as well as in business, international affairs, library science, law, and medicine. An English major has much to offer that is essential to our society and has a wide, rather than narrow, choice of career opportunities.

ENGLISH [NON-TEACHING] PROGRAM

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

9 Credits

Students must select Discipline E: SPEECH ENGL 203¹ plus one course from Discipline A and B.

Discipline A: ARTS

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

or

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201, PHIL 202

Discipline E: SPEECH

ENGL 203¹

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **6 Credits**

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201, PHIL 202

POLI 200 or POLI 200H,

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **7 Credits**

Students must select three science courses, one of which **must** be a laboratory course, from the following:

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS **3 Credits**

MATH 102¹ or MATH 109²

Curriculum Area V - ENGLISH COMPOSITION³ **9 Credits**

ENGL 101/H/Online

ENGL 102/H/Online

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **7 Credits**

ENGL 100 First Year Experience or other Departmental orientation course

EXSC 111 Personal Health & Fitness

In addition, students must take 3 credits from the following approved list:

ENGL 317 Shakespeare

ENGL 324 Literature and Film

ENGL 325 Literary Criticism

ENGL 345 Special Topics in Literature

ENGL 412/H Commonwealth Literature

ENGL 413/H/Online The Novel—East and West

Total Required for General Education **41 Total Credits**

¹Preferred

²Students must pass MATH 101 with grade of “C” or above before taking MATH 102 or 109.

³Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

REQUIRED LANGUAGE COURSES**12 Credits**

Any four-semester sequence in a single foreign language

REQUIRED MAJOR COURSES

ENGL	218	Approaches to Grammar	3
ENGL	327/H	African American Literature	3
ENGL	330	Advanced Public Speaking	3
ENGL	401	Modern Drama	3

Choose **two** of the following:

ENGL	204/Online	Introduction to Fiction	3
ENGL	205	Introduction to Drama	3
ENGL	206	Introduction to Poetry	3
ENGL	207/Online	Introduction to Creative Writing	3
TELC	214	Introduction to Telecommunications	3
ENGL	215	Introduction to Film	3

Choose **one** of the following:

ENGL	301	American Literature I	3
ENGL	302	American Literature II	3

Choose **one** of the following:

ENGL	321	English Literature I	3
ENGL	322/H	English Literature II	3

Choose **one** of the following:

ENGL	328	World Literature I	3
ENGL	329	World Literature II	3

Choose **one** of the following:

ENGL	346/Online	History of the English Language	3
ENGL	380	Introduction to Language Science	3

Choose **one** of the following:

ENGL	412	Commonwealth Literature	3
ENGL	413/Online	The Novel—East and West/Online	3

33 Total Credits**ENGLISH ELECTIVE COURSES**

Students may choose any 200, 300 or 400 level course offered by the Department

12 Credits**FREE ELECTIVES**

Students may choose any undergraduate courses offered by the University.

22 Credits**TOTAL CREDITS REQUIRED:****120 Credits**

CURRICULUM GUIDE FOR ENGLISH (NON-TEACHING)

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ²	0
GEN ED CURR AREA I	3	EXSC 111 ⁴	3
GEN ED CURR AREA II ¹	3	GEN ED CURR AREA I ³	3
GEN ED CURR AREA III	3	SPAN 102 or	
SPAN 101 or		FREN 102	3
FREN 101	<u>3</u>	MATH 102	<u>3</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	ENGL 204-215 or TELC 214	3
ENGL 204-215 or TELC 214 ^{5,6}	3	ENGL 218	3
GEN CURR AREA II ³	3	ENGL Elective ⁷	3
GEN ED CURR AREA III	3	ENGL 301 or	
GEN ED CURR AREA III	1	ENGL 302	3
SPAN 201 or		SPAN 202 or	
FREN 201	<u>3</u>	FREN 202	<u>3</u>
	16		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or		ENGL 327	3
ENGL 310	3	ENGL 346 or	
ENGL 321 or		ENGL 380	3
ENGL 322	3	ENGL 330	3
ENGL Elective ⁷	6	ENGL Elective ⁷	3
Free Elective ⁹	<u>3</u>	Free Elective ⁹	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 328 or		ENGL 490 ⁸	3
ENGL 329	3	ENGL 412 or	
ENGL 401	3	ENGL 413	3
Free Electives ⁹	<u>9</u>	Free Electives ⁹	<u>7</u>
	15		13

Total Credit Hours: 120

¹Student must choose from GEN ED CURR AREA II:A

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Student must choose from GEN ED CURR AREA II:B

⁴Course **cannot** be repeated for credit.

⁵Student must select from ENGL 204, ENGL 205, ENGL 206, ENGL 207, ENGL 215, or TELC 214.

⁶Students planning to minor in telecommunications should take TELC 214, a pre-requisite for telecommunications courses.

⁷English electives include courses with prefixes ENGL, TELC, and THAR.

⁸Course will fulfill requirement for GEN CURR AREA VI.

⁹Or more credits; combinations of 1, 2 or 3 credit courses are acceptable to complete required credit count.

ENGLISH EDUCATION

DEPARTMENTAL REQUIREMENTS

UMES offers the Bachelor of Arts (B.A.) degree in English Education. In addition to the completion of the 41 required credits in General Education, all students are expected to complete 85 credit hours from a common body of academic coursework. The 85 credit hours must consist of 30 credit hours selected from the program core requirements, 6 credit hours of English electives, 6 credit hours in either French or Spanish language instruction, and 43 credit hours of professional education requirements.

All English majors will be required to complete 12 alternative credits before graduating. Alternative credits can be earned by completing internships, summer and winter session courses, on-line courses, independent study, undergraduate research, credit by examination, and courses completed while studying abroad.

CAREER OPPORTUNITIES

The teaching program is designed to prepare individuals to become teachers of English/Language Arts in middle and high schools. The program of study provides the prospective English teacher with a broad and integrated liberal arts background, a concentrated study of English literature and language, and the techniques, knowledge, and experience to help middle, junior, and senior high school students develop to their highest potential.

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

General Education Requirements [a minimum of 40 credits] are distributed as follows:

Curriculum Area I Arts and Humanities

Credit 15

Students must select Discipline E: SPEECH ENGL 203¹ plus one course from Discipline A and B.

Discipline A: ARTS

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

or

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Students must take one of the following courses in Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203¹

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credit 6**

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200 (Prerequisite for PSYC 303 and PSYC 307)

HUEC 203, HUEC 220, HUEC 361

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credit 7**

Students must select two science courses, one of which **must** be a laboratory course, from the following:

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS **Credit 3**

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

Curriculum Area V - ENGLISH COMPOSITION¹ **Credit 9**

ENGL 101/H/Online

ENGL 102/H/Online

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credit 7**

EDCI 100 First Year Experience or other Departmental orientation course

EXSC 111 Health & Wellness

EDCI 306 Integrating Technology into the Curriculum

Total Required for General Education **Credit 41**

COMMON REQUIRED COURSES

One (1) ENGL 200, 300, or 400 Level Course [3 credits]

Two (2) ENGL 400 Level Courses [6 credits]

Any two-semester sequence in French or Spanish—[6 credits]

REQUIRED MAJOR COURSES

<u>Course & No.</u>	<u>Title</u>	<u>Credit Hr.</u>
ENGL 218	Approaches to Grammar	3
ENGL 347/H	Adolescent & Young Adult Literature	3
ENGL 330	Advanced Public Speaking	3

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Choose **two** of the following:

ENGL 204/Online	Introduction to Fiction	3
ENGL 205	Introduction to Drama	3
ENGL 206	Introduction to Poetry	3
ENGL 207/Online	Introduction to Creative Writing	3
TELC 214	Introduction to Telecommunications	3
ENGL 215	Introduction to Film	3

Choose **one** of the following:

ENGL 301	American Literature I	3
ENGL 302	American Literature II	3

Choose **one** of the following:

ENGL 321	English Literature I	3
ENGL 322/H	English Literature II	3

Choose **one** of the following:

ENGL 328	World Literature I	3
ENGL 329	World Literature II	3

Choose **one** of the following:

ENGL 346/Online	History of the English Language	3
ENGL 380	Introduction to Language Science	3

28 Credits

Professional Education Requirements

EDCI 200	Introduction to Contemporary Education	3
EDCI 201	PRAXIS Preparation	1
PSYC 303	Adolescent Psychology	3
PSYC 307	Educational Psychology	3
EDCI 311	Comprehensive Assessment	3
EDCI 400	Senior Seminar	3
EDCI 406	Classroom Management	3
EDCI 409	Teaching Reading in Content Areas I	3
EDCI 410	Teaching Reading in Content Areas II	3
EDCI 425	Curriculum & Instruction in English	3
EDCI 428	Communication and Collaboration in Special Education	3
EDCI 480	Teaching Internship - MS	6
EDCI 490	Teaching Internship – HS	6

43 Credits

CURRICULUM GUIDE FOR ENGLISH EDUCATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
FREN 101 or		ENGL 001/ENGL 003 ²	0
SPAN 101	3	FREN 102 or	
EDCI 100	1	SPAN 102	3
GEN ED CURR AREA I ¹	3	GEN ED CURR AREA III ³	4
GEN ED CURR. AREA III	3	GEN ED CURR AREA I ⁴	3
GEN ED CURR AREA IV	<u>3</u>	GEN ED II PSYC 200	<u>3</u>
	16		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	ENGL 200-400 Elective ⁵	3
EDCI 200	3	ENGL 204-215 ⁶	3
EDCI 201	1	ENGL 218	3
GEN ED CURR. AREA II	3	ENGL 301 or	
GEN ED CURR. AREA VI	3	ENGL 302	3
PSYC 303	<u>3</u>	PSYC 307	<u>3</u>
	16		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 321 or		ENGL 328 or	
ENGL 322	3	ENGL 329	3
ENGL 400 Elective ⁵	3	ENGL 346 or	
ENGL 305 or		ENGL 380	3
ENGL 310	3	ENGL 347	3
ENGL 204-215 ⁶	3	EDCI 306	3
ENGL 330	<u>3</u>	EDCI 406	3
	15	EDCI 409	<u>3</u>
			18

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 400 Elective ⁵	3	EDCI 400	3
EDCI 311	3	EDCI 480	6
EDCI 410	3	EDCI 490	<u>6</u>
EDCI 425	3		15
EDSP 428	<u>3</u>		
	15		

Total Credit Hours: 126

¹Student must select from GEN ED CURR AREA I:A.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Student must select one science course and one laboratory course.

⁴Student must select from GEN ED CURR AREA I:B.

⁵English electives include 200-400 level courses offered by the department, including courses with prefixes ENGL, TELC, and THAR.

⁶Student must select a course from ENGL 204, ENGL 205, ENGL 206, ENGL 207, or ENGL 215.

MINOR PROGRAMS

The Department of English and Modern Languages offers minors in English, Spanish, and Telecommunications. For a student to earn a minor in a subject, a minimum of eighteen semester hours, according to department specifications, must be met. The specifications in the Department of English & Modern Languages are as follows:

English

The English Minor is for students in major programs of study outside the Department of English and Modern Languages. English courses taken to meet General Education Requirements DO NOT meet department requirements for the minor in English. In addition to General Education Requirements, students selecting English as a minor must choose a sequence of English courses from the list in number one below. The English Minor requires the following:

1. The following courses are the only English courses that a student may take to meet the 18 semester hour requirement for the English minor:
ENGL 204, 205, 206, 215, 218
ENGL 301, 302, 305¹, 310¹, 321, 322, 325, 327, 328, 329, 332, 345, 346, 347
ENGL 401, 404, 405, 408, 412, 413, 481
2. Any sequence of 18 semester hours, chosen from the above list, meets the numerical requirement for the minor in English.
3. A grade of “C” or better is required in each course to meet the requirements for the English minor.

Spanish

The Spanish Minor is for English majors and students in major programs of study outside the Department of English and Modern Languages:

1. The following courses are the only Spanish courses that a student may take to meet the 18 semester hour requirement for the Spanish minor:
SPAN 201, SPAN 202, SPAN 301, SPAN 302, SPAN 401 and SPAN 402.
2. Any sequence of 18 semester hours, chosen from the above list, meets the numerical requirement for the minor in Spanish.
3. A grade of “C” or better is required in each course to meet the requirements for the Spanish minor.

¹ This course can be used only if it is not used to fulfill a General Education requirement.

Telecommunications

The Telecommunications Minor is for English majors and students in major programs of study outside the Department of English and Modern Languages. The Telecommunications Minor is designed to satisfy the varied interests of students who seek careers in radio, television, public relations, journalism, social media, and/or other digital outlets. Students will focus on both content creation and product delivery, tailoring their minors to suit their individualized needs. This broadly-based minor is reflective of the expanding and encompassing field of communications studies in the 21st century. Students who major in English or other programs of study can minor in Telecommunications by completing 18 credit hours from the list of courses below. The specifications are as follows:

1. The following courses are the only Telecommunications courses that a student may take to meet the 18 semester hour requirement for the Telecommunications minor:

TELC 214, TELC 236, TELC 237, TELC 238, TELC 239, TELC 241
TELC 303, TELC 333, TELC 336, TELC 337, TELC 351
TELC 472, TELC 481

2. Any sequence of 18 semester hours, chosen from the above list, meets the numerical requirement for the minor in Telecommunications.
3. A grade of “C” or better is required in each course to meet the requirements for the Telecommunications minor.
4. Departmental internships may be earned in 3 credit increments (3, 6, 9, or 12 credits), but no combination of academic internships may exceed a total of 12 credits.

CAREER OPPORTUNITIES

Employment prospects in telecommunications are wide ranging in a digital age where global information is a critical commodity. Communication experts are highly sought after in private industry, at academic institutions, and throughout all levels of government. The Telecommunications Minor provides students with specific skills and concepts required for careers in radio, television, and other media related fields. Depending on course selection, students are prepared to engage in a variety of occupations including, but not limited to, broadcast news reporting, radio and television program creation and delivery, the production of commercial and promotional messaging, computer-generated graphic design, and social media distribution. Particular emphasis is placed on experiential learning which may include participation in campus radio and television productions and/or multiple internships. In this way, students are able to discover which area of the communication industry is the best fit for their talents.

THE FOREIGN LANGUAGE INSTRUCTIONAL CENTER (FLIC)

The mission of the Foreign Language Instructional Center is to provide instruction in the Less Commonly Taught Languages (LCTLs) in order to help meet the need for critical language acquisition in the United States. Customized instructional materials have been developed by FLIC in Akan-Twi, Arabic, Chinese (Mandarin), Hindi, Russian, Yoruba as well as Haitian Creole which, along with Spanish, is taught in response to the needs of growing Haitian and Hispanic community. In addition to advancing language proficiency, instructors at FLIC emphasize cultural understanding. Students are exposed to the traditions and norms of the countries where the foreign language is spoken so that they may put the language in practical context for interaction with native speakers either in the United States or in the respective world regions. FLIC has created a state-of-the-art classroom with the most advanced instructional technology available.

COURSE DESCRIPTIONS IN ENGLISH, MODERN LANGUAGES, TELECOMMUNICATIONS, AND THEATER

ARABIC

ARAB 101 Fundamentals of Arabic I **Credit 3**
This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar, and translation. Laboratory work is required.

ARAB 102 Fundamentals of Arabic II **Credit 3**
Fundamentals of Arabic II is a continuation of ARAB 101. This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar, and translation. Laboratory work is required. Prerequisite: ARAB 101.

CHINESE

CHIN 101 Beginning Chinese **Credit 3**
An introduction to speaking, reading, and writing Mandarin Chinese, this course emphasizes the mastery of pronunciation and basic characters. This course also uses discussions and authentic materials to develop the student's understanding of Chinese culture.

ENGLISH

ENGL 001/002/003 English Proficiency Examination **Credit 0**
The English Proficiency Examination (EPE) is a two-hour examination required to assure that students are able to write at an acceptable level. In order to graduate, every student must pass the English Proficiency Examination. The test is given during exam week in the Fall and Spring semesters and during exam day in the Winter and Summer III sessions. **Students also registered for ENGL 102 should take ENGL 001; students also registered for ENGL 102H should take ENGL 003; students who have completed ENGL 102 should take ENGL 002.**

ENGL 100 First Year Experience **Credit 1**
This course is to provide 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 will assist students in developing cognitive skills and will assist them in adjusting personally and socially to the college environment. This course will enable first-year students to develop creative and critical thinking skills, and information literacy skills needed to facilitate a successful transition from high school to university. Additionally, this course shall facilitate self-awareness and interpersonal communication skills. In addition to providing information needed for student success at the University, this course serves as a conduit for students entering the field of English and Telecommunications. Students will be provided with the prerequisites needed to make a successful transition into the English Non-Teaching Major. The course will develop interpersonal and conflict resolution skills providing academic, personal, social, and emotional adjustments.

ENGL 101/Online Basic Composition I **Credit 3**
This course is designed to provide instruction in the basics of college level essay writing, with an emphasis on organization and development of ideas and the rhetorical modes of expository writing. The course will also review the fundamentals of grammar, punctuation, and conventional usage. Adequate opportunity for written analysis and oral discussion of selected examples of prose and creative writing are provided to encourage development of critical reading and thinking skills.

ENGL 101 Honors English Composition I Credit 3
The major goal of this course 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/Online Basic Composition II Credit 3
This course continues the study of college level essay writing, with an emphasis on the development of critical analysis skills. Students will be introduced to basic research concepts, the use of secondary source material, and the tenets of source citation. A research essay will be required. Prerequisite: "C" or better in ENGL 101.

ENGL 102 Honors English Composition II Credit 3
This course is 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 203 Fundamentals of Contemporary Speech Credit 3
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/Online Introduction to Fiction Credit 3
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 Credit 3
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 Credit 3
This course is an introduction to the development of poetry with concentration on several major poets. Prerequisites: ENGL 101 and ENGL 102.

ENGL 207/Online Introduction to Creative Writing Credit 3
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 Credit 3
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 Credit 3
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 301/Online American Literature I Credit 3
This course is a survey of the major American authors and their works from the beginning of American civilization to Walt Whitman. Prerequisites: ENGL 101 and ENGL 102.

ENGL 302 American Literature II**Credit 3**

This course is a survey of the major American authors and their works from Walt Whitman to the present. Prerequisites: ENGL 101 and ENGL 102.

ENGL 305/Honors/Online Technical Writing**Credit 3**

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 their freshman and sophomore years with at least 56 credit hours, and who have satisfactorily completed ENGL 101, ENGL 102, and ENGL 203.

ENGL 310/Honors/Online Advanced Composition**Credit 3**

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**Credit 3**

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**Credit 3**

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 317 Shakespeare**Credit 3**

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. Prerequisites: ENGL 101 and ENGL 102.

ENGL 319 Theater Practicum**Credit 1**

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**Credit 3**

This course involves a survey of selected authors and works in English Literature from the beginning through the Restoration. Prerequisites: ENGL 101 and ENGL 102.

ENGL 322 English Literature II**Credit 3**

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**Credit 3**

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**Credit 3**

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/Online African American Literature**Credit 3**

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**Credit 3**

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 American. Prerequisites: ENGL 101 and ENGL 102.

ENGL 329 World Literature II**Credit 3**

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**Credit 3**

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**Credit 3**

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 345 Special Topics in Literature**Credit 3**

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/Online History of the English Language**Credit 3**

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/Online Adolescent and Adult Literature**Credit 3**

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 380 Introduction to Language Science**Credit 3**

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**Credit 3**

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**Credit 3**

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 events that foster the various types of drama produced during a particular period. Prerequisites: ENGL 101, ENGL 102 and ENGL 205.

ENGL 405 Studies in Film**Credit 3**

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**Credit 3**

This course traces the development of poetry with concentration on several major poets. Prerequisites: ENGL 101, ENGL 102, and ENGL 206.

ENGL 412 Commonwealth Literature**Credit 3**

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. Prerequisites: ENGL 101 and ENGL 102.

ENGL 413/Online The Novel - East and West**Credit 3**

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. Prerequisites: ENGL 101 and ENGL 102.

ENGL 472/Online Internship**Credit 3-12**

This course is an internship in various study areas arranged by and with permission of the instructor. Students wishing to travel abroad may petition for Foreign Language credit under this course. Contact the Department Chair for details. Prerequisites: ENGL 203 & permission of the instructor.

ENGL 490 Senior Capstone in English and Modern Languages**Credit 3**

The Senior Capstone Course in English and Modern Languages is designed for seniors who will demonstrate their competence as English majors by preparing and presenting a portfolio of their best works, suitable for assessment by a three-panel faculty jury. The portfolio should include a cover letter, résumé, personal statement, a foreign language writing sample, in addition to four significantly revised and polished essays from four different English courses across the student's collegiate career. Students are also required to give a brief oral presentation in a foreign language and a Microsoft PowerPoint presentation of the final portfolio at the conclusion of the course. Prerequisite: Senior English majors only.

ENGL 499 Independent Research in English**Credit 1-3**

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 in the area of English and Modern Languages. The student is required to meet and confer with the instructor on specified conference dates. Limited enrollment. Prerequisite: permission of instructor.

ENGLISH AS A SECOND/OTHER LANGUAGE

ESOL 101 ESL Writing Skills

Credit 3

This course provides basic composition for second language learners of English. The focus of the course is written expression through sentences, paragraphs, and essays.

FRENCH

FREN 101 Fundamentals of French I

Credit 3

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 examination for credit.

FREN 102 Fundamentals in French II

Credit 3

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 examination for credit. Prerequisite: C or better in FREN101

FREN 201 Intermediate French I

Credit 3

This course involves a review of grammar and pronunciation and involves graded readings of modern prose. Prerequisite: C or better in FREN 101 and FREN 102 or the equivalent.

FREN 202 Intermediate French II

Credit 3

This course provides a review of idiomatic expressions, applications of language skills to reading, composition, and class discussion. Prerequisite: C or better in FREN 201 or equivalent.

FREN 301 Conversation and Composition

Credit 3

This course focuses on the development of conversational proficiency in French, development of writing skills through written reports on current events and focuses on literary topics. Prerequisites: C or better in FREN 101, 102, 201 and 202, or permission of the instructor.

FREN 302 Translation

Credit 3

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: C or better FREN 101, 102, 201 and 202, or permission of the instructor.

FREN 401 French for the Business World

Credit 3

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: C or better in FREN 302 or permission of the instructor.

FREN 402 Writers of French-Speaking Africa and the Caribbean

Credit 3

This course involves the study of selected novels expressing the culture and the aspirations of the French speaking people of Africa and the Caribbean. Prerequisites: C or better in FREN 301 and FREN 302 or permission of the instructor.

SPANISH

SPAN 101/Online Fundamentals of Spanish I Credit 3

This course provides for the acquisition of basic skills in the language through drills in pronunciation, grammar, and translation of elementary prose. Laboratory 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 examination for credit.

SPAN 102 Fundamentals of Spanish II Credit 3

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 examination for credit. Prerequisite: C or better in SPAN101.

SPAN 201 Intermediate Spanish I Credit 3

This course provides a review of grammar and pronunciation. The course involves graded readings of modern prose. Prerequisites: C or better in SPAN 101 and SPAN 102 or equivalent.

SPAN 202 Intermediate Spanish II Credit 3

This course is a review of idiomatic expressions, and applications of language skills to reading, composition, and class discussion. Prerequisites: C or better in SPAN 101, SPAN 102 and SPAN 201.

SPAN 301 Spanish Conversation and Composition Credit 3

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: C or better in SPAN 101, 102, 201 and 202, or permission of the instructor.

SPAN 302 Translation Credit 3

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: C or better in SPAN 101, 102, 201 and 202, or permission of the instructor.

SPAN 401 Spanish for the Business World Credit 3

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: C or better in SPAN 302 or permission of the instructor.

SPAN 402 Writers of Spanish Expression-Spain/Latin America Credit 3

This course is a study of selected novels expressing the culture and aspirations of the Spanish-speaking people of Spain and Latin America. Prerequisites: C or better in SPAN 302 or permission of the instructor.

TELECOMMUNICATIONS

TELC 214 Introduction to Telecommunications Credit 3

This course concentrates on the history of telecommunications, regulation, and current policies and procedures. It is a prerequisite for most telecommunications courses. Prerequisites: ENGL 101 and ENGL 102.

TELC 236 Interviewing**Credit 3**

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: TELC 214.

TELC 237 Radio Production and Programming**Credit 3**

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: TELC 214

TELC 238 TV Production and Programming**Credit 3**

This is a laboratory course designed to expose the student to each production position in a TV studio, including director, camera operator, audio operator, and video editor. Prerequisite: TELC 214

TELC 239 Introduction to Broadcast Performance**Credit 3**

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. Prerequisite: TELC 214.

TELC 241 Basic News Writing and Reporting**Credit 3**

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. Prerequisite: TELC 214

TELC 303 Broadcasting Management**Credit 3**

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 in various station departments. Prerequisite: TELC 214

TELC 333 Principles of Photojournalism**Credit 3**

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. Prerequisite: TELC 214.

TELC 336 Computer Graphics I**Credit 3**

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.

TELC 337 Computer Graphics II**Credit 3**

Computer Graphics II is a continuation of Computer Graphics I (TELC 336) and the course work builds on the skills learned in TELC 336. 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: TELC 336

TELC 351 Communications Design Survey

Credit 3

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: TELC 336 and TELC 337.

TELC 472 Internship

Credit 3-12

This course is designed to provide experiential learning for students who seek careers in telecommunications including radio, television, and other media-related fields. It offers a unique opportunity to gather on-site, career-related experience and apply information previously gathered in the classroom setting. Students who receive the instructor's permission to enroll in TELC 472 must have completed the sophomore year of instruction and have maintained a minimum GPA of 2.7 prior to enrollment in the course. The course is offered in three credit increments up to twelve credits. Prerequisites: ENGL 101, 102, and 203; TELC 214, 237, and 238; and permission of the instructor.

TELC 481 Dramatic Writing for Film and TV

Credit 3

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 and ENGL 102 and consent of the instructor. Enrollment is limited to seventeen students.

THEATER ARTS

THAR 101 Introduction to Theater

Credit 3

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

Credit 3

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

Credit 3

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

Credit 3

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

Credit 3

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

Credit 3

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.

DIRECTORY OF FACULTY

Anderson, Mignon, Associate Professor

B.A., Fisk University; M.F.A., Columbia University

Brice-Finch, Jacqueline, Chair

B.A., Howard University; M.A., Indiana University, Bloomington; Ph.D., University of Maryland, College Park.

Buerkle, Marilyn, Lecturer, Visual Information Specialist

B.A., Edinboro University of Pennsylvania; M.A., American University

Champagne, Carole A., Associate Professor

B.S., Wake Forest University; M.Ed., M.A., Ph.D., University of Massachusetts, Amherst

Cooledge, Dean R., Associate Professor

B.A., Trinity University; M.A., Ph.D., University of Arizona

Davis, Joseph, Lecturer

B.M.E., Music, Henderson State University; M.M., Music History, Memphis State University; M.M., Piano Performance, Memphis State University; M.F.A., Towson University

Galloway, Kimberly A., Lecturer

B.A., East Tennessee State University; M.A., College of Charleston & The Citadel

Green, Melissa, Lecturer

B.A., St Mary's College; M.A., Salisbury University;

Gregory, Nydia, Lecturer

B.A., University of Puerto Rico; M.A., Assumption College; Ph.D., University of Maryland Eastern Shore

Hagenrater-Gooding, Amy, Assistant Professor

B.S., M.A., Radford University; Ph.D., Indiana University of Pennsylvania

Harned, Courtney, Lecturer

B.A., M.A.T., University of Virginia

Johnson, David, Assistant Professor

B.S., North Carolina A&T State University; M.Ed., Salisbury University; Ph.D., The Union Institute & University

Johnston, Sandra, Lecturer

B.A., M.Ed., Shippensburg University; M.A., Salisbury University

Miller, Bonni, Lecturer

B.A., M.A., Salisbury University

Okafor, Clement, Professor

B.A., University of Nigeria; M.A., University of East Africa; Ph.D., Harvard University

Rose, Wilton, Lecturer

B.F.A., New York University

Seabrook, Barbara, Associate Professor

B.S., M.Ed., Shippensburg University; M.Ed., Ed.D., Wilmington College

Shoge, Simeon, Lecturer

B.A., University of Ibadan; M.A., Washington College; MFA., Columbia University

Smith, Terry, Associate Professor

B.A., M.A., Salisbury University; Ph.D., Indiana University of Pennsylvania

Vlahovici-Jones, Gabriela, Lecturer

B.A., M.A., Al. I. Cuza University; M.A., Salisbury University

DEPARTMENT OF FINE ARTS

www.umes.edu/arts/

Mr. Christopher J. Harrington, Chairperson

MISSION

The mission of the Fine Arts Department is to provide art and music teachers for elementary and secondary schools; to prepare students for professional non-teaching careers in Commercial Ceramics, Graphic Illustration, Commercial Photography and Sequential Arts; 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. In addition the Fine Arts Department provides exhibits, cultural events and other programs necessary to promote art and make the university and general community artistically and musically richer.

OBJECTIVES

Students having completed the Art Education Program will:

1. 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.
2. Create, critically analyze, and evaluate works of art from a wide variety of media.
3. Develop, organize, evaluate, and administer effectively an art education curriculum in grades PreK-12.
4. Demonstrate an understanding of the developmental stages of art through which children and adolescents pass.
5. Demonstrate a working knowledge of safety precautions and hazards that are unique to studio work.
6. Design and deliver developmentally appropriate experiences in art for children in grades PreK-12.

Students having completed the Applied Design program will demonstrate the ability to do the following:

1. Design, produce, and market high-quality functional ceramic ware for both the wholesale and retail markets.
2. Operate and manage a small business.
3. Work as photo journalists or as commercial photographers.
4. Work at management level positions in the applied design field.
5. Integrate conventional illustrations with high tech digital illustrations.
6. Demonstrate mastery of computer software, such as Adobe Photoshop, Illustrator, InDesign, Lightroom, Dreamweaver, and Flash.
7. Manipulate, retouch, and alter photographic images for commercial applications.

8. Prepare layouts for newsletters, brochures, magazines, and newspapers.
9. Mass-produce ceramic ware using state-of-the-art forming, glazing, and firing techniques.

Students having completed the Music Education Program will:

1. Demonstrate suitable skills and knowledge in music pedagogy, applied music, and related subject areas.
2. 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.
3. Develop evaluation instruments and assess musical performances.
4. Develop and implement classroom management procedures that contribute to a desirable learning environment.
5. Demonstrate skill in oral and written communication in music, as well as in other academic areas.

DEGREES OFFERED

Bachelor of Arts - Art Education

Bachelor of Arts - Applied Design

Bachelor of Arts - Music Education

GENERAL PROGRAM REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Fine Arts is based upon the general admission requirements of the University.

ART EDUCATION TEACHING DEPARTMENTAL REQUIREMENTS

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 Pre-12 teaching certification. Students in this program must complete 126 semester hours of University courses. Included in the 125 semester hours are a minimum of 42 hours of Fine Art Core Courses and 42 hours of Professional Education Courses. A minimum GPA of 2.75 is required for all courses.

CAREER OPPORTUNITIES

A degree in Fine Arts prepares Art and Music teachers for elementary and secondary schools; prepares students for professional non-teaching careers in Commercial Ceramics, Graphic Illustration, Commercial Photography and Sequential Arts; and provides students a foundational development for graduate study.

ART EDUCATION TEACHING Program Requirements

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES **Credits 9**

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 7**

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS **Credits 3**

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

MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**

ARTS 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses:

CRJS 101 Introduction to Criminal Justice

TMGT 306 Ecology and Cultural Tourism

Total Required for General Education **Credits 41**

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

REQUIRED MAJOR COURSES

EDCI 200	EDCI 440A	EDSP 200B	PSYC 305
EDCI 201 ²	EDCI 450A		PSYC 307
EDCI 311			
EDCI 400			
EDCI 406			
EDCI 409			
EDCI 410			
EDCI 430			

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 *UMES Course Catalog* for the specific courses in their majors. **TOTAL NUMBER OF SEMESTER HOURS REQUIRED: 40-43 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. A total of 15 credits is required. Students must also pass a criminal background check at this phase in the program and purchase the Unit's electronic assessment system. Professional education courses in phases two, three, and four may be repeated only once.

EDCI 200	EDCI 201¹	EDSP 200³
PSYC 303⁴	PSYC 305⁵	PSYC 307

¹Does not count toward graduation

²Or approved substitute course

³Special Education majors only

⁴Secondary Majors only

⁵Special Education and Specialty Education majors only

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 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 (or passing scores on other Maryland State approved tests) for program entry, in addition to meeting other requirements.** Students must complete and submit a **Teacher Education Application** which can be obtained online 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. Once admitted to Teacher Education, teacher candidates must maintain a minimum overall grade point average of 2.75 as well as a minimum 2.75 grade point average in their major, with no grade of "D" or lower in the major or in education courses.

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 content area. A total of 18 semester hours is required in specialization courses for Specialty majors. A total of 39 semester hours is required for specialization courses for Special Education Majors. These requirements are listed in the *Teacher Education Handbook*.

COMMON REQUIRED SPECIALIZATION COURSES FOR SPECIALTY¹
(Except Special Education Majors)

EDCI 311 EDCI 406 EDCI 409
EDCI 410 EDCI 4XX EDSP 428

Note: EDCI 306 is also required for Art, English, Music, and Social Studies.

**COMMON REQUIRED SPECIALIZATION COURSES FOR
SPECIAL EDUCATION MAJORS**

A total of 39 semester hours is required for specialization courses for Special Education Majors. These requirements are listed in the *Teacher Education Handbook*.

EDSP 401 EDSP 402 EDSP 403 EDSP 404 EDCI 306
EDSP 414 EDSP 416 EDSP 422 EDSP 426
EDSP 428 EDSP 430 EDSP 431 PSYC 406

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. Students who wish to become teacher education majors will need to successfully complete a criminal background check prior to any field placements in a school setting.

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 submitted 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) Interview with faculty that includes review of candidate's professional dispositions and cultural competencies.

- 8) 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. Each student must also attend a 3-4 day workshop in preparation for the internship.

SPECIALTY EDUCATION

Art/Music (PreK-12)

EDCI 440

EDCI 450

EDCI 400

¹For additional program requirements for the Art Education (Teaching) major, please refer to the Department of Education and the *Teacher Education Handbook*. UMES' Teacher Education Programs are accredited by the National Council for Accreditation of Teacher Education and approved by the Maryland State Department of Education.

²Does not count toward graduation.

**CURRICULUM GUIDE FOR ART EDUCATION
(Grades PreK-12)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
EXSC 111	3	ENGL 001/ENGL 003 ¹	0
ARTS 101	3	ARTS 103	3
ARTS 102	3	ARTS 202	3
ARTS 201	3	MATH 102	3
EDCI 100	<u>1</u>	PSYC 200	3
	16	EDCI 200	3
		EDCI 201 ³	<u>1</u>
			19

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	ENGL 310	3
ARTS 121	3	ARTS 211	3
BIOL 101	3	ARTS 221	3
BIOL 103	1	ARTS 341	3
PSYC 305	3	GEN ED CURR AREA II ⁴	<u>3</u>
ARTS 122	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 206	3	ARTS 205	3
ARTS 342	3	ARTS 210	3
ARTS 212	3	PSYC 307	3
EDCI 306	3	EDCI 406	3
GEN ED CURR. AREA I ⁵	<u>3</u>	EDCI 409	3
	15	GEN ED CURR AREA IV	<u>3</u>
			18

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDSP 428	3	EDCI 400	3
EDCI 430	3	EDCI 440A	6
GEN ED CURR AREA III	3	EDCI 450A	<u>6</u>
EDCI 410	3		15
EDCI 311	<u>3</u>		
	15		

Total Credit Hours: 129

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Student must select from GEN ED CURR AREA II: A.

³Does not count toward graduation

⁴Students must select from GEN ED CURR AREA II: B .

⁵Students must select from GEN ED CURR AREA I: HISTORY

DEPARTMENTAL REQUIREMENTS

APPLIED DESIGN

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, Commercial Ceramics and Sequential Arts. 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. Students in this program must complete 124 semester hours of University courses. Included in these 124 hours are 45 hours of required Foundation Courses and 38 hours of Fine Art Core Courses. A minimum GPA of 2.75 is required for all Foundation Courses and Fine Art Core Courses.

GRAPHIC ILLUSTRATION

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101², ARTS 310, MUSI 100, MUSI 101, MUSI 109

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

²Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²Recommended

Curriculum Area IV – MATHEMATICS **Credits 3**
 MATH 102, if a student needs MATH 101, he/she **must** take before Math 102

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**
 ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H; ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**
 ARTS 100 First Year Experience Course
 In addition, students must take 6 credits from foreign language or approved international liberal arts courses:
 CRJS 101 Introduction to Criminal Justice
 TMGT 306 Ecology and Cultural Tourism

Total Required for General Education **Credits 41**

FOUNDATION KNOWLEDGE **Credits 45**

ARTS	102	Drawing I	3
ARTS	103	Drawing II	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	213	History of American Craft	3
ARTS	304	Drawing III	3
ARTS	341	Painting I	3
ARTS	342	Painting II	3
ECON	201	Principles of Economics	3
BUAD	132	Introduction to Business	3

MAJOR REQUIREMENTS **Credits 38**

ARTS	313	Foundations of Visual Computing	3
ARTS	314	Advanced Visual Computing	3
ARTS	319	Representational Painting	3
ARTS	320	Advanced Representational Painting	3
ARTS	321	Water Based Media	3
ARTS	322	Illustration I	3
ARTS	323	Illustration II	3
ARTS	340	Anatomy for Artists	3
ARTS	411	Digital Photography	3
ARTS	412 ²	Digital Photography II or	
ARTS	330 ²	Sequential Arts I	3
ARTS	420	Illustration III	3
ARTS	451	Senior Seminar	3
ARTS	498J	Internship: Illustration	2

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Students must select either ARTS 412 or ARTS 330.

**CURRICULUM GUIDE FOR APPLIED DESIGN
GRAPHIC ILLUSTRATION**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
EXSC 111	3	ENGL 001/ENGL 003 ¹	0
ARTS 100	1	ARTS 103	3
ARTS 102	3	ARTS 202	3
ARTS 101	3	ARTS 211	3
ARTS 201	<u>3</u>	MATH 102	<u>3</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 212	3	ARTS 122	3
ARTS 213	3	ARTS 341	3
ARTS 304	3	ARTS 205	3
BUAD 132	3	ARTS 206	3
ECON 201	3	GEN ED CURR AREA I	<u>3</u>
ENGL 203	<u>3</u>		15
	18		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	GEN ED CURR AREA II ²	3
BIOL 103	1	GEN ED CURR AREA II ³	3
ARTS 321	3	ARTS 323	3
ARTS 342	3	ARTS 319	3
ARTS 313	3	ARTS 314	<u>3</u>
ARTS 322	<u>3</u>		15
	16		

SUMMER SEMESTER

ARTS 498J	<u>2</u>
	2

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 313	3	ARTS 340	3
ARTS 420	3	ARTS 451	3
ENGL 305 or		GEN ED CURR AREA VI	3
ENGL 310	3	GEN ED CURR AREA III	3
ARTS 320	3	ARTS 412 or	
ARTS 411	<u>3</u>	ARTS 330	<u>3</u>
	15		15

Total Credit Hours: 124

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Students must select from GEN ED CURR AREA II:A.

³Students must select from GEN ED CURR AREA II:B.

COMMERCIAL PHOTOGRAPHY

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 310, MUSI 100, MUSI 101, MUSI 109

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102, if a student needs MATH 101, he/she **must** take before Math 102

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

² Recommended

Curriculum Area VI - EMERGING ISSUES**Credits 7**

ARTS 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses:

CRJS 101 Introduction to Criminal Justice

TMGT 306 Ecology and Cultural Tourism

Total Required for General Education**Credits 41****FOUNDATION KNOWLEDGE****Credits 48**

ARTS	101	Exploration of Visual Arts	3
ARTS	102	Drawing I	3
ARTS	103	Drawing II	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	207	Design of Photography	3
ARTS	211	Art History I	3
ARTS	212	Art History II	3
ARTS	213	History of American Craft	3
ARTS	309	Photography II	3
ARTS	341	Painting I	3
ECON	201	Principles of Macroeconomics	3
BUAD	132	Introduction to Business	3

MAJOR REQUIREMENTS**Credits 35**

ARTS	311	Photography III	3
ARTS	312	Photography IV	3
ARTS	313	Foundations of Visual Computing	3
ARTS	319	Representational Painting	3
ENGL	333	Principles of Photo Journalism	3
ARTS	410	Studio Photography	3
ARTS	411	Digital Photography	3
ARTS	412	Digital Photography II	3
ARTS	499K ¹	Independent Study in Photography	3
ARTS	499K ¹	Independent Study in Photography	3
ARTS	451	Senior Seminar	3
ARTS	498J	Internship: Illustration	2

¹Students must complete two additional times for credit.

CURRICULUM GUIDE FOR APPLIED DESIGN COMMERCIAL PHOTOGRAPHY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
EXSC 111 ⁵	3	ENGL 001/ENGL 003 ¹	0
ARTS 100	1	ARTS 103	3
ARTS 102	3	ARTS 202	3
ARTS 101	3	ARTS 211	3
ARTS 201	<u>3</u>	ARTS 206	3
	16	MATH 102	<u>3</u>
			18

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 213	3	ARTS 122	3
ARTS 212	3	ARTS 205	3
ARTS 207	3	ARTS 309	3
ECON 201	3	ARTS 341	3
BUAD 132	<u>3</u>	GEN ED CURR AREA I ²	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	GEN ED CURR AREA II ³	3
BIOL 103	1	GEN ED CURR AREA II ⁴	3
ARTS 411	3	ARTS 314	3
ARTS 313	3	ARTS 311	3
ENGL 203	3	ARTS 499K ⁶	<u>3</u>
ARTS 499K ⁶	<u>3</u>		15
	16		

SUMMER SEMESTER

ARTS 498K	<u>2</u>
	2

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 410	3	ARTS 412	3
ARTS 312	3	ARTS 451	3
ENGL 305 <u>or</u>		GEN CURR AREA VI	3
ENGL 310	3	TELC 333	<u>3</u>
GEN ED CURR AREA III	3	-	12
ARTS 499K ⁶	<u>3</u>		
	15		

Total Credit Hours: 124

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Students must select from GEN ED CURR AREA I: B, C, or D.

³Students must select from GEN ED CURR AREA II:A.

⁴Students must select from GEN ED CURR AREA II:B.

⁵Course cannot be repeated for credit.

⁶Students must repeat ARTS 499K for credit.

APPLIED DESIGN FOR COMMERCIAL CERAMICS

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 310, MUSI 100, MUSI 101, MUSI 109

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102, if a student needs MATH 101, he/she **must** take before Math 102

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

ARTS 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses:

CRJS 101	Introduction to Criminal Justice
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****FOUNDATION KNOWLEDGE****Credits 48**

ARTS 101	Exploration of the Visual Arts	3
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 213	History of American Craft	3
ARTS 221	Ceramics II	3
ARTS 341	Painting I	3
ECON 201	Principles of Economics	3
BUAD 132	Introduction to Business	3

MAJOR REQUIREMENTS**Credits 35**

ARTS 302	Ceramics III Advanced Wheel Throwing	3
ARTS 303	Ceramics IV Advanced Ceramics	3
ARTS 305	Ceramics V Hand Construct	3
ARTS 306	Ceramics VI Advanced Hand Construction	3
ARTS 400	Ceramics VII Glaze Calculations	3
ARTS 401	Ceramics VIII Functional Ceramics	3
ARTS 402	Ceramics IX Firing and Kiln Design	3
ARTS 451	Senior Seminar	3
ARTS 498M	Internship: Ceramics	2
ARTS 499M	Independent Study Ceramics	3
ARTS 499M	Independent Study Ceramics	3
ARTS 499M	Independent Study Ceramics	3

**CURRICULUM GUIDE FOR APPLIED DESIGN
COMMERCIAL CERAMICS**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
MATH 102	3	ENGL 001/ENGL 003 ¹	0
ARTS 100	1	ARTS 103	3
ARTS 102	3	ARTS 202	3
ARTS 101	3	ECON 201	3
ARTS 201	<u>3</u>	ARTS 211	3
	16	ARTS 121	<u>3</u>
			18

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 213	3	ARTS 341	3
ARTS 212	3	ENGL 203	3
BUAD 132	3	GEN ED CURR AREA II ²	3
ARTS 122	3	ARTS 205	3
ARTS 221	<u>3</u>	GEN ED CURR AREA I	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	GEN ED CURR AREA II ³	3
BIOL 103	1	GEN ED CURR AREA III	3
ARTS 305	3	ARTS 302	3
ARTS 342	3	ARTS 400	3
ARTS 499M ⁴	3	ARTS 499M	<u>3</u>
EXSC 111 ⁵	<u>3</u>		15
	16		

SUMMER SEMESTER

ARTS 498M	<u>2</u>
	2

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 303	3	ARTS 499M	3
ARTS 401	3	ARTS 402	3
ARTS 499M	3	ARTS 451	3
GEN ED CURR AREA IV	3	GEN ED CURR AREA VI	<u>3</u>
ARTS 306	<u>3</u>		12
	15		

Total Credit Hours: 124

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Students must select from GEN ED CURR AREA II:A.

³Students must select from GEN ED CURR AREA II:B.

⁴Students must be repeated course for credit.

⁵Course cannot be repeated for credit.

APPLIED DESIGN SEQUENTIAL ARTS
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

ARTS 101², ARTS 310, MUSI 100, MUSI 101, MUSI 109

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102, if a student needs MATH 101, he/she **must** take before Math 102

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Recommended

Curriculum Area VI - EMERGING ISSUES**Credits 7**

ARTS 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses:

CRJS 101 Introduction to Criminal Justice

TMGT 306 Ecology and Cultural Tourism

Total Required for General Education**Credits 41****FOUNDATION KNOWLEDGE****Credits 48**

ARTS 102	Drawing I	3
ARTS 103	Drawing II	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 213	History of American Craft	3
ARTS 304	Drawing III	3
ARTS 333	History of Sequential Arts	3
ARTS 341	Painting I	3
ARTS 342	Painting II	3
ECON 201	Principles of Economics	3
BUAD 132	Introduction to Business	3

MAJOR REQUIREMENTS**Credits 35**

ARTS 313	Foundations of Visual Computing	3
ARTS 314	Advanced Visual Computing	3
ARTS 319	Representational Painting	3
ARTS 321	Water Based Media	3
ARTS 330	Sequential Arts I	3
ARTS 331	Sequential Arts II	3
ARTS 332	Sequential Arts III	3
ARTS 334	Elements of Cartooning	3
ARTS 340	Anatomy for Artists	3
ARTS 411	Digital Photography	3
ARTS 451	Senior Seminar	3
ARTS 498J	Internship: Illustration	2

 Internship must be in the area of Sequential Arts.

**CURRICULUM GUIDE FOR
APPLIED DESIGN SEQUENTIAL ARTS**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
EXSC 111	3	ENGL 001/ENGL 003 ¹	0
ARTS 100	1	ARTS 103	3
ARTS 102	3	ARTS 202	3
ARTS 101	3	MATH 102	3
ARTS 201	<u>3</u>	ARTS 211	<u>3</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 206	3	ARTS 341	3
ARTS 212	3	ARTS 340	3
BUAD 132	3	ARTS 122	3
ECON 201	3	ARTS 205	3
ARTS 304	<u>3</u>	GEN ED CURR AREA I ²	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 101	3	GEN CURR AREA II ³	3
BIOL 103	1	ARTS 331	3
ARTS 333	3	ARTS 314	3
ARTS 330	3	ARTS 319	3
ARTS 313	3	ENGL 203	<u>3</u>
ARTS 342	<u>3</u>		15
	16		

SUMMER SEMESTER

ARTS 498Q ⁴	<u>2</u>
	2

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ARTS 321	3	ARTS 344	3
ARTS 332	3	ARTS 451	3
ENGL 305 <u>or</u>		GEN ED CURR AREA III	3
ENGL 310	3	GEN ED CURR AREA VI	3
GEN ED CURR AREA II ⁵	3	ARTS 411	<u>3</u>
ARTS 499Q	<u>3</u>		15
	15		

Total Credit Hours: 124

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Student must select GEN ED CURR AREA I: B, or D.

³Student must select GEN ED CURR AREA II: A

⁴Internship must be in the area of Sequential Arts.

⁵Student must select GEN ED CURR AREA II:B

⁶Course cannot be repeated for credit.

MUSIC EDUCATION PROGRAM

The Music Education 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. 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.

DEPARTMENTAL 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 or band instrument must fulfill the six-semester requirement in an instrument al large ensemble such as Concert Band or Jazz Band. Students who elect piano or voice for their major applied concentration must fulfill the six semester requirement in Concert Choir though piano majors may fulfill the requirement in an instrumental ensemble.). Music Education majors are expected to perform in recitals twice each semester. Students in this program must complete 132 semester hours of University courses. Included in these 132 hours are 43 hours of required Music Core Courses and 48 hours of Professional Education Courses. A minimum GPA of 2.75 is required of all courses, and a grade of C or better is required for all music core courses.

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

One course from either

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: FOREIGN LANGUAGE

Languages: French, Spanish, American Sign Language

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES **Credits 6**

Students must select PSYC 200 and one course in Discipline A.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES **Credits 7**

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

Curriculum Area IV – MATHEMATICS **Credits 3**

MATH 102, if a student needs MATH 101, he/she **must** take before Math 102

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 7**

EDCI 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses:

EXSC 111 Personal Health and Fitness

CRJS 101 Introduction to Criminal Justice

TMGT 306 Ecology and Cultural Tourism

Total Required for General Education **Credits 41**

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

FOUNDATION KNOWLEDGE **Credits 43**

MUSI	102	Music Theory and Application I	4
MUSI	103	Music Theory and Application II	4
MUSI	104	Woodwind Class	1
MUSI	105	Percussion Class	1
MUSI	106	String Class	1
MUSI	107	Brass Class	1
MUSI	108	Voice Class	1
MUSI	111	Major Applied with Selected Topics	1
MUSI	112	Major Applied with Selected Topics	1
MUSI	113 ¹	or Concert Band (6 semesters @ 1 credit ea.)	6 or
MUSI	114 ¹	or Jazz Band (6 semesters @ 1 credit ea.)	6 or
MUSI	116 ¹	Concert Choir (6 semesters @ 1 credit ea.)	6
MUSI	201	Harmony	3
MUSI	203	Form and Analysis	2
MUSI	205	Piano Class I	1

¹ Students must select either MUSI 113, MUSI 114, or MUSI 116

MUSI	206	Piano Class II	1
MUSI	211	Major Applied with Selected Topics	1
MUSI	212	Major Applied with Selected Topics	1
MUSI	306	Instrumentation and Arranging	3
MUSI	308	Conducting	2
MUSI	309	Piano Class III	1
MUSI	310	Piano Class IV	1
MUSI	311	Major Applied with Selected Topics	1
MUSI	312	Major Applied with Selected Topics	1
MUSI	313	Music History and Literature I	2
MUSI	314	Music History and Literature II	2

PROFESSIONAL CORE COURSES

Credits 48

EDCI	200	Introduction to Contemporary Education	3
EDCI	201 ²	PRAXIS Preparation	(1)
EDCI	306	Integrating Technology into the Curriculum	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	421C	Curriculum and Instruction in Music: Elementary Middle	3
EDCI	423C ³	or Curr. and Instruction: Choral/General Secondary	3 or
EDCI	423D ³	Curr. and Instruction: Instrumental Secondary	3
EDCI	440C	Teaching Internship: Elementary	6
EDCI	450C ⁴	or Teaching Internship: Choral - Secondary	6 or
EDCI	450D ⁴	Teaching Internship: Instrumental - Secondary	6
EDSP	428	Communication and Collaboration in Special Ed	3
PSYC	305	Developmental Psychology	3
PSYC	307	Educational Psychology	3

² Course does not count toward graduation.

³ Students must select either EDCI 423C or EDCI 423D

⁴ Students must select either EDCI 450C or EDCI 450D

**CURRICULUM GUIDE FOR MUSIC EDUCATION
INSTRUMENTAL or CHORAL GENERAL
Grades PreK-12**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	PSYC 200	3
EXCS 111 ²	3	ENGL 102	3
EDCI 100	1	ENGL 001/ENGL 003 ¹	0
BIOL 101	3	MATH 102	3
MUSI 102	4	BIOL 103	1
MUSI 111	1	MUSI 103	4
MUSI 113, 114, or 116	1	MUSI 112	1
MUSI 205	<u>1</u>	MUSI 113, 114, or 116	1
	17	MUSI 206	<u>1</u>
			17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN ED CURR AREA VI	3	GEN ED CURR AREA III	3
ENGL 203	3	PSYC 305	3
EDCI 200	3	MUSI 101 or 109	3
EDCI 201 ³	1	MUSI 107	1
MUSI 105	1	MUSI 108	1
MUSI 201	3	MUSI 203	2
MUSI 309	1	MUSI 310	1
MUSI 211	1	MUSI 212	1
MUSI 113, 114 or 116	<u>1</u>	MUSI 113, 114, or 116	<u>1</u>
	17		16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or		GEN ED CURR AREA II	3
ENGL 310	3	EDCI 409	3
PSYC 307	3	EDCI 406	3
EDCI 306	3	EDCI 421C	3
MUSI 104	1	MUSI 106	1
MUSI 306	3	MUSI 314	2
MUSI 313	2	MUSI 312	1
MUSI 311	1	MUSI 113, 114 or 116	<u>1</u>
MUSI 113, 114 or 116	<u>1</u>		17
	17		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN ED CURR AREA I	3	EDCI 400	3
EDCI 410	3	EDCI 440C	6
EDCI 423D	3	EDCI 450D	<u>6</u>
EDCI 311	3		15
EDSP 428	3		
MUSI 308	<u>2</u>		
	17		

Total Credit Hours: 132 _____

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Course cannot be repeated for credit.

³Course does not count toward graduation.

COURSE DESCRIPTIONS IN ART

ARTS 100 First Year Experience

Credit 1

This course is to provide 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 will assist students in developing cognitive skills and will assist them in adjusting personally and socially to the college environment. This course will enable first-year students to develop creative and critical thinking skills, and information literacy skills needed to facilitate a successful transition from high school to university. Additionally, this course shall facilitate self-awareness and interpersonal skills. In addition, to providing information needed for student success at the University, this course serves as a conduit for students entering into the field of Applied Design. Students will be provided with prerequisite needed to make a successful transition into the Fine Arts Major. The course will develop interpersonal and conflict resolution skills providing academic, personal, social, and emotional adjustment. Prerequisites: Applied Design Majors Only.

ARTS 101/Online Exploration of the Visual Arts

Credit 3

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

Credit 3

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

Credit 3

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 104 Introduction to Visual Culture

Credit 3

Today as part of the 21st century visual images pervade our culture more than any other period in history. Increasingly people build their ideas and attitudes about culture not from first-hand experience but from images either as still photographs, video, film and electronic media. This course would look at the range of technology employed to create the new images and the cultural significance of life in a world of images. In this course students will become familiar with the key methods of visual criticism and larger social debate about the politics of information through images. Through lecture, selected reading discussion, viewings and screening the various types of visual cultural style will be examined. OPEN TO ALL STUDENTS. Lecture three hours.

ARTS 105 Fundamentals of Drawing

Credit 3

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 121 Ceramics I**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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. Prerequisite: ARTS 201 Design I.

ARTS 205 Printmaking I**Credit 3**

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**Credit 3**

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 207 Design of Photography**Credit 3**

A course designed to acquaint students with the fundamentals of design special to the photographic process. This course places emphasis on the essential problems in translation of 2 dimensional design into the design of a photographic composition. Students will investigate problems utilizing the basic art elements through photographic imaging. Introduction to digital photographic process will be included. Prerequisite: ARTS 201, ARTS 206. Laboratory four hours.

ARTS 210 Sculpture II**Credit 3**

An advanced course designed to assist the student in the manipulation and analysis of three dimensional media. The course is designed to promote greater professional performance in the sculptural media. Studies are done in plaster, plastics, wood, clay and composite materials. Prerequisite: ARTS 122. Laboratory four hours.

ARTS 211 Art History I**Credit 3**

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. Lecture three hours. Prerequisite: ARTS 101.

ARTS 212 Art History II**Credit 3**

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. Lecture three hours. Prerequisite: ARTS 211.

ARTS 213 History of American Crafts**Credit 3**

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**Credit 3**

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 302 Ceramics III Advanced Wheel Throwing**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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.

ARTS 310 African American Art History**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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 collaring digital images. Laboratory four hours. Prerequisites: ARTS 102 and ARTS 201. OPEN TO ART MAJORS ONLY.

ARTS 314 Advanced Visual Computing**Credit 3**

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**Credit 3**

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 Master's in relation to these concerns. Laboratory four hours. Prerequisite: ARTS 342.

ARTS 320 Advanced Representational Painting**Credit 3**

This is a continuation of ARTS 319. Prerequisites: ARTS 319 and consent of the instructor.

ARTS 321 Water Based Media**Credit 3**

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**Credit 3**

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**Credit 3**

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 330 Sequential Arts I**Credit 3**

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 331 Sequential Arts II**Credit 3**

This course will further examine the medium of sequential art. Advanced concepts of storytelling and pacing will be broached, and continuing study of computer applications and usage will be examined. Submission policies and standards will also be emphasized. Laboratory four hours. Prerequisite: ARTS 330.

ARTS 332 Sequential Arts III**Credit 3**

This course is intended as an advanced study of the sequential arts medium. As such it will investigate the current trends of the art form and its international appreciation. Alternative materials and processes of visual expression will be introduced. Experimentation with progressive styles and presentation methods will be investigated. Laboratory four hours. Prerequisite: ARTS 331.

ARTS 333 History of Sequential Arts**Credit 3**

This course will examine the history of sequential art. The origins of pictorial narratives will be examined from earliest stages of art history. Cave paintings, Egyptian Hieroglyphics, and illuminated manuscripts will serve as the foundation for a more focused study of cartoons and comics from the twentieth century. Lecture three hours.

ARTS 334 Elements of Cartooning**Credit 3**

This course covers the theory and practice of single panel and newspaper comic art. Students will learn the history and practices of the fields leading artists. Students will then begin to create their own comics by incorporating lessons in storytelling and visual impact. Students will develop and execute unique cartoons in both single panel and newspaper strip formats. Upon completion of the course, they will have developed a professional portfolio of cartoons. Laboratory four hours. Prerequisite: ARTS 103.

ARTS 340 Anatomy for Artists**Credit 3**

This course examines the anatomy of the human form as it applies to artists. Muscle groups and skeletal structures will be studied through handouts, observation and drawing/photography. Skeletal models, photos and live models will be analyzed and drawn from. Nudity is an essential component to this course. Anyone who is sensitive to the objective depiction and observation of the natural human form should reconsider their placement in this class. Laboratory four hours. Prerequisite: ARTS 103.

ARTS 341 Painting I**Credit 3**

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**Credit 3**

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 Calculations**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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 I**Credit 3**

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 206.

ARTS 412 Digital Photography II**Credit 3**

This course is a continuation of Digital Photography I. The course gives special emphasis to the challenged digital photographers face when working with models both in the studio and on location. In addition, the course will cover advanced Photoshop techniques. Laboratory four hours. Prerequisite: ARTS 411.

ARTS 420 Illustration III**Credit 3**

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 451 Senior Seminar in Arts: Senior Exhibition**Credit 3**

This is a culminating course in Applied Design. It is a course based on extensive research and professional practice in the areas of Graphic Illustration, Commercial Photography, Commercial Ceramics or Sequential Arts based on the student's area of concentration. This course serves as an exit assessment of a student's knowledge and application of contemporary art theories and exhibition practice. Research paper, Exhibition with Oral Defense required. Prerequisites: Senior standing and completion of ARTS 498.

ARTS 498J Internship: Illustration**Credit 2**

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**Credit 2**

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**Credit 2**

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 498Q Internship: Sequential Arts**Credit 2**

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**Credit 3**

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**Credit 3**

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

Credit 3

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

Credit 3

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

Credit 3

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

Credit 3

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

Credit 3

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 Applied Design: Illustration

Credit 3

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 Applied Design: Photography

Credit 3

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 Applied Design: Ceramics

Credit 3

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 in Applied Design: Sequential Art

Credit 3

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 330.

MUSIC

MUSI 100 Rudiments of Music

Credit 3

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 may be 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

Credit 3

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 101 Honors Introduction to Music-Honors

Credit 3

An introductory course in which the acquisition of designated skills and knowledge serves as a means of musical enjoyment. Basic music repertoire is included. Round-table discussions and background research enhance the course for honors students. Three hours lecture per week. OPEN TO HONORS STUDENTS ONLY. Consent required.

MUSI 102 Music Theory and Application I

Credit 4

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 sequentially. Three hours lecture and two hours laboratory per week. Prerequisite: MUSI 189 with a minimum grade of C, or consent of the instructor.

MUSI 103 Music Theory and Application II

Credit 4

This course is a continuation of the 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 with minimum grade of C, or consent of the instructor.

MUSI 104 Woodwind Class

Credit 1

This course focuses on the essential competencies required for certification in the teaching of instrumental music. Fundamentals of breath control, characteristic tone, attack, and the development of a good embouchure are applied. The student will gain competent playing ability on flute, saxophone & clarinet as well as a working knowledge of bassoon and oboe. 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. Consent required.

MUSI 105 Percussion Class

Credit 1

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 gains 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. Consent required.

MUSI 106 String Class**Credit 1**

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 gains 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. Consent required.

MUSI 107 Brass Class**Credit 1**

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 gains 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. Consent required.

MUSI 108 Voice Class**Credit 1**

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. Pedagogical principles are developed. A proficiency examination is given at the end of the course. Two laboratory hours per week. Consent required.

MUSI 109 Introduction to Jazz History**Credit 3**

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. OPEN TO ALL STUDENTS. Lecture, three hours.

MUSI 110A Preparatory Piano Class**Credit 1**

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 or MUSI 111, 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 continuation to MUSI 110B. OPEN TO MUSIC MAJORS ONLY.

MUSI 110B Preparatory Piano Class**Credit 1**

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 111 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 or MUSI 111. OPEN TO MUSIC MAJORS ONLY.

MUSI 111 Major Applied with Selected Topics**Credit 1-2**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: Consent of the instructor.

MUSI 112 Major Applied with Selected Topics**Credit 1-2**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 111 or consent of the instructor.

MUSI 113 Concert Band**Credit 1**

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. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisite: Audition or consent of instructor.

MUSI 114 Jazz Band**Credit 1**

In this course, the rehearsal, study, and performance of standard and non-standard jazz band literature will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisite: Audition or consent of instructor.

MUSI 116 Concert Choir**Credit 1**

In this course, the rehearsal, study, and performance of standard and non-standard choral literature will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisite: Audition or consent of instructor.

MUSI 117 Gospel Choir**Credit 1**

In this course, the rehearsal, study, and performance of standard and non-standard gospel music literature will be explored. OPEN TO ALL STUDENTS WHO QUALIFY. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisite: Audition or consent of instructor. Does not fulfill Music Education ensemble requirements.

MUSI 121 First Year Experience**Credit 1**

This course is designed to promote the development of skills for student success, such as reading, writing and speaking. The course will familiarize students with the resources available to them at UMES and help students in making the transition to university life. FOR JAZZ/POPULAR STUDIES MAJORS ONLY. Music Education majors should register for First Year Experience through the Education department.

MUSI 188A Intro to Music Theory**Credit 2**

This is an intense, detailed study of fundamental music theory skills designed for students with limited or no previous training, as a preparation for MUSI 102. Emphasis in this course is on rhythmic and notation skills, both aural and written. These credits do not count toward the Music Education degree. Required of Music Education majors who do not qualify for MUSI 102. A proficiency examination is administered. Two hours lecture-laboratory per week. A grade of C or better must be earned before continuation to MUSI 189. OPEN TO MUSIC MAJORS AND MINORS ONLY.

MUSI 189 Exp. Core: Music Theory Prep II**Credit 3**

This is a continuation of MUSI 188A designed for students with limited or no previous training, as a preparation for MUSI 102. Emphasis in this course is on scales, key signatures, intervals, and basic harmonic functions. These credits do not count toward the Music Education degree. Required of Music Education majors who do not qualify for MUSI 102. A proficiency examination is administered. Three hours lecture-laboratory per week. Prerequisite: MUSI 188A with a minimum grade of C, or consent of instructor. OPEN TO MUSIC MAJORS AND MINORS ONLY.

MUSI 201 Harmony**Credit 3**

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 consent of Instructor.

MUSI 203 Form and Analysis**Credit 2**

This course is a study of motive, phrase, sentence structure, song forms, sonata, rondo, and other primary musical forms. Harmonic and structural analysis of selected 17th, 18th, 19th, and 20th century compositions are explored. Aural and written experiences are undertaken. Three one-hour lectures per week. Prerequisite: MUSI 201 with a minimum grade of C or consent of instructor.

MUSI 205 Piano Class I**Credit 1**

This course is a study of piano techniques useful for school and community playing. Scales, arpeggios, chordal 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 with a minimum grade of C, or an audition. OPEN TO MUSIC MAJORS ONLY.

MUSI 206 Piano Class II**Credit 1**

This course is a continuation of MUSI 205, and includes 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 205 with a minimum grade of C, or an audition. OPEN TO MUSIC MAJORS ONLY.

MUSI 211 Major Applied with Selected Topics**Credit 1-2**

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 majors with a faculty jury at the end of the semester. Repeatable with credit for a different topic. Prerequisite: MUSI 112 or consent of the instructor.

MUSI 212 Major Applied with Selected Topics**Credit 1-2**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 211 or consent of the instructor.

MUSI 218

Chamber Music Ensemble: Jazz Combo

Credit 1

MUSI 218 Jazz Combo is a small jazz ensemble consisting of one to four horns and a rhythm section consisting of piano, bass and drums. Other instruments including guitar and marimba may be included. Students will be engaged in intense study of musical style and performance techniques pertaining to a small jazz ensemble and will be provided with practical experience in developing the personal playing skills that are necessary for small jazz ensemble performance. Students will develop independent critical listening skills and sensitivity to small jazz ensemble balance and blend. Students will also be introduced to professional small jazz ensemble literature from various periods throughout history and performance practices appropriate to those periods. This course will be performance based and students will be required to demonstrate skills acquired through public concerts. Classes meet twice per week. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisites: Acceptance is based on audition and consent of instructor. A minimum of one semester of Music Theory (MUSI 102) and one year of applied lessons is required unless instructor grants approval. Instrumentation will vary depending on section.

Chamber Music Ensemble: Saxophone Quartet

Credit 1

MUSI 218 Chamber Music Ensemble: Saxophone Quartet is a Small Chamber Ensemble consisting of four saxophones. Students will be engaged in intense study of musical style and performance techniques pertaining to saxophone quartet, and the ensemble will provide practical experience in developing the personal playing skills that are necessary for saxophone quartet in a chamber group setting. Students will develop independent critical listening skills and sensitivity to ensemble balance and blend. Students will also be introduced to professional saxophone quartet literature from various periods throughout history and performance practices appropriate to those periods. This course will be performance based and students will be required to demonstrate skills acquired through public concerts. Classes meet twice per week. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisites: Acceptance is based on audition and consent of instructor. A minimum of one semester of Music Theory (MUSI 102) and one year of applied lessons is required unless instructor grants approval. Instrumentation will vary depending on section.

Chamber Music Ensemble: Woodwind Quintet

Credit 1

MUSI 218 Chamber Music Ensemble: Woodwind Quintet is a Small Chamber Ensemble consisting of woodwind instruments. Students will be engaged in intense study of musical style and performance techniques pertaining to a small woodwind ensemble, and will be provided with practical experience in developing the personal playing skills that are necessary for woodwind ensemble performance in a chamber group setting. Students will develop independent critical listening skills and sensitivity to ensemble balance and blend. Students will also be introduced to professional woodwind ensemble literature from various periods throughout history and performance practices appropriate to those periods. This course will be performance based and students will be required to demonstrate skills acquired through public concerts. Classes meet twice per week. Course is repeatable for credit a maximum of ten times at 1 credit each for a total of 10 credits. Prerequisites: Acceptance is based on audition and consent of instructor. A minimum of one semester of Music Theory (MUSI 102) and one year of applied lessons is required unless instructor grants approval. Instrumentation will vary depending on section.

MUSI 220 A-O Introduction to Jazz Improvisation**Credit 1**

This course will cover basic improvisation skills necessary to formulate a good improvised solo from identification and application of chord scales to rhythmic variation, phrasing and voice-leading. Due to its strong roots in music theory, this course will enhance any musician's theoretical knowledge as scales, chords and voice-leading need to be accessible at a subconscious level. This course will also analyze the history and development of improvisation through the study of various jazz artists throughout time. The training of the ear and its connection to the musician's instrument is also central to the course. Through transcription of jazz solos and application of an improvisational vocabulary, students will learn to play what they hear and hear what they play. Finally, the pedagogical principles to learning jazz improvisation and how to pass on the tradition to students and effectively run a comprehensive jazz program in a K-12 setting. Prerequisite: A minimum of one semester of Music Theory (MUSI 102) and one year of applied lessons is required unless instructor grants approval.

MUSI 231 Improvisation I**Credit 2**

This course covers the basic mechanics of improvising within the jazz idiom. Rudimentary harmonic and melodic material of master jazz improvisers from the swing through post-bop era will be examined. Modal compositions and blues progressions will be studied for chord/scale relationships. Two one-hour lectures per week. Prerequisite: MUSI 103 or permission of instructor.

MUSI 232 Improvisation II**Credit 2**

This course covers intermediate mechanics of improvising within the jazz idiom. More complex harmonic and melodic material of master jazz improvisers from the swing through post-bop era will be examined. Jazz standards as well as more modern compositions will be studied for chord/scale relationships. Two one-hour lectures per week. Prerequisite: MUSI 103 and MUSI 231 or permission of instructor.

MUSI 288/Online History of World Music**Credit 3**

This course is a survey of world music, forms, styles, social and political influences and the variety of musical instruments. This course may not be applied toward the music education core requirement. OPEN TO ALL STUDENTS. Three hours lecture per week.

MUSI 302 Junior Recital**Credit 2**

This course will serve as a culmination of the students' work at this point in their program of study. Students will present a full 60 minute recital of works selected in collaboration with their instructor. This recital will give the student the experience of preparing a recital of their music and presenting it to the public. Prerequisite: Approval of instructor.

MUSI 306 Instrumentation and Arranging**Credit 3**

This course is a study of instrumental and vocal colors, sounds, and technical capabilities of orchestral instruments and voices. Students acquire practical skills in functional arranging of various types of music. Three lecture-laboratory hours per week. Prerequisite: MUSI 203 with a minimum grade of C, or consent of the instructor.

MUSI 307 Jazz and Popular Music Arranging**Credit 2**

This course will provide students with the ability to arrange music for ensembles. Students will study melodic harmonization techniques of jazz and popular arrangers. Students will study voicing, coupling, transposition and other aspects of the arranging process. Two lecture-lab hours per week. Prerequisite: MUSI 201, 306, or consent of instructor.

MUSI 308 Conducting**Credit 2**

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. Three hours lecture-laboratory per week. Prerequisites: MUSI 203 and MUSI 306, and consent of the instructor.

MUSI 309 Piano Class III**Credit 1**

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, chordal progressions, modulation, reduction of four-part open score, and weekly ensemble playing. Two laboratory hours per week. Prerequisites: MUSI 206 with a minimum grade of C, or by audition.

MUSI 310 Piano Class IV**Credit 1**

This course is a continuation MUSI 309, with additional emphasis on accompanying more advanced vocal and instrumental literature, improvisation in classical and popular styles, chordal progressions, modulation, reduction of four-part open score and ensemble playing. Two laboratory hours per week. Prerequisites: MUSI 309 with a minimum grade of C, or by audition.

MUSI 311 Major Applied with Selected Topics**Credits 1-3**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 212 or consent of instructor.

MUSI 312 Major Applied with Selected Topics**Credits 1-3**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 311 or consent of instructor.

MUSI 313 Music History and Literature I**Credit 2**

This is a survey course designed to explore the evolution of music in Western Civilization. Musical 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. Three lecture hours per week. Prerequisites: MUSI 201 and MUSI 203 with a minimum grade of C, or consent of the instructor.

MUSI 314 Music History and Literature II**Credit 2**

This course is a continuation of MUSI 313. This course covers the seventeenth century to the present. Three lecture hours per week. Prerequisite: MUSI 313 with a minimum grade of C, or consent of the instructor.

MUSI 321 American Music**Credit 3**

The broad range of musical influences on Americans since the 16th Century is a strong reflection of our ever-broadening and diverse cultural influences. This course seeks to delineate the specific cultural influences from outside the continent, and to show how those influences evolved into a unique American music. The course will also familiarize students with the origins and evolutions of the “melting-pot” that is America through the examination of its music and the music of the cultures that make up that “melting-pot.” Through extensive listening examples, readings, and lectures, the students will be guided through the panorama of America’s musical landscape. Prerequisites: MUSI 109; MUSI 103; junior standing.

MUSI 402 Senior Recital**Credit 2-3**

This course is preparation of a full or half recital 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 Chairperson of the Department. **Not for Jazz/Popular Music Majors*

MUSI 403 Senior Project**Credit 3**

Senior Project will serve as the capstone course to the BA in Jazz and Popular Music degree. The senior project may consist of the following:

1. Full recital with analysis and extensive program notes. OR
2. Half recital accompanied by a senior thesis related to the recital material. OR
3. Half recital accompanied by supervised internship in the field of music.

Prerequisite: MUSI 302; senior standing; and instructor's consent.

MUSI 405 Special Topics in Music - Variable Topics**Credit 3**

This course is an upper level course focused on specific topics chosen by music faculty. Topics and faculty will rotate each semester. Course may be repeated for credit with different topics. Prerequisites: MUSI 201; MUSI 313; consent of the instructor.

MUSI 407 Advanced Jazz and Popular Arranging**Credit 3**

This course will provide students with the skills to arrange music for large ensembles. Students will study advanced melodic harmonization techniques of jazz and popular arrangers. Students will study voicing, coupling, transposition and other aspects of the arranging process. Can be used to substitute for one semester of MUSI 405 Special Topics. Prerequisites: MUSI 103; MUSI 306; MUSI 307; consent of the instructor.

MUSI 411 Major Applied with Selected Topics**Credits 1-3**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 312 or consent of instructor.

MUSI 412 Major Applied with Selected Topics**Credits 1-3**

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 majors with a faculty jury at the end of the semester. Repeatable for credit with a different topic. Prerequisite: MUSI 411 or consent of the instructor.

DIRECTORY OF FACULTY

Demanche, Michel, Professor

B.F.A., University of Texas; M.F.A., North Texas State University

Harrington, Christopher, Chair & Associate Professor

B.A., Binghamton University; M.A. and Ed.M., Teachers College, Columbia University;
M.F.A., Maryland Institute, College of Art

Hudson, Bradley, Assistant Professor

B.A., University of Maryland, College Park; M.F.A., University of Maryland, College Park

Isekeije, Solomon, Assistant Professor

B.A., Obafemi Awolowo University; M.F.A., Old Dominion and Norfolk State Universities

Knier, Veronica, Instructor

B.F.A., University of Connecticut; M.M., University of Connecticut

Lamkin, John, Instructor

B.S., South Carolina State University; M.M., Morgan State University; Ph.D., University of Maryland, College Park

Schiff, Marcelle, Instructor

B.A., University of Delaware; M.M. Westminster Choir College - Rider University

Perez, Brian, Instructor

B.M., University of Minnesota; M.M., Miami University

DEPARTMENT OF SOCIAL SCIENCES

www.umes.edu/SAPS

Dr. Joyce Bell, Interim Chairperson

MISSION

The Department of Social Sciences provides a learning environment that values critical thinking about social dilemmas. The Department strives to help students to understand the world around them within a broad intellectual and ethical perspective. Students are challenged to apply this expanded world view to their professions. The Department promotes an understanding of cultures, the value of research and service to the community, the importance of social responsibility, and a commitment to social justice.

OBJECTIVES

The objectives of the Department of Social Sciences are to:

1. Encourage students to analyze the operation of their own and other societies.
2. Provide students with the scientific tools and cognitive skills to analyze societies.
3. Establish a forum within which students can learn to examine and evaluate, for themselves, the major social problems confronting their own and other societies.
4. Provide students with educational opportunities that will enable them to achieve their educational and career goals.

DEGREES OFFERED

Bachelor of Arts - African American Studies

Bachelor of Arts - History

Bachelor of Arts - Social Studies Teacher Education: History

Bachelor of Arts - Sociology

Doctor of Philosophy¹ - Organizational Leadership

GENERAL PROGRAM REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Social Sciences is based upon the general admission requirements of the University.

DEPARTMENTAL REQUIREMENTS

African American Studies – The major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 21 hours of courses at the 100/200 level, 26 to 30 hours at the 300/400 level, and 12 to 16 hours at the 400 level. A minimum grade of “C” must be achieved in these courses.

History – The major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 36 hours of courses in history. A minimum grade of “C” must be achieved in these courses. The student must maintain a 2.5 overall GPA and 2.5 in the history courses.

¹Please consult the UMES Graduate Catalog for further information.

Social Studies – The major must complete 129 semester hours of University courses. Included in the 129 semester hours are a minimum of 34 hours of courses in professional development courses, 42 hours in social studies specialization courses, and 12 hours in the Teaching Internship. Students must be admitted into the Teacher Education Program which requires an overall grade point average of 2.75 and a passing score of the PRAXIS I test as set by the State of Maryland.

Sociology - The major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 21 hours of required sociology courses and 15 hours of sociology electives. A minimum grade of “C” must be achieved in these courses. The student must maintain a 2.5 overall GPA and 2.5 in the sociology courses.

Sociology/Social Work-UMES (Sociology) and Salisbury University (Social Work) have established a Dual-Degree program through which students at UMES can earn a Bachelor of Arts in Social Work (B.A.S.W.) from SU and a Bachelor of Science in sociology from UMES. The program can be completed in 120 and is accredited by the Council on Social Work Education through Salisbury University. A minimum of grade of “C” must be achieved in all required Sociology (UMES) and Social Work (SU) courses. The student must maintain a 2.5 overall GPA and a 2.7 social work GPA. Included in the social work GPA is BIOL 101, BIOL 103, SOWK 200, SOWK 300, SOWK 302, MATH 102, PSYC 200, SOCI 101 and SOCI 222.

CAREER OPPORTUNITIES

A degree in the fields of the social sciences prepares students to teach, to conduct social research, to go on to graduate programs and professional schools (such as law, social work, policy, and public administration), and to work in government, public policy, business, the non-profit sector and other areas where a strong background in the social sciences is needed.

AFRICAN AMERICAN STUDIES

The African American Studies program is a four-year, multi-disciplinary, non-teaching degree leading to the Bachelor of Arts (B.A.) in African American Studies. The major provides students with an objective of Africa and the African Diaspora in the United States. The program helps students gain an understanding of relevant historical, economic, social and political problems and possible resolutions.

DEPARTMENTAL REQUIREMENTS

The African American Studies major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 21 hours of courses at the 100/200 level, 26 to 30 hours at the 300/400 level, and 12 to 16 hours at the 400 level. A minimum grade of "C" must be achieved in these courses. ARTS, MUSI, HIST, POLI, ENGL, SOCI and CRJS courses must be related to the field of African American Studies. Majors should check with their advisor to be sure that their selection fulfills the requirement.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

Students must select one course in each of two disciplines:

Discipline A: ARTS

ARTS 101, MUSI 100, MUSI 101, MUSI 109

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

or

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101; HUEC 203, HUEC 220, HUEC 361; PSYC 200; SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must complete 7-8 credit hours from the following courses:

ANPT 114/114H, BIOL 101, BIOL 103, CHEM 101, CHEM 102, CHEM 103, CHEM 104,

ENVS 101, NUDT 210, PLSC 184, PLSC 185, PHYS 121/121H, PHYS 122, PHYS 161,

PHYS 182H, PHYS 263.

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area IV – MATHEMATICS**Credits 3**

MATH 102 or higher: Students MUST pass the proficiency exam or MATH 101 with a grade of “C” before taking MATH 102.

Curriculum Area V - ENGLISH COMPOSITION¹**Credits 9**

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online¹**Curriculum Area VI - EMERGING ISSUES****Credits 7**

Students must complete SOSC 100 and 6 credits of 100/200 level General Education courses from among the following disciplines: EDHE, BUED, ENGL, SOWK, HIST, SOCI, POLI, EDCI, EDSP, and PSYC.

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality

Total Required for General Education**Credits 41****AFRICAN AMERICAN STUDIES MAJOR CORE REQUIREMENTS****Credits 79****PROGRAM CORE REQUIREMENT****Credits 63**

ART	310	African American Art History	3
CRJS	492D	Special Topics: Unequal Justice	3
ECON	304	The Economics of Black America	3
ENGL	327	African American Literature	3
ENGL	332	The African Writer	3
HIST	200A	Introduction to Modern African History	3
HIST	333	African American History I	3
HIST	334	African American History II	3
HIST	360	Ancient African History	3
HIST	361	African History after 1800	3
HIST	414	Cross-Cultural Internship in Africa	4-12
HIST	418	Cross-Cultural Internship in Africa Seminar	3
MUSI	109	Introduction to Jazz	3
POLI	342	Urban Politics	3
SOCI	221	Research Methods in the Behavioral Sciences	3
SOCI	303	Social Inequalities	3
SOCI	331	American Minority Groups	3

SOCI	430	The African American Family	3
SOCI	450	Contribution of Afro-Americans	3

FREE ELECTIVES

Credits 16

Students must complete at least 16 credit hours of Free Electives as defined by the Academic Department. Priority should be given to fulfilling required course pre-requisites.

CURRICULUM GUIDE FOR AFRICAN AMERICAN STUDIES¹

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN ED CURR AREA I	3	MATH 102 or Higher	3
GEN ED CURR AREA II	3	HIST 200A	3
ENGL 101	3	GEN ED CURR AREA III ³	4
EXSC 111 ²	3	GEN ED CURR AREA I	3
SOSC 100	1	ENGL 102/H/Online	3
HIST 101	<u>3</u>	ENGL 001/ENGL 003 ⁴	<u>0</u>
	16		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN ED AREA IV	3	CRJS 101	3
GEN ED CURR AREA III	3	ARTS 101	3
SOCI 101	3	HIST 100 or 200 level	3
PSYC 200	3	POLI 100 or 200 level	3
ENGL 203	<u>3</u>	SOCI 200 or 300 level	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or 310	3	HIST 300 or 400 Level	3
ARTS 310	3	ENGL 300 or 400 Level	3
SOCI 331	3	HIST 400 level	3
HIST 100 or 300 Level	3	POLI 342	3
SOCI 221	<u>3</u>	Free Elective	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CRJS 300 or 400 Level	3	ART or MUSI	
EDCI 300 or 400 Level	3	300 or 400 level	3
HIST 400 level	3	HIST 400 level	3
SOCI 303	3	HIST 400 level	3
Free Elective	<u>3</u>	Free Elective	3
	15	Free Elective	<u>1</u>
			13

Total Credit Hours: 120

¹ARTS, MUSI, HIST, POLI, ENGL, SOCI, and CRJS courses must be related to the field of African and African American Studies. Majors should check with their advisor to be sure that a course fulfills requirement.

²Course cannot be repeated for credit.

³Students must select a lecture and laboratory course to total four (4) credits.

⁴The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

HISTORY

The History major offers students a detailed study of world civilizations with an emphasis on issues impacting our contemporary world. Students will develop critical skills needed to assess both primary and secondary sources to better understand the past.

DEPARTMENTAL REQUIREMENTS

The major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 36 hours of courses in history. In addition, 18 semester hours of the history major must be in 300 or 400 level history courses. A minimum grade of “C” must be achieved in these courses. The student must maintain a 2.5 overall GPA and 2.75 in the History courses. Majors will also master research skills necessary to develop an historical argument or thesis. Students must complete 12 credit hours in a foreign language. Effective written communication is a significant emphasis.

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

Students must select one course in each of two disciplines:

Discipline A: ARTS

ARTS 101, MUSI 100, MUSI 101, MUSI 109

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

or

Discipline B: HISTORY

ART 211

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101; HUEC 203, HUEC 220, HUEC 361; PSYC 200; SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must complete 7-8 credit hours from the following courses:

ANPT 114/114H, BIOL 101, BIOL 103, CHEM 101, CHEM 102, CHEM 103, CHEM 104, ENV5 101, NUDT 210, PLSC 184, PLSC 185, PHYS 121/121H, PHYS 122, PHYS 161, PHYS 182H, PHYS 263.

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 102 or higher: Students MUST pass the proficiency exam or MATH 101 with a grade of “C” before taking MATH 102.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area V - ENGLISH COMPOSITION¹**Credits 9**

ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online¹

Curriculum Area VI - EMERGING ISSUES**Credits 7**

Students must complete SOSC 100 and 6 credits of 100/200 level General Education courses from among the following disciplines: EDHE, BUED, ENGL, SOWK, HIST, SOCI, POLI, EDCI, EDSP, and PSYC.

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality

Total Required for General Education**Credits 41****History Major Core Requirements****Credits 79****Program Core I****Credits 18**

HIST 101	History of World Civilization I	3
HIST 102	History of World Civilization II	3
HIST 201	History of American Civilization I	3
HIST 202	History of American Civilization II	3
HIST 221	Historical Research	3
HIST 497	Senior Thesis	3

Program Core II**Credits 18**

History BA: Program Core II: Students must complete 18 additional credits of 300/400 level History courses earning at least a "C" in each course. The following list of course provides options for students but is in no way a comprehensive list. Please see advisor in selecting courses.

HIST 333	African American History I	3
HIST 334	African American History II	3
HIST 350	Contemporary World Issues	3
HIST 351	Latin America	3
HIST 360	Ancient African History	3
HIST 361	African History after 1800	3

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

HIST	405	The Presidents of the United States - Seminar	3
HIST	414	Cross-Cultural Internship in Africa	9
HIST	418	Cross-Cultural Internship in Africa Seminar	3
HIST	440	East Asia from 1600 to the Present	3
HIST	450	Southeast Asia from 1600 to the Present	3
HIST	460	Russia: From 1600 to the Present	3
HIST	498	Independent study of History	3
HIST	499	Independent study of History	3

History Major Support

Credits 30

Support I

Credits 9

ART	212	Art History II	3
ENGL	218	Approaches to Grammar	3
ENGL	346	History of the English Language	3

Support II

Credits 3

ECON	200	Principles of Economics (Micro)	3
ECON	201	Principles of Economics (Macro)	3

Support III

Credits 12

Students must complete 12 Credit hours in one foreign language

Support IV

Credit 6

Students must complete 6 credit hours of 300/400 level courses in: ARTS, MUSI, THAR, or ENGL.

History Free Electives

Credit 13

Students must complete at least 13 credit hours of Free Electives as defined by the Academic Department

CURRICULUM GUIDE FOR HISTORY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOSC 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
HIST 101	3	ARTS 211	3
ARTS 101	3	MATH 102 or Higher	3
SOCI 101	3	BUED 212	3
GEN ED AREA III	<u>3</u>	HIST 102	<u>3</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	FREN or SPAN	3
FREN or SPAN	3	ENGL 218	3
HIST 201	3	HIST 202	3
GEN ED AREA III	3	GEN ED AREA II	3
GEN ED AREA III lab	1	GEN ED AREA IV	<u>3</u>
ECON 201	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or 310	3	HIST 350	3
HIST 221	3	MUSI 300 or 400 Level or	
FREN or SPAN	3	THAR 300 or 400 Level	3
ART 212	3	HIST 300 or 400 Level	3
ENGL 346	<u>3</u>	FREN or SPAN	3
	15	Free Elective	<u>3</u>
			15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HIST 300 or 400 Level	3	HIST 300 or 400 Level	3
HIST 300 or 400 Level	3	HIST 300 or 400 Level	3
ARTS, MUSI, THAR		HIST 497	3
300 or 400 level	3	FREE Elective	3
Free Elective	3	FREE Elective	<u>1</u>
Free Elective	<u>3</u>		13
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

SOCIAL STUDIES TEACHER EDUCATION

The Social Studies Education major must complete 128 semester hours of University courses. Included in the 128 semester hours are 41 hours in general education coursework, 33 hours in courses for the major, 9 hours in social studies support courses, and 45 hours in professional development, including 12 hours in the Teaching Internship. Students must be admitted to into the Teacher Education Program which requires an overall grade point average of 2.75 and a passing score on the PRAXIS I test as set by the State of Maryland.

SOCIAL STUDIES TEACHER EDUCATION

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I ARTS AND HUMANITIES

9 Credits

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

6 Credits

Students must select one course in each of Disciplines A and B.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 201

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 300 or 400 level

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

7 Credits

Students must select **two** science courses and **one** science laboratory course from the following.

BIOL 101, BIOL 103 (lab)

ENVS 101

Curriculum Area IV – MATHEMATICS

3 Credits

MATH 102 or MATH 109

Curriculum Area V - ENGLISH COMPOSITION¹

9 Credits

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305 or ENGL 310

Curriculum Area VI - EMERGING ISSUES

7 Credits

SOSC 100 First Year Experience Course

EXSC 111 Personalized Health Fitness

BUED 212

Total Required for General Education

41 Credits

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

MAJOR REQUIREMENTS			33 Credits
HIST	202	American Civilization II	3
HIST	300/400	Level Course	3
HIST	300/400	Level Course	3
HIST	300/400	Level Course	3
HIST	300/400	Level Course	3
GEOG	201	World Geography I	3
GEOG	202	World Geography II	3
POLI	200	Intro to American Government	3
POLI	300/400	Level Course	3
SOCI	101	Intro to Sociology	3
SOCI	201	Social Problems	3
SOCI	221	Research Methods	3
SOCI	222	Statistical Methods	3

SOCIAL STUDIES SUPPORT COURSES **9 Credits**
 Students must complete the following three Social Science courses with a “C” average or better.

ECON	201	Principals of Economics	3
SOCI	221	Research Methods in Behavioral Sci	3
SOCI	222	Statistical Methods in Behavioral Sci	3

PROFESSIONAL COURSES			45 Credits
EDCI	200	Intro to Contemporary Education	3
EDCI	201	Praxis Preparation (credit does not count toward graduation)	1
EDCI	306	Integrating Technology into Curriculum	3
EDCI	311	Comprehensive Assessment in Education	3
EDCI	400	Senior Seminar	3
EDCI	406	Classroom Management	3
EDCI	409	Reading in the Content Area I	3
EDCI	410	Reading in the Content Area II	3
EDCI	425e	Curriculum & Instructional Methods in Soc. Studies	3
EDSP	428	Communication and Collaboration in Special Ed.	3
EDCI	480	Teaching Internship: Middle School	6
EDCI	490	Teaching Internship: High School	6
PSYC	305	Human Growth and Development	3
PSYC	307	Educational Psychology	3

**CURRICULUM GUIDE FOR SOCIAL STUDIES
TEACHER EDUCATION**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 101	3
ENVS 101	3	BIOL 103	1
SOCI 101	3	ENGL 102	3
SOSC 100	1	ENGL 001/ENGL 003 ¹	0
HIST 101	3	HIST 102	3
MATH 102 or Higher	<u>3</u>	PSYC 200	3
	16	SOCI 201	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ECON 201	3	ECON 200	3
EDCI 200	3	EDCI 306 ⁴ or	
EDCI 201 ²	1	Approved Course Substitute	3
ENGL 203	3	EXSC 111 ³	3
GEOG 201	3	GEOG 202	3
HIST 201	3	HIST 202	<u>3</u>
POLI 200	<u>3</u>		15
	18		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305/H/Online or		SOCI 222	3
ENGL 310/H/Online	3	EDCI 406 ⁴	3
PSYC 303 or		HIST 300 or 400 Level	3
PSYC 305	3	EDCI 409 ⁴	3
EDCI 410 ⁴	3	POLI 300 or 400 Level	3
HIST 300 or 400 Level	3	PSYC 307	<u>3</u>
SOCI 221	<u>3</u>		18
	15		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDCI 311 ⁴	3	EDCI 400 ⁴	3
EDCI 425E ⁴	3	EDCI 480 ⁴	6
EDSP 428 ⁴	3	EDCI 490 ⁴	<u>6</u>
HIST 300 or 400 Level	3		15
HIST 300 or 400 Level	<u>3</u>		
	15		

Total Credit Hours: 129

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Course does not count toward graduation.

³Course cannot be repeated for credit.

⁴Student must be admitted into the Teacher Education Program.

SOCIOLOGY

DEPARTMENTAL REQUIREMENTS

The Sociology major must complete 120 semester hours of University courses. Included in the 120 semester hours are a minimum of 21 hours of required sociology courses and 15 hours of sociology electives. Sociology majors must also complete six (6) additional hours in other Social Science areas (e.g., POLI, ECON, etc.). A minimum grade of “C” must be obtained in all major courses. Students must maintain a 2.5 overall GPA and 2.5 in sociology courses.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I ARTS AND HUMANITIES

Credit 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course in each of two disciplines:

Discipline A: ARTS

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

or

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

or

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credit 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201/201H; ECON 200/ 200H; GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H, POLI 220H or POLI 342

Discipline B: BEHAVIORAL SCIENCES

CRJS 101; HUEC 203; HUEC 220 and PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credit 7

Students must select 3 science courses one of which **must** be a 1 credit course (Laboratory) from the following:

ANPT 114/114H; BIO 101; BIO 103; CHEM 101, CHEM 102; CHEM 103; ENVS 101,

NUDT 210; PHYS 101, PLSC 184,

Curriculum Area IV – MATHEMATICS

Credit 3

MATH 102 or higher:

Students **MUST** pass the proficiency exam or MATH 101 with a grade of “C” before taking MATH 102.

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area V - ENGLISH COMPOSITION¹**Credit 9**

ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credit 7**

SOSC 100: First Year Experience Course

In addition, it is recommended that students take

EXSC 111 and BUED 212 or approved electives from the following disciplines:

BUAD 213	Business Software Application
TELC 214	Introduction to Telecommunications
ENGL 218	Approaches to Grammar
ENGL 215	Introduction to Film
HIST 200A	Modern Africa
HIST 275	Swahili
POLI 311	Comparative Political Systems
POLI 312	International Relations

Total Required for General Education**Credit 41****SOCIOLOGY****Credit 74****Sociology Program Core I****Credit 21**

SOCI 101	Introductory to Sociology	3
SOCI 221	Research Methods in Behavioral Sciences	3
SOCI 222	Statistics Methods in Behavioral Sciences	3
SOCI 231	Theory I: Found. In Sociological theory	3
SOCI 232	Theory II: Contemporary Sociological Theory	3
SOCI 303	Social Inequalities	3
SOCI 431	Senior Seminar	3

Program Core II**Credit 9**

Students must complete a minimum of 9 elective credits in Sociology at the 300/400 level earning at least a "C" in each course. The following list of course provides options for students but is in no way a comprehensive list. Please see advisor in selecting courses.

SOCI 303	Social Inequality	3
SOCI 313	Criminology and Penology	3
SOCI 315	Urban Sociology	3
SOCI 316	Marriage and Family life	3
SOCI 318	Social Welfare Policy	3
SOCI 320	Social Movement and Social Change	3
SOCI 322	Population Studies: Demography	3
SOCI 326	Social Psychology	3
SOCI 329	Sociology of Medicine	3
SOCI 331	American Minority Groups	3
SOCI 334	Sociology of Mental Health	3
SOCI 340	Small Group Analysis	3
SOCI 344	Social Organization	3
SOCI 361	Social Gerontology	3
SOCI 370	Sociology of Education	3
SOCI 388	Special Topics in the Social Sciences	3

SOCI	388A	Experimental Course: Medical Sociology	3
SOCI	488	Organizational Leadership	3
SOCI	490	Sociological Internship	3
SOCI	498	Independent Study	3
SOCI	499	Independent study	3

Program Core III

Credit 6

Students must complete 6 credits of Sociology elective courses with a grade of "C" or better in each of these courses. The following list of courses provides options for students but is in no way a comprehensive list. Please see advisor in selecting courses.

SOCI	201	Social Problem	3
SOCI	202	Social Deviance and Social Control	3
SOCI	250	Juvenile Delinquency	3

Sociology Major Support

Credit 6

Students must complete two Social Science courses with a "C" average or better. They may choose courses from the following:

CRJS; ECON; GEOG; HIST; PHIL; POLI; SOCI; SOWK

Sociology Free Electives

Credit 37

Students must take 37 credit hours of free electives. These courses may also be applied towards the completion of a Minor field. If student is not completing a minor it is strongly recommended that students take courses in sociology, criminal justice; Political Sciences; Philosophy and History that will contribute significantly in increasing their knowledge of their major. Suggested courses are: SOCI 490, 498, and 499.

CURRICULUM GUIDE FOR SOCIOLOGY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOSC 100	1	BIOL 101	3
SOCI 101	3	BIOL 103	1
PSYC 200	3	ENGL 102	3
GEN ED CURR AREA I ¹	3	ENGL 001/ENGL 003 ³	0
GEN ED CURR AREA II ²	3	MATH 102	3
ENGL 101	<u>3</u>	GEN ED CURR AREA I ⁴	3
	16	EXSC 111 ⁵	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HIST 101	3	SOCI 200 Level	3
ENGL 203	3	SOCI 222	3
ENVS 101	3	SOCI 232	3
SOCI 221	3	BUED 212	3
SOCI 231	<u>3</u>	Free Elective	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or 310	3	SOCI 300 or 400 Level	3
ECON 201	3	SOCI 300 or 400 Level	3
SOCI 303	3	CRJS 101	3
SOCI 300 or 400 Level	3	SOCI Free Elective	3
SOCI Free Elective	<u>3</u>	SOCI Free Elective	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOCI 300 or 400 Level	3	SOCI 431 ⁸	3
SOCI FREE Elective	3	SOCI Free Elective	3
SOCI FREE Elective	3	SOCI FREE Elective	3
SOCI FREE Elective	3	SOCI FREE Elective	3
SOCI FREE Elective	<u>3</u>	SOCI FREE Elective	<u>1</u>
	15		13

Total Credit Hours: 120

¹Student must select from GEN ED CURR AREA I:A

²Student must select from GEN ED CURR AREA II:A.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Student must select from GEN ED CURR AREA I:B

⁵EXSC 111 **cannot** be repeated for credit.

⁶Student must select from GEN Ed CURR AREA II: B

It is strongly recommended that if students are not taking a minor they should take courses in sociology; criminal justice; political sciences; philosophy; history.

Students must complete SOCI 221; 222; 231 and 232 before registering for SOCI 431.

SOCIOLOGY/SOCIAL WORK

The Dual Degree Program in Sociology (UMES) and Social Work (SU) has as its objective to prepare graduates for entry level professional social work positions, state social work licensure, and graduate education in social work. The program is made possible through the shared resources of the University of Maryland Eastern Shore (UMES) and Salisbury University (SU). UMES students can earn a Bachelor of Arts Degree in Social Work (BASW) from SU and a Bachelor of Arts Degree in Sociology from UMES. The program is accredited by the Council on Social Work Education through SU.

DEPARTMENTAL REQUIREMENTS

The program can be completed in 120 credit hours. Included in the 120 semester hours are a minimum of 21² hours of required sociology courses and 15 hours of sociology³ electives. A minimum grade of “C” must be achieved in these courses by the fall of the Junior Year. The student must maintain a 2.5 overall GPA, a 2.5 in the sociology courses and a 2.7 in social work courses. Majors must be in their second semester of the sophomore year and have junior standing, and have completed 56 - 60 hours or, if graduating at the end of the fall semester, 57 hours by the end of the sophomore year. Students should have completed the following courses:

BIOL 101	PSYC 200	SOCI 101	SOWK 200
BIOL 103		SOCI 221	SOWK 300
		SOCI 222	SOWK 302

ADMISSION PROCEDURES

To become a Social Work major is actually a three-step process. The first step occurs at the University level where a student may indicate “social work” as a desired major at the time of admission to the University as part of the admissions process, or by completing a “Change of Major” form and filing the form with the Office of the Registrar some time after the initial admission and registration.

The second step occurs during the spring of the sophomore year. Students interested in the Dual Degree must first be admitted to SU. During the spring of the sophomore year, students complete an online Application for Admission to SU. The fee for the application is waived. Students will become dually enrolled in both UMES and SU.

The third step occurs at the Salisbury University departmental level during the fall of the junior year. All students are required to complete an Application to Major in Social Work which is reviewed by the Social Work Department Admission Committee.

In order to be accepted in the Social Work major, students must have a 2.5 overall GPA and a 2.7 Social Work GPA. The Social Work GPA will include the following courses; MATH 102¹, BIOL 101, BIOL 103, PSYC 200, SOCI 101, SOCI 222, SOWK 200, SOWK 300 and SOWK 302.

¹MATH 102 must be completed with a grade of C or better.

SOCIOLOGY/SOCIAL WORK
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credit 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

Students must select one course in each of two disciplines:

Discipline A: ARTS

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

or

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

or

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credit 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201/201H; ECON 200/200H; GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H, POLI 220H or POLI 342; SOCI 201; 202

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credit 7

Students must select BIO 101 and BIO 103 and one science course which **must** be a 3 credit course, from the following:

ANPT 114/114H; CHEM 101, CHEM 102; ENVS 101, NUDT 210; PHYS 101, PLSC 184,

Curriculum Area IV – MATHEMATICS

Credit 3

MATH 102 or higher:

Students **MUST** pass the proficiency exam or MATH 101 with a grade of “C” before taking MATH 102.

Curriculum Area V - ENGLISH COMPOSITION¹

Credit 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credit 7**

SOSC 100: First Year Experience Course

In addition, it is recommended that students take EXSC 111 and BUED 212 or approved electives from the following disciplines:

BUAD 213	Business Software Application
TELC 214	Introduction to Telecommunications
ENGL 218	Approaches to Grammar
ENGL 215	Introduction to Film
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems

Total Required for General Education**Credit 41****Sociology/Social Work BA****Credit 74****Sociology Program Core Requirements****Credit 21**

SOCI 101	Introductory to Sociology	3
SOCI 221	Research Methods in Behavioral Sciences	3
SOCI 222	Statistics Methods in Behavioral Sciences	3
SOCI 231	Theory I: Found. In Sociological theory	3
SOCI 232	Theory II: Contemporary Sociological Theory	3
SOCI 303	Social Inequalities	3
SOCI 431	Senior Seminar	3

Program Core Elective**Credit 12**

Students must take at least 3 SOCI courses at the 300/400 level. The following list of courses provides options for students but is in no way a comprehensive list. Please see advisor in selecting courses.

SOCI 303	Social Inequality	3
SOCI 313	Criminology and Penology	3
SOCI 315	Urban Sociology	3
SOCI 316	Marriage and Family Life	3
SOCI 318	Social Welfare Policy	3
SOCI 320	Social Movement and Social Change	3
SOCI 322	Population Studies: Demography	3
SOCI 326	Social Psychology	3
SOCI 329	Sociology of Medicine	3
SOCI 331	American Minority Groups	3
SOCI 334	Sociology of Mental Health	3
SOCI 340	Small Group Analysis	3
SOCI 344	Social Organization	3
SOCI 361	Social Gerontology	3
SOCI 370	Sociology of Education	3
SOCI 388	Special Topics in the Social Sciences	3
SOCI 388A	Experimental Course: Medical Sociology	3
SOCI 488	Organizational Leadership	3
SOCI 490	Sociological Internship	3
SOCI 498	Independent Study	3
SOCI 499	Independent Study	3
SOCI 201	Social Problem	3

SOCI	202	Social Deviance and Social Control	3
SOCI	250	Juvenile Delinquency	3

Social Work Core I **Credit 32**

SOWK	200	Introductory to Social Work	3
SOWK	300	Human Behavior I	3
SOWK	302	Human Behavior II	3
SOWK	305	Social Work Policy	3
SOWK	310	Basic Interviewing Skills and Techniques	3
SOWK	320	Social Work Practice I	3
SOWK	400	Social Work Practice II	3
SOWK	410	Social Work Practice III	3
SOWK	420	Field Instruction and Seminar I	4
SOWK	421	Field Instruction and Seminar II	4

Social Work Core II **Credit 3**

Students must complete 1 approved Social Work Elective courses from the following courses:

SOWK 350, SOWK 450, SOWK 455, SOWK 460, SOWK 465, SOWK 470, SOWK 475, SOWK 484, SOWK 490, SOWK 499.

Supportive Course Requirements **Credit 6**

Student must complete two approved social science courses for a total of 6 credit hours.

Free Electives **Credit 5**

Students must complete 5 credits of free electives.

CURRICULUM GUIDE FOR SOCIOLOGY/SOCIAL WORK

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOSC 100	1	BIOL 101	3
SOCI 101	3	BIOL 103	1
PSYC 200 ⁴	3	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ³	0
GEN CURR AREA I ¹	3	MATH 102	3
EXSC 111	<u>3</u>	GEN CURR AREA I ¹	3
	16	SOWK 200	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HIST 101	3	SOCI 200 Level	3
ENGL 203	3	SOCI 222	3
SOWK 300	3	SOWK 302	3
SOCI 221	3	CRJS 101	3
GEN ED AREA III ⁵	<u>3</u>	BUED 212	<u>3</u>
	15		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 or 310	3	SOCI 232	3
SOCI 231	3	SOWK Elective	3
SOWK 305	3	SOCI 300 or 400 Level	3
SOCI 310	3	SOWK 320	3
SOCI 300 or 400 Level	<u>3</u>	SOCI 303	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOCI 300 or 400 Level	3	SOCI 431	3
SOWK 400	3	SOWK 410	3
SOWK 420	4	SOWK 421	4
Social Science Support Course	3	Free Elective	<u>3</u>
Free Elective	<u>3</u>		13
	16		

Total Credit Hours: 120

¹Student must select from GEN CURR AREA I:C – Foreign Language.

²Student must select from GEN CURR AREA II:A.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Course will satisfy GEN CURR AREA II:B

⁵Student must select from GEN CURR AREA III:B – Sciences.

COURSE DESCRIPTIONS

GEOGRAPHY

GEOG 201 The World Geography I

Credit 3

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

Credit 3

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/Honors History of World Civilization I

Credit 3

The course examines human endeavors from the earliest civilizations to 1500. It examines major political and socio-economic achievements, stressing non-western and Greek, Roman, and Medieval contributions to world civilization.

HIST 102/Honors History of World Civilization II

Credit 3

This course is a continuation of HIST 101 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 150 History of Philosophy

Credit 3

This is an introductory course in the study of Western philosophy. It uses the prism of history to develop an overview of the seminal philosophers over the past 2500 years. Philosophical study will include the Greek and medieval periods, the post-renaissance and enlightenment periods along with the Modern and late Twentieth Century periods. Meets CA I requirements.

HIST 200A Introduction to Modern African History

Credit 3

This course is an outline of contemporary African History after 1700. The course will include colonialism the struggle for independence, and the problems of economic and social development in independent Africa.

HIST 201/Online History of American Civilization I

Credit 3

This course is a survey of American history from the pre-colonial period to the Civil War. The topics covered include Colonial America, the institution of slavery, the American Revolution, the foundations of American government, and the roots of the Civil War.

HIST 202/Online History of American Civilization II

Credit 3

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

Credit 3

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. Prerequisite: A 100/200 level HIST course and HIST Major only.

HIST 275 Swahili: History, People, Language **Credit 3**
This course approaches learning about history and culture of East Africa through learning the Swahili language. Prerequisite: One 100/200 level history course.

HIST 313/Online Gender Equality in America **Credit 3**
Women have played an integral role in the development of America. This course will examine the roles and contributions that American women have made beginning with the Colonial period up to the Twenty-First Century. Gender and ethnic differences will be examined within a cultural, political and social context.

HIST 333 African American History I **Credit 3**
This course surveys African American History from African roots to the Civil War. Prerequisite: A 100/200 level HIST course.

HIST 334 African American History II From 1865 to Present Times **Credit 3**
This is a study of African-American History from the civil war to the Twentieth Century. Prerequisite: A 100/200 level HIST course.

HIST 350 Contemporary World Issues **Credit 3**
This will be a discussion-based course prefaced on student presentations in class. Most of the world's developing/developed nations offer an English language newspaper on the World Wide Web which delivers official government positions/spin on issues of interest to American students. These newspapers will form the curriculum for the course as will rejoinders by the "national" newspapers of the United States, i.e., *The New York Times* and *The Washington Post*. The course instructor will moderate class discussions.

HIST 351 Latin America **Credit 3**
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 Ancient African History **Credit 3**
This is a study of African History from the beginning of recorded history to 1800. Prerequisite: A 100/200 level HIST course.

HIST 361 African History After 1800 **Credit 3**
This is a study of African colonial issues, the struggle for independence, the emergence of nation-states and current issues in Africa. Prerequisite: A 100/200 level HIST course

HIST 405 The Presidencies of the United States ~ Seminar **Credit 3**
This course will require students to select a president to research and lead the seminar on the following issues about that president throughout the semester: Pre-presidential biography, congressional relationships, domestic policy, economic strategy, cabinet and court appointments, international relations, and effectiveness as commander-in chief. A major research paper is required. Prerequisite: One 100/200 level history course.

HIST 414 Cross-Cultural Internship in Africa **Credit 4-12**
This course provides an elective opportunity for students to gain cross-cultural exposure and understanding in a grassroots African community. Approved students will spend one to three months at a community educational center in Uganda in East Africa to gain cross-cultural experience living and working under the supervision of Ugandan and American educators. Section 004 (1 month) 4 credits; Section 008 (2 months) 8 credits; and Section 012 (three months) 12 credits. Prerequisite: A 100/200 level HIST, registration in HIST 418 course and HIST Major only.

HIST 418 Cross-Cultural Internship Seminar**Credit 3**

Simultaneously accompanies HIST 414. Prior to going out and after returning, students will attend a group seminar, and during the internship, interns will produce written reflections on their daily experience. Students will present an extended paper on their internship experience. Prerequisite: A 100/200 level HIST, registration in HIST 414 course and HIST Major only.

HIST 440 East Asia from 1600 to the Present**Credit 3**

This course will examine the inter-related histories of China, Japan, and Korea. The economic, social, political, religious, and cultural developments of East Asia during major historic periods will be studied. Prerequisite: One 100/200 level history course.

HIST 450 Southeast Asia: from 1600 to the Present**Credit 3**

This course will survey the histories of the nations, which comprise Southeast Asia. The economic, social, political, religious, and cultural developments of Southeast Asia during major historic periods will be studied. Prerequisite: One 100/200 level history course.

HIST 460 Russia: From 1600 to the Present**Credit 3**

This course will examine the transformation of Russia from a feudal civilization to a military superpower. Attention is given to Tsarist Russia, to the Communist Revolution of 1917, Communist Russia, and the post-Communist Russian Federation. The economic, social, political, religious, and cultural developments of Russia during major historic periods will be studied. Prerequisite: One 100/200 level history course.

HIST 497 Senior Thesis**Credit 3**

The senior thesis is the culmination of student learning, analysis, and research resulting in a major research paper. The paper will involve a thorough critical examination of a significant historical controversy or historiographical issue. Prerequisites: senior history majors only. Approved topic, approved research proposal, approved bibliography, and significant research completed.

HIST 498 Independent Study of History**Credit 3**

This course is an intensive study of special topics in history for advanced students. Prerequisite: Consent of instructor Prerequisite: HIST Major only.

HIST 499 Independent Study of History**Credit 3**

This course is an intensive study of special topics in history for advanced students. Prerequisite: Consent of instructor. Prerequisite: HIST Major only.

PHILOSOPHY**PHIL 201 Introduction to Logic****Credit 3**

This course will be concerned with propositional logic, a major deductive system of symbolic logic. Attention will be paid to the uses of symbolic logic in identifying and evaluating reasoning in ordinary language arguments. Both traditional and symbolic logic will be studied. CA I requirements.

PHIL 202 Ethics**Credit 3**

This course involves the study of the major philosophers (i.e., Aristotle, Hobbes, Hume, Mill, Kant, etc.). Their distinctive approaches to ethics are presented. Also explored will be the relevance of their views to current debates in moral philosophy. Fundamental questions will be used that reflect on ethical issues. Meets GEN ED CURR AREA I requirements.

POLITICAL SCIENCE

- POLI 200 Introduction to American Government** **Credit 3**
This course presents a critical study of the American political system in its contemporary context: policy-making processes, sources of conflict processes.
- POLI 312 International Relations** **Credit 3**
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 498 Independent Study** **Credit 1-3**
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** **Credit 1**
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.

SOCIAL SCIENCE

- SOSC 100 First Year Experience** **Credit 1**
This basic seminar introduces the topics of mental health and effectiveness in changing world. This is an applied course to guide the student through a self-assessment process that includes developing a personal plan for academic success. Required course for all social science majors.

SOCIOLOGY

- SOCI 101 Online Introduction to Sociology** **Credit 3**
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. Prerequisite: Not open to first time Freshmen.
- SOCI 201/Online Social Problems** **Credit 3**
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** **Credit 3**
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 221 Research Methods in Behavioral Science** **Credit 3**
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. Prerequisites: SOCI 101 and MATH 109.
- SOCI 222 Statistical Methods in Behavioral Science** **Credit 3**
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. Prerequisites: SOCI 101 and MATH 109.

- SOCI 231/Honors Theory I: Foundations in Sociological Theory Credit 3**
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 232 Theory II: Contemporary Sociological Theory Credit 3**
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 250 Juvenile Delinquency Credit 3**
The course juvenile delinquency is an introduction to theories of Juvenile delinquency and alternative intervention strategies for reducing the prevalence of juvenile delinquency. Prerequisites: SOCI 101 or 201.
- SOCI 303 Social Inequality Credit 3**
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 or 201.
- SOCI 306 Socialization Credit 3**
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. Prerequisites: SOCI 101 or SOCI 201.
- SOCI 313 Criminology and Penology Credit 3**
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 of SOCI 201.
- SOCI 315 Urban Sociology Credit 3**
The course is a sociological analysis of the development and effects of modern urbanization on human institutions, population trends and social relationships. The role of social agencies and elements making for organization and disorganization, urban planning and redevelopment will be explored. Prerequisites: SOCI 101, SOCI 201
- SOCI 316 Marriage and Family Life Credit 3**
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 101or 201.
- SOCI 320 Social Movement and Social Change Credit 3**
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 or 201.
- SOCI 322 Population Studies: Demography Credit 3**
Demography is the study of the basic variables of population: birth, death, and migration. The course considers socio-economic and cultural variables affecting population, growth projection and possible controls are discussed. Prerequisite: SOCI 101.

SOCI 326 Social Psychology**Credit 3**

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 or SOCI 201.

SOCI 331 American Minority Groups**Credit 3**

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/Online Sociology of Mental Health**Credit 3**

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 or SOCI 201.

SOCI 340 Small Group Analysis**Credit 3**

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 and SOCI 201.

SOCI 344 Social Organizational I**Credit 3**

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 or SOCI 201.

SOCI 345 Organizational Social Psychology Organizational Dynamics I Credit 3

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. Prerequisites: SOCI 101 or SOCI 201.

SOCI 361 Social Gerontology**Credit 3**

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 201.

SOCI 400 Organizational Leadership**Credit 3**

This course presents the concept of leadership in organization. The course presents the concept of leadership at three levels: individual, team and organization. The course includes discussion of major theories with their application in real world situations, and covers the lexicon of leadership studies. Leadership is discussed in the context of work organizations where leadership is required to resolve conflict, manage change, and influence organizational culture.

SOCI 490 Sociological Internship**Credit 3**

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. Prerequisites: Senior sociology majors only.

SOCI 498 Independent Study in Sociology Credit 3

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 Credit 3

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 WORK¹

SOWK 200 Introduction to Social Work and Social Welfare Credit 3

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 300 Human Behavior in the Social Environment I Credit 3

This course focuses on the inter-relationships of biological and psychosocial 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 Credit 3

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 Credit 3

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.

SOWK 310 Basic Interviewing Skills and Techniques Credit 3

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.

¹SOWK 320 Social Work Practice I Credit 3

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, 300 and 310.

SOWK 350 Social Work with Older People Credit 3

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. Prerequisites: SOWK 200.

¹Students enrolled in the dual degree program should consult Salisbury University School of Social Work course catalog for required and appropriate courses.

SOWK 400 Social Work Practice II**Credit 3**

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: SOCI 309 or SOWK 315 and 320. Co-requisite: SOWK 406 or 407 and admission to the professional program.

SOWK 410 Social Work Practice III**Credit 3**

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 416 Social Work Research I**Credit 3**

This is the first of two courses in social work and evaluation research. Emphasis is placed on understanding the development and use of scientific knowledge and the application of that knowledge to evaluate social work interventions and program evaluation. Special attention is given to applied research methodologies that will enhance the student's use of evidence-based social work knowledge and skills.

SOWK 417 Social Work Research II**Credit 3**

This is the second of two courses focused on the basic concepts and methods of scientific inquiry used to build knowledge and evaluate practice. The course material builds upon and expands that covered in Social Work Research I. Specific topics include an introduction to program evaluation, single subject designs, data analysis, descriptive and inferential statistics, presentation of data and report writing, and application of findings to practice. Special attention is given to applied research methodologies that will enhance the student's use of evidence-based social work knowledge and skills.

SOWK 420 Field Instruction in Social Work**Credit 4**

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 302, SOCI 309 or SOWK 315 and 320, and admission to the professional program. Students volunteer two days per week in an agency.

SOWK 421 Field Instruction in Social Work II**Credit 4**

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 406. Students volunteer two days per week in an agency.

SOWK 450 Social Work with Families/Children**Credit 3**

This course is a survey of child welfare services and examination of current policies in social work for children and families. It considers practice issues in protective services; in-home services to families; and substitute care including adoption and foster care. Prerequisites: SOWK 200.

¹SOWK 455 Substance Abuse: Issues and Services**Credit 3**

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 200.

SOWK 460 Social Work in Corrections**Credit 3**

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.

SOWK 465 Social Work in Health Care**Credit 3**

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. Prerequisites: SOWK 200.

SOWK 470 Social Work in Mental Health**Credit 3**

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. Prerequisites: SOWK 200.

SOWK 475 Social Work With Persons Who Have Disabilities**Credit 3**

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. Prerequisites: SOWK 200.

SOWK 484 Social Work and the Law**Credit 3**

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. Prerequisites: SOWK 200.

SOWK 490 Individual Directed Study**Credit 1-3**

This course enables advanced students to pursue topics of their own choosing with the guidance and supervision of the faculty. This course cannot duplicate any course in the department. For Independent Study, the student must have the written consent of the instructor prior to enrolling in the course. Prerequisites: SOWK 200

SOWK 499 Independent Study/Special Topics**Credit 3**

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. Prerequisites: SOWK 200.

¹Students enrolled in the dual degree program should consult Salisbury University School of Social Work course catalog for required and appropriate courses.

DIRECTORY OF FACULTY

Alston Jr., David, Associate Professor

B.A., North Carolina Central University; M.R.P., University of North Carolina; Ph.D., North Carolina State University

Barrett-Gaines, Katherine, Associate Professor

B.A., Fordham University; M.A., University of Maryland Baltimore County; M.A., Duke University; M.A., Stanford University; Ph.D., Stanford University

Baughman, T.H., Professor

B.A., Stetson University; M.A., The Ohio State University; Ph.D., Florida State University

Bell, Joyce, Associate Professor; Coordinator of the Dual Degree Program; Interim Chair

B.A., University of Maryland Eastern Shore; B.A.S.W., Salisbury University; M.S.W. University of Maryland Baltimore; Ph.D., Catholic University of America

Hopwood, Junior, Assistant Professor

B.S., University of the West Indies—Trinidad and Tobago; M.S., University of West Indies—Jamaica; Ph.D., Howard University

Rebach, Howard, Professor

B.A., University of Maryland, College Park; M.A., University of Maryland, College Park; M.A. Salisbury University; M.S.W., University of Maryland at Baltimore; Ph.D., Michigan State University

Wright, Joshua, Assistant Professor

B.A., Loyola College; M.A., George Washington University; Ph.D., Howard University

Dr. Kate Brown, Chairperson

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 Administration, Business Education, Finance, and Marketing, as well as to provide core management courses to other 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.

OBJECTIVES

The objectives of the programs offered in the Department of Business, Management and Accounting are to:

1. Stimulate the intellectual curiosity of students and faculty as they discover new knowledge;
2. Enhance the students' problem solving and critical thinking skills;
3. Sponsor activities that enhance students' professional and social development;
4. Promote an understanding of the economic, ethical, and legal environment in which we live and businesses operate;
5. Provide practical management learning experiences through internship and/or cooperative programs;
6. Foster an awareness of ethical and global issues facing decision makers;
7. Prepare students for careers in professional accounting and managerial positions;
8. Prepare secondary school teachers in the area of business education;
9. Meet the standards of such external bodies as the AACSB, AICPA, The Maryland State Board of Accountancy, and The Maryland State Department of Education, NCATE, and the Middle States Commission on Higher Education;
10. Prepare students for graduate study.

DEGREES OFFERED

Bachelor of Science - Accounting
Bachelor of Science - Business Administration
Bachelor of Science - Business Education
Bachelor of Science - Finance
Bachelor of Science - Marketing

DESCRIPTION OF PROGRAMS

The programs offered in the Department of Business, Management and Accounting are grounded in the liberal arts. Nearly 50 percent of the curricula comprise general education and other liberal arts courses necessary for the development of each student's cognitive skills. These programs prepare students for professional careers in accounting and managerial positions. Accounting 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.

The Department is committed to program enhancement and has been accredited by the Association to Advance Collegiate Schools of Business - International (AACSB). The Business Education major is the only accredited program of its kind in the University System of Maryland. The program is designed to develop competencies among students to teach office administration, accounting, computer concepts and applications, and other business-related courses in secondary education.

GENERAL PROGRAM REQUIREMENTS

Overall Objectives

The overall objectives of the Departmental admission standards, effective from the Fall of 2001, are to promote high quality management education while maintaining high retention and graduation rates for students admitted to the programs offered in the Department of Business, Management and Accounting.

Criteria

Students admitted 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 950 or higher on the Math and Verbal sections, or a total of 1400 or higher on the three component scores.

Students from other programs in the University can apply to change their major to those in the Department of Business, Management and Accounting if:

- a. They have earned 28 semester credit hours with a GPA of 2.5 or higher.
- b. They have earned grades of "C" or higher in MATH 109, ENGL 101, and ENGL 102; and
- c. They have passed the English Proficiency Examination.

All students must earn a grade of "C" or better in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major course requirements.

Transfer Students

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.

GENERAL RESTRICTIONS

1. Junior and senior level course requirements for a degree in the Department of Business, Management and Accounting cannot be satisfied through credit by examination, independent study, or other non-traditional methods.
2. At least 50 percent of the business credit hours required for degrees in the Department of Business, Management and Accounting must be earned at UMES.
3. There is no business concentration in the General Studies Program.
4. Repeat courses should be taken at UMES.

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. Guidance is provided by 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 Student Chapter of the American Marketing Association (AMA), and Phi Beta Lambda.

Honor Society

Beta Gamma Sigma is the international honor society serving business programs accredited by AACSB International - The Association to Advance Collegiate Schools of Business. Membership in Beta Gamma Sigma is the highest recognition a business student anywhere in the world can receive in a business program accredited by AACSB International. Candidates for baccalaureate degrees whose academic rank is in the upper 10 percent of their class may be inducted as follow: (1) Students in the next to last year of study (or its equivalent in course work) ranked among the upper 10 percent of their class may be inducted in the last term or semester (or its equivalent in course work) of that year. (2) Students in their final year who were not previously inducted may be inducted at any time during their final year (or its equivalent in course work) if their academic rank is in the upper 10 percent of their class.

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.

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 these experiences.

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.

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.

DEPARTMENTAL REQUIREMENTS

Accounting – Accounting majors complete 120 hours of course work, of which 41 hours are general education, 6 are supporting liberal arts, and the remaining 73 are foundation knowledge and major requirement courses. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Business Administration – Business Administration majors complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Finance - Finance majors complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Marketing - Marketing majors complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Business Education – The Business Education major requires 41 credits of general education, 39.5 credits of foundation knowledge and major subject requirements, and 42-43 credits of Teacher Certification Requirements.

ACCOUNTING

DEPARTMENTAL REQUIREMENTS

Accounting majors complete 120 hours of course work, of which 41 hours are general education, 9 are supporting liberal arts, and the remaining 70 are foundation knowledge and major requirement courses. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Students in the Honors program must select courses in the area of Honors Accounting.

OBJECTIVES

The objectives of the Accounting Program are to:

- Provide students with understanding of the concepts, structure and meaning of accounting and financial data with the ability to produce clear and concise financial reports.
- Provide students with understanding of the process of identifying, gathering, measuring, summarizing, and analyzing financial data in business organizations.
- Provide students with understanding of the concepts, methods and process of control that provides for accuracy and integrity of financial data and safeguarding of business assets.
- Provide students with understanding of the nature of attest services and the conceptual and procedural bases for performing them.
- Provide students with understanding of taxation and its impact on financial and managerial decisions.
- Provide students with the skills to enter graduate school and conduct research.

CAREER OPPORTUNITIES FOR ACCOUNTING

The accounting program is designed for students who plan to pursue careers in Public Accounting, Corporate Accounting, Government or Not-For-Profit Accounting and related fields. It is also designed to prepare students for advanced study in Accounting and related fields.

ACCOUNTING Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109, if a student needs MATH 101, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200 and ECON 201 with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS**Credits 27**

BUAD	414	Business Law II	3
ACCT	301	Cost and Budgetary Control	3
ACCT	302	Intermediate Accounting I	3
ACCT	303	Intermediate Accounting II	3
ACCT	304	Managerial Accounting	3
ACCT	308	Accounting Information Systems	3
ACCT	400	Intermediate Accounting III	3
ACCT	402	Federal Income Tax Accounting Individual	3
ACCT	407	Auditing	3

MAJOR ELECTIVES**Credits 3**

One course in Accounting electives

CURRICULUM GUIDE FOR ACCOUNTING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102	3
ENGL 101	3	ENGL 001 ¹	0
MATH 109	3	GEN ED CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUAD 222	3
ECON 201	3	BUED 101	.5
ENGL 203	3	ECON 200	3
GEN ED CURR AREA	<u>3</u>	BUAD 300	3
	15	GEN ED CURR AREA VI	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 301	3	ACCT 303	3
ACCT 302	3	ACCT 304	3
BUAD 302	3	BUAD 353	3
BUAD 333	3	BUED 102	.5
ACCT 308	<u>3</u>	FINA 340	3
	15	ENGL 305	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MKTG 308	3	GEN ED CURR AREA VI	3
ACCT 402	3	ACCT 407	3
BUAD 354	3	ACCT Elective	3
BUAD 412	3	BUAD 414	3
ACCT 400	<u>3</u>	BUAD 495	<u>3</u>
	15		15

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102.

ACCOUNTING HONORS

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101H, HIST 102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 111H

Curriculum Area V - ENGLISH COMPOSITION

Credits 9

ENGL 101H

ENGL 102H

ENGL 305H/Online or ENGL 310H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200H and ECON 201H with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302H	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353H	Business Statistics I	3
BUAD 354H	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495H	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340H	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS**Credits 27**

BUAD	414	Business Law II	3
ACCT	301	Cost and Budgetary Control	3
ACCT	302H	Intermediate Accounting I	3
ACCT	303H	Intermediate Accounting II	3
ACCT	304	Managerial Accounting	3
ACCT	308	Accounting Information Systems	3
ACCT	400H	Intermediate Accounting III	3
ACCT	402H	Federal Income Tax Accounting Individual	3
ACCT	407H	Auditing	3

MAJOR ELECTIVES**Credits 3**

One course in Accounting electives

CURRICULUM GUIDE FOR ACCOUNTING HONORS

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102H	3
ENGL 101H	3	ENGL 003 ¹	0
MATH 111H	3	GEN ED CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUAD 222	3
ECON 201H	3	BUED 101	.5
ENGL 203	3	BUAD 300	3
GEN ED CURR AREA I	<u>3</u>	ECON 200H	3
	15	GEN ED CURR AREA VI	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 301	3	ACCT 303H	3
ACCT 302H	3	ACCT 304	3
BUAD 302H	3	BUAD 353	3
BUAD 333	3	BUED 102	.5
ACCT 308	<u>3</u>	FINA 340	3
	15	ENGL 305	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>First Semester</i>	<i>Credit</i>
MKTG 308	3	GEN ED CURR AREA VI	3
ACCT 402H	3	ACCT 407H	3
BUAD 354H	3	ACCT Elective	3
BUAD 412	3	BUAD 414	3
ACCT 400H	<u>3</u>	BUAD 495	<u>3</u>
	15		15

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 003 prior to enrolling in ENGL 102H.

BUSINESS ADMINISTRATION

DEPARTMENTAL REQUIREMENTS

Business Administration majors must complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

Students in the Honors program must select courses in the area of Honors Business Administration.

OBJECTIVES

The objectives of the Business Administration Program are to:

1. To understand theories and concepts of organizational behavior and their management.
2. To provide opportunities for developing team-work skills.
3. To learn about and become sensitive to the rights and responsibilities of employers, employees and other stakeholders.
4. To develop successful management strategies through scientific methods, simulation and information technology.
5. To help generate critical thinking and problem solving skills to face global economic challenges.
6. Provide students with the skills to enter graduate school and conduct research.

CAREER OPPORTUNITIES

A degree in Business Administration will allow students to pursue career opportunities in a variety of areas within the field of business including marketing, general management and human resource management. The program also prepares students to be admitted into advanced degree programs.

BUSINESS ADMINISTRATION

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOC 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109, if a student needs MATH 101, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200 and ECON 201 with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS**Credits 18**

BUAD	304	Small Business Management	3
BUAD	364	Managerial Economics	3
BUAD	410/422	Production Management/Supply Chain Management	3
BUAD	411	Operations Research	3
BUAD	420	International Business	3
FINA	341	Investments	3

MAJOR ELECTIVES**Credits 12**

Four courses in any business program elective, i.e., any ACCT, BUAD, FINA or MKTG 300 or 400 level course for which the student has the required prerequisites.

CURRICULUM GUIDE FOR BUSINESS ADMINISTRATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102	3
ENGL 101	3	ENGL 001 ¹	0
MATH 109	3	GEN ED CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUED 101	.5
ECON 201	3	ECON 200	3
ENGL 203	3	GEN ED CURR AREA I	3
BUAD 222	<u>3</u>	BUAD 300	3
	15	GEN ED CURR AREA VI	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 302	3	BUAD Elective	3
ENGL 305	3	BUAD 354	3
BUAD 353	3	BUED 102	.5
BUAD 333	3	FINA 340	3
MKTG 308	<u>3</u>	BUAD 304	3
	15	BUAD 364	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD Elective	3	BUAD Elective	3
BUAD 412	3	BUAD 411	3
BUAD 410 or		BUAD 420	3
BUAD 422	3	BUAD 495	3
FINA 341	3	BUAD Elective	<u>3</u>
GEN ED CURR AREA VI	<u>3</u>		15
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

BUSINESS ADMINISTRATION HONORS

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 111H

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101H

ENGL 102H

ENGL 305H or ENGL 310H

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200H and ECON 201H with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302H	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353H	Business Statistics I	3
BUAD 354H	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495H	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340H	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS**Credits 18**

BUAD	304H	Small Business Management	3
BUAD	364	Managerial Economics	3
BUAD	410/422	Production Management/Supply Chain Management	3
BUAD	411H	Operations Research	3
BUAD	420	International Business	3
FINA	341H	Investments	3

MAJOR ELECTIVES**Credits 12**

Four courses in any business program elective, i.e., any ACCT, BUAD, FINA or MKTG 300 or 400 level course for which the student has the required prerequisites.

**CURRICULUM GUIDE FOR
BUSINESS ADMINISTRATION HONORS**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102H	3
ENGL 101H	3	ENGL 003 ¹	0
MATH 111H	3	GEN CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUED 101	.5
ECON 201H	3	ECON 200H	3
ENGL 203	3	GEN ED CURR AREA VI	3
BUAD 222	<u>3</u>	BUAD 300	3
	15	GEN ED CURR AREA I	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 302H	3	BUAD 333	3
BUAD 304	3	BUAD 354H	3
BUAD 353H	3	BUED 102	.5
MKTG 308	3	FINA 340H	3
ENGL 305	<u>3</u>	BUAD 364	3
	15	BUAD Elective	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD Elective	3	BUAD Elective	3
BUAD 412	3	BUAD 411H	3
BUAD 410H or		BUAD 420	3
BUAD 422	3	BUAD 495H	3
FINA 341H	3	BUAD Elective	<u>3</u>
GEN ED CURR AREA VI	<u>3</u>		15
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 003 prior to enrolling in ENGL 102H.

BUSINESS EDUCATION PROGRAM

DEPARTMENTAL REQUIREMENTS

The Business Education major requires 41 credits of general education, 39.5 credits of foundation knowledge and major subject requirements, and 42-43 credits of Teacher Certification Requirements.

OBJECTIVES

The objectives of the Business Education Program are to:

1. Provide students with the skills to create, analyze, revise and implement curricula to prepare learners for a dynamic and rapidly changing world and to assess learner progress.
2. Provide students with the skills to build relationships with various publics to produce a vibrant, holistic learning environment.
3. Provide students with a solid foundation in general education, business content areas, and professional studies.
4. Provide students with an understanding of the need to grow continuously as a professional.
5. Provide students with the skills to enter graduate school and conduct research.

CAREER OPPORTUNITIES

A degree in Business Education will allow students to pursue career opportunities in 5-12 schools, higher education, business, government, consulting, training, and with not-for-profit organizations. The program also prepares students to be admitted into advanced degree programs.

BUSINESS EDUCATION
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 12

Students must select one course in each of Disciplines A and B.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

And must complete ECON 200 and ECON 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109, if a student needs MATH 101, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 1**

BUED 100 First Year Experience Course

Total Required for General Education**Credits 41****MAJOR REQUIREMENTS****Credits 39.5**

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	302	Management and Organizational Behavior	3
BUAD	304	Small Business Management	3
BUAD	313	Advanced Computer Applications	3
BUAD	333	Business Communications	3
BUAD	412	Business Law I	3
BUAD	430	Ethical, Economic, Managerial, Societal Cons.	3
BUED	101	Sophomore Professional Development	0.5
BUED	414	Office Management	3
FINA	340	Financial Management	3
MKTG	308	Principles of Marketing	3

PROFESSIONAL COURSES**Credits 42**

EDCI	200	Fundamentals of Contemporary Education	3
EDCI	288	PRAXIS Preparation I+	
EDCI	311	Comprehensive Assessment in Education	3
EDCI	400	Senior Seminar	3
EDCI	406	Classroom Management	3
EDCI	409	Reading in the Content Area I	3
EDCI	410	Reading in the Content Area II	3
EDCI	427B	Curriculum and Instruction in Business Ed- Secondary	3
EDCI	428	Communication and Collaboration in Special Ed.	3
EDCI	480B	Teaching Internship: Secondary Program	6
EDCI	490B	Teaching Internship: Secondary Program	6
PSYC	305	Human Growth and Development	3
PSYC	307	Educational Psychology	3

+ Does not count toward graduation.

CURRICULUM GUIDE FOR BUSINESS EDUCATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
MATH 109	3	PSYC 200	3
SOCI 101	3	GEN ED CURR AREA I	3
GEN ED CURR AREA III	3	BUED 213	3
GEN ED CURR AREA III	<u>1</u>	BUAD 252	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
EDCI 200	3	BUED 101	.5
ECON 201	3	ECON 200	3
ENGL 203	3	PSYC 305	3
GEN ED CURR AREA III	3	BUAD 313	3
EDCI 201 ^{2,3}	<u>1</u>	GEN ED CURR AREA I	<u>3</u>
	16		15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 302	3	BUED 414	3
BUAD 304	3	EDCI 406	3
BUAD 333	3	EDCI 409	3
FINA 340	3	PSYC 307	3
ENGL 305	3	BUAD 412	<u>3</u>
MKTG 308	<u>3</u>		15
	18		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDCI 311	3	EDCI 400	3
EDCI 410	3	EDCI 480B	6
EDCI 427B	3	EDCI 490B	<u>6</u>
EDSP 428	3		15
BUAD 430	15		

Total Credit Hours: 123.5

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Course does not count towards graduation.

³Required until PRAXIS is passed.

FINANCE

DEPARTMENTAL REQUIREMENTS

Finance majors must complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

OBJECTIVES

The objectives of the Finance Program are to:

1. Provide students with understanding of the concepts that underlie the raising and spending of capital.
2. Provide students with understanding of the process of cash flows within an organization.
3. Provide students with understanding of the concepts of forecasting and discounting to determine appropriate investments.
4. Provide students with understanding of the nature of financial markets and institutions in the current global context.
5. Provide students with understanding of finance as it relates to them.
6. Provide students with the skills to enter graduate school and conduct research.

CAREER OPPORTUNITIES

A degree in Finance will allow students to pursue career opportunities in banking, business advising, budgeting, financial analysis, brokerage, and other finance related areas. The program also prepares students to be admitted into advanced degree programs.

FINANCE
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109, if a student needs MATH 101, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200 and ECON 201 with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS

BUAD	304	Small Business Management	3
BUAD	410/422	Production Management/Supply Chain Management	3
BUAD	411	Operations Research	3
BUAD	420	International Business	3
FINA	341	Investments	3
FINA	440	Advanced Financial Management	3

Credits 18**MAJOR ELECTIVES**

Four courses in Finance electives

Credits 12

CURRICULUM GUIDE FOR FINANCE

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
MATH 109	3	GEN ED CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUED 101	.5
ECON 201	3	ECON 200	3
ENGL 203	3	BUAD 222	3
GEN ED CURR AREA VI	<u>3</u>	BUAD 300	3
	15	GEN ED CURR AREA I	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 302	3	BUAD 333	3
ENGL 305	3	BUAD 354	3
BUAD 353	3	BUED 102	.5
FINA 340	3	FINA 341	3
MKTG 308	<u>3</u>	GEN ED CURR AREA VI	3
	15	BUAD 304	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FINA Elective	3	FINA 440	3
FINA Elective	3	FINA Elective	3
BUAD 411	3	FINA Elective	3
BUAD 412	3	BUAD 420	3
BUAD 410 or		BUAD 495	<u>3</u>
BUAD 422	<u>3</u>		15
	15		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

MARKETING

DEPARTMENTAL REQUIREMENTS

Marketing majors must complete 120 hours of course work, of which 41 hours are general education courses, 6 credits are supporting liberal arts, and 73 credits are foundation knowledge and major subject requirements. A minimum grade of “C” must be earned in ENGL 101, ENGL 102, MATH 109, and all foundation knowledge and major requirement courses.

OBJECTIVES

The objectives of the Business Administration – Marketing Concentration Program are to:

1. Provide students with understanding of the concepts and interactions between competitive forces and marketing strategies.
2. Provide students with understanding of the concepts, processes and metrics for optimizing the position of a product and the segments it serves.
3. Provide students with the ability to plan the allocation of resources between all elements of the marketing mix including brand equity creation.
4. Provide students with the ability to analyze the implications of institutional policies on firm profitability.
5. Provide students with understanding of the theories of consumer perception, learning, motivation and attitude formation.

CAREER OPPORTUNITIES

A degree in Marketing will allow students to pursue career opportunities in all types of marketing positions in marketing research, advertising, retailing, ecommerce and international marketing. The program also prepares students to be admitted into advanced degree programs.

MARKETING Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H; POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109, if a student needs MATH 101, he/she **must** take before Math 109;

MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

BUED 100 First Year Experience Course

In addition, students must take 6 credits from foreign language or approved international liberal arts courses: Languages: Arabic, Chinese, French, Spanish, American Sign Language, Russian
International Liberal Arts:

ARTS 211/212	Art History I or II
ENGL 317	Shakespeare
ENGL 321/322	English Literature I/II
ENGL 324	Literature and Film
ENGL 328/329	World Literature I/II
ENGL 332	The African Writer
ENGL 346	History of English Language
ENGL 347	Adolescent and Adult Literature
GEOG 201/201	World Geography I/II
HIST 101	World Civilization I
HIST 102	World Civilization II
HIST 150	History of Philosophy
HIST 200A	Modern Africa
HIST 275	Swahili
HIST 350	Contemporary World Issues
HIST 351	Latin America
HIST 360	Ancient African History
HIST 361	African History after 1800
MUSI 288	World Music
MUSI 313/314	Music History and Literature I/II
PHIL 201	Logic
PHIL 202	Ethics
POLI 311	Comparative Political Systems
POLI 312	International Relations
SOCI 201	Social Problems
SOCI 303	Social Inequality
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING LIBERAL ARTS REQUIREMENTS****Credits 6**

Students must complete ECON 200 and ECON 201 with an average GPA of 2.0

FOUNDATION KNOWLEDGE**Credits 43**

ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate & Managerial Accounting	3
BUAD 213	Business Software Applications	3
BUAD 222	The Scientific Method in Business	3
BUAD 252	Calculus with Business and Management Applications	3
BUAD 300	Business Ethics	3
BUAD 302	Management and Organizational Behavior	3
BUAD 333	Business Communications	3
BUAD 353	Business Statistics I	3
BUAD 354	Business Statistics II	3
BUAD 412	Business Law I	3
BUAD 495	Strategic Management	3
BUED 101	Sophomore Professional Development	0.5
BUED 102	Junior Professional Development	0.5
FINA 340	Financial Management	3
MKTG 308	Principles of Marketing	3

MAJOR REQUIREMENTS

BUAD	304	Small Business Management	3
BUAD	410/422	Production Management/Supply Chain Management	3
BUAD	411	Operations Research	3
BUAD	420	International Business	3
MKTG	401	Advertising Management	3
MKTG	404	Consumer Behavior and Theory	3
MKTG	410	Marketing Strategy and Policy	3

Credits 21**MAJOR ELECTIVES**

Three courses in Marketing electives

Credits 9

CURRICULUM GUIDE FOR MARKETING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUED 100	1	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ¹	0
MATH 109	3	GEN ED CURR AREA I	3
PSYC 200	3	GEN ED CURR AREA III	3
GEN ED CURR AREA III	3	BUAD 213	3
GEN ED CURR AREA III	<u>1</u>	SOCI 101	<u>3</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	ACCT 202	3
BUAD 252	3	BUED 101	.5
ECON 201	3	ECON 200	3
ENGL 203	3	BUAD 222	3
GEN ED CURR AREA I	<u>3</u>	BUAD 300	3
	15	GEN ED CURR AREA VI	<u>3</u>
			15.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 302	3	MKTG Elective	3
ENGL 305	3	BUAD 304	3
BUAD 353	3	BUAD 354	.5
BUAD 333	3	BUED 102	3
MKTG 308	<u>3</u>	FINA 340	3
	15	GEN ED CURR AREA VI	<u>3</u>
			15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MKTG Elective	3	MKTG Elective	3
MKTG 401	3	MKTG 410	3
MKTG 404	3	BUAD 411	3
BUAD 412	3	BUAD 420	3
BUAD 410/422	<u>3</u>	BUAD 495	<u>3</u>
	15		15

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

MINOR PROGRAMS

The Department of Business, Management and Accounting offers minors in Accounting and Business Administration and these are available to students in major programs of study outside the Department of Business, Management and Accounting. Each minor program consists of 18 semester hours of program courses with a grade of “C” or better. Courses may not be used to fulfill graduation requirements in another major.

The Business Administration minor requires:

BUAD 302 FINA 340 MKTG 308
BUAD 412
Two 300-400 business electives

The Accounting minor requires:

ACCT 201 ACCT 301 ACCT 303 ACCT 402
ACCT 202 ACCT 302

COURSE DESCRIPTIONS FOR ACCOUNTING

ACCT 201 Introductory Financial Accounting/Hybrid

Credit 3

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. The focus is on accounting for sole proprietorships. 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/Hybrid

Credit 3

Financial accounting principles and concepts as they relate to partnerships and corporations are covered. Theory and practice applicable to income determination and asset valuation are considered. In addition, managerial and cost accounting topics are explored. Prerequisite: ACCT 201.

ACCT 288 College Accounting

Credit 3

This course will present a survey of accounting with the focus on practical issues for users of accounting information. This course will not satisfy any requirements for majors in the Department of Business, Management and Accounting.

ACCT 301 Cost & Budgetary Control

Credit 3

This course is a study of the basic principles of managerial accounting and the environment in which cost accounting information is developed and used for decision-making. Basic cost accounting concepts under job order and process costing systems and budgeting techniques are emphasized. Prerequisite: ACCT 202.

ACCT 302/Honors Intermediate Accounting I

Credit 3

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.

ACCT 303/Honors Intermediate Accounting II

Credit 3

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

Credit 3

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 308/Hybrid Accounting Information Systems

Credit 3

The course provides a basis for understanding, using and controlling accounting information systems (AIS) as found in business organizations. The principle content areas include documentation of accounting information systems; security, privacy and ethics; internal control systems, AIS and business processes. Prerequisite: ACCT 201 with a grade of 'C' or better.

ACCT 309 Financial Statement Analysis**Credit 3**

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 302, with a grade of “C” or higher.

ACCT 400/Honors Intermediate Accounting III**Credit 3**

The course is a continued in-depth study of modern financial accounting. This course covers investments, earnings per share, revenue recognition, pensions, leases, accounting for changes and cash flows. Prerequisite: ACCT 302 with “C” grade or better.

ACCT 401/Honors Advanced Financial Accounting**Credit 3**

The course is a study of specialized issues in partnerships, business combinations, consolidation of parent and subsidiary financial statements, segment reporting, foreign currency transactions and hedging, and foreign financial statements. Prerequisite: ACCT 303 with a grade of ‘C’ or better.

ACCT 402/Honors Federal Income Tax Accounting Individual**Credit 3**

The course is an in-depth study of tax provisions and planning for individuals. The basic procedures involved in the determination of income tax liability of individuals are performed. Prerequisite: ACCT 302.

ACCT 405/Honors Government and Non-Profit Accounting**Credit 3**

Accounting principles and practices for governmental and not-for-profit organizations are covered with specific emphasis on state and local government units. The course also focuses on accounting and reporting issues in private not-for-profit organizations, such as hospitals and schools. Prerequisite: ACCT 302.

ACCT 407/Honors/Hybrid Auditing**Credit 3**

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. The use of audit software is required. A thorough understanding of financial accounting is required. This capstone course in Accounting is taken during the final semester of study. Prerequisites: Senior Standing, ACCT 303, ACCT 400.

ACCT 409 Forensic Accounting**Credit 3**

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 303 and ACCT 400.

ACCT 410 CPA Problems**Credit 3**

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 in accounting, or permission of instructor.

ACCT 498 Independent Study in Accounting**Credit 3**

The hours for this course are by arrangement with designated or individual faculty. Under the guidance of the faculty member, students conduct an intensive investigation of a topic within the field of accounting. A written proposal is required for approval. Projects typically include library research, interviews with operating and/or staff managers, and other requirements appropriate to the topic. One of the products of this project is a report. Prerequisites: ACCT 400 and permission of instructor.

BUSINESS ADMINISTRATION**BUAD 132 Introduction to Business****Credit 3**

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 for business majors.

BUAD 213/Hybrid/Online Business Software Applications**Credit 3**

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.

BUAD 222 Principles of the Scientific Method in Business**Credit 3**

This three-credit course examines the scientific method, and discusses its importance and application to business. The course explores the key elements of the scientific method and introduces the foundations of research in business. Prerequisites: ENGL 102, MATH 109, and sophomore standing.

BUAD 252 Calculus with Business and Management Applications**Credit 3**

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/Online Business Ethics**Credit 3**

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/Honors/Hybrid Management and Organizational Behavior**Credit 3**

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 200, ACCT 201 and ACCT 202, PSYC 200, and SOCI 101. Fashion Merchandising majors only: ECON 200 and permission of the respective Department Chairs.

BUAD 303 Advanced Organizational Behavior**Credit 3**

This course provides an understanding of managerial behavior in an organizational setting. It explores individual attitudes and behavior in interpersonal and intra-group 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/Hybrid**Credit 3**

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. Prerequisite: BUAD 302 and Junior standing.

BUAD 306 Human Resource Management**Credit 3**

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**Credit 3**

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/Online/Hybrid Advanced Business Applications**Credit 3**

The course is designed to develop computer application techniques for skilled users. Emphasis is placed on more advanced commands and techniques as applied in business and industry. Prerequisite: BUAD 213

BUAD 333/Online/Hybrid Business Communications**Credit 3**

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 305.

BUAD 353/Honors Business Statistics I**Credit 3**

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/Honors/Hybrid Business Statistics II**Credit 3**

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 364 Managerial Economics**Credit 3**

This course is the application of economic theory and methodology to managerial decision-making and policy formulation organizations settings such as business firm or government agency in local or global context. Emphasis will be on demand analysis, production and cost analysis under different market conditions, and decision-making under uncertainty. This course requires some exposure to economics, and fair knowledge of basic algebra and calculus. Managerial Economics is basically an applied quantitative course in which managerial problems are studied, analyzed and solved using economic models including graphs, diagrams, mathematical expressions, and equations. Prerequisites: BUAD 252, ECON 200, BUAD 302.

BUAD 410/Honors/Hybrid Production Management Credit 3

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/Honors/Hybrid Operations Research and Decision Theory Credit 3

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): BUAD 252 and BUAD 354 or MATH 112 and MATH 210.

BUAD 412 Business Law I Credit 3

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.

BUAD 414 Business Law II Credit 3

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 Credit 3

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.

BUAD 422 Principles of Supply Chain Management Credit 3

The purpose of this course is to examine supply chain management (SCM), its importance and benefits to the overall strategy and competitiveness of firms of all sizes. The course explores all of the key elements that comprise SCM: Operations, Distribution, and Integration. Prerequisites: BUAD 302, BUAD 354.

BUAD 430 ONLINE Ethical, Economic, Managerial and Societal Considerations of Technological Information Systems Credit 3

This course will examine the evolution of technological systems exploring the impact on business, economics, knowledge acquisition, and society. Management considerations, system options, technology adoption models, major theories, security and data control issues, and factors that can either stimulate or deter technological implementation will be covered. The role of enterprise resource planning in supply chain, data, customer relationship, human resource, financial, and project management will be discussed. Critical legal and ethical issues will also be explored.

BUAD 480 Directed Study and Practical Applications in Business and Accounting Credit 3

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 Chair.

BUAD 488C Ethical, Economic, Managerial and Societal Considerations of Technological Information Systems **Credit 3**

This course will examine the evolution of technological systems exploring the impact on business, economics, knowledge acquisition, and society. Management considerations, system options, technology adoption models, major theories, security and data control issues, and factors that can either stimulate or deter technological implementation will be covered. The role of enterprise resource planning in supply chain, data, customer relationship, human resource, financial, and project management will be discussed. Critical legal and ethical issues will also be explored.

BUAD 490 Senior Seminar in Business **Credit 3**

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.

BUAD 491/Honors Research Methods in Business **Credit 3**

The planning of research and the collection, analysis, and interpretation of data are important aspects of the course. A completed research project is required.

BUAD 495/Honors/Hybrid Strategic Management **Credit 3**

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.

BUAD 498 Independent Study in Management **Credit 3**

The hours for this course are by arrangement with designated or individual faculty. Under the guidance of the faculty member, students conduct an intensive investigation of a topic within the field of management. A written proposal is required for approval. Projects typically include library research, interviews with operating and/or staff managers, and other requirements appropriate to the topic. One of the products of this project is a report. Prerequisites: BUAD 302 and consent of instructor.

BUSINESS EDUCATION

BUED 100 First Year Experience/ Business **Credit 1**

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 Sophomore Professional Development **Credit .5**

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 Junior Professional Development**Credit .5**

A continuation of BUED 101 with emphasis on strategic planning for life including personal and 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 212/Hybrid/Online Computer-Concepts/ Applications I**Credit 3**

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 414/Online Office Management**Credit 3**

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

FINANCE**FINA 340/Hybrid/Honors Financial Management****Credit 3**

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 200.

FINA 341/Hybrid/Honors Investment and Security Analysis**Credit 3**

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/Hybrid/Honors Advanced Financial Management**Credit 3**

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**Credit 3**

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/Hybrid Principles of Real Estate**Credit 3**

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, deeds, titles, mortgage instruments, liens, landlord and tenant relationships, settlements, appraisal, real estate financing, real estate licensing laws, and ethics. Prerequisites: ACCT 202, ECON 201, ECON 200 or consent of instructor.

FINA 443 Futures and Options**Credit 3**

The focus of this course is the understanding of options and futures. Theoretical issues as well as practical matters will be discussed. Emphasis will be on the valuation of derivatives and applications to the management of financial risk. Techniques for managing both individual and corporate investment risk will be examined. Speculation strategies will also be discussed. Prerequisite: FINA 341

FINA 444 Entrepreneurial and Small Firm Finance**Credit 3**

The focus of this course is the assessment of the financial needs and sources of funds for new firms based on forecasting cash flows. Topics for discussion will include the value of the endeavor to the entrepreneur, strategic issues such as the tradeoffs between alternative financing choices, and issues of financial flexibility and control. While the primary focus will be new ventures, discussion of the financing of existing small firms will be included. Prerequisite: FINA 340

FINA 445 Financial Institutions and Markets**Credit 3**

The focus of this course is the role of institutions in the flow of funds in the economy. The banking sector, from the Federal Reserve to local retail banks, will be thoroughly examined. The development and regulatory issues of financial markets will be discussed. The course will include the theoretical underpinnings of financial markets as well as practical issues relating to money. Prerequisites: ECON 200 and 201.

FINA 446 Personal Finance**Credit 3**

The focus of this course is the management of an individual's money. Topics will include saving, investing, cash management, and credit. Discussion will focus on decision making and the acquisition of relevant information. Prerequisite: Junior Standing.

FINA 490 Senior Seminar in Finance**Credit 3**

This course provides the opportunity for advanced study of topics in finance; offerings to be announced prior to registration. Will satisfy elective requirement in Finance Concentration program. Prerequisite: Senior standing.

FINA 491/Honors Research Methods in Finance**Credit 3**

The focus of this course is the planning and execution of a research project, including the collection, analysis and interpretation of data on a topic in Finance. A completed research report is required. Prerequisite: Senior standing.

FINA 498 Independent Study in Finance**Credit 3**

The hours for this course are by arrangement with designated or individual faculty. Under the guidance of the faculty member, students conduct an intensive investigation of a topic within the field of finance. A written proposal is required for approval. Projects typically include library research, interviews with operating and/or staff managers, and other requirements appropriate to the topic. One of the products of this project is a report. Prerequisites: FINA 340 and permission of instructor.

MARKETING**MKTG 308/Hybrid Principles of Marketing****Credit 3**

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 200, ECON 201, ACCT 202 and Junior standing. (Fashion Merchandising Majors only. ECON 200 and permission of the respective Department Chairs).

MKTG 312 Sales Management**Credit 3**

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**Credit 3**

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**Credit 3**

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**Credit 3**

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, and 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**Credit 3**

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**Credit 3**

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: MKTG 308.

MKTG 409 Marketing Research**Credit 3**

The focus is on the process of acquiring, classifying and interpreting primary and secondary marketing data at the macro and micro level needed for profitable marketing decisions. Skills in evaluating the appropriateness of inductive, deductive, survey, observational, and experimental methodologies are developed. Recent developments in the systematic recording and use of internal and external data needed for marketing decisions are evaluated. The course focuses on integrating problem formulation, research design, questionnaire construction, sampling, data collection and data analysis to yield valuable marketing information. The course also examines the proper use of statistical applications such as time series analysis as well as qualitative methods, with an emphasis on the interpretation and use of results. Prerequisite: MKTG 308

MKTG 410 Marketing Strategy and Policy**Credit 3**

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 421 International Marketing**Credit 3**

The focus is on company survival and growth in developed and emerging markets. This course examines the challenge of entering and operating effectively in foreign markets. Decisions must be made regarding international marketing objectives, strategies and policies, foreign market selection and entry, adaptation and customization of products, distribution channel design and communication programs to fit each foreign market. International marketing organization, international marketing research, planning and control are discussed. Student projects will explore and demonstrate understanding of cultural and language issues through readings, case discussion, class presentations and a term project. Techniques for communicating and marketing products and services in a specific country that accommodate cultural differences are emphasized. Prerequisite: MKTG 308.

MKTG 498 Independent Study in Marketing**Credit 3**

The hours for this course are by arrangement with designated or individual faculty. Under the guidance of the faculty member, students conduct an intensive investigation of a topic within the field of marketing. A written proposal is required for approval. Projects typically include library research, interviews with operating and/or staff managers, and other requirements appropriate to the topic. One of the products of this project is a report. Prerequisites: MKTG 308 and consent of instructor.

DIRECTORY OF FACULTY

Abaidoo, Rexford, Assistant Professor

B.S., Business Administration & Law, University of Ghana; M.S., Kennesaw State University; Ph.D., Jackson State University

Ali, Mohammad, Associate Professor

B.A., University of Dhaka, Dhaka, Bangladesh; M.A., University of Dhaka; M.B.A., University of Dhaka; M.S., Ph.D., University of Florida

Brown, Kate, Associate Professor & Chair

B.A., M.B.A., Ph.D. University of Connecticut

Buzzetto- More, Nicole, Associate Professor

B.A., Marist College; M.S., College of New Rochelle; Ed.M., Columbia University; Ed.D., Columbia University

Das, Monisha, Associate Professor

B.A., University of Calcutta, India; M.A., University of Bombay, India; M.B.A., J. Bajaj Institute of Management Studies; Ph.D., Golden State University

Habib, Nagy, Associate Professor

B.A., Higher Commercial Institute, Egypt; M.A., New York University; Ph.D., Indiana University

Lee, Kyung Joo, Associate Professor

B.B.A., Korea University, Seoul, Korea; M.B.A., Indiana University; Ph.D., University of Arizona

Li, Deqing (Diane), Associate Professor

B.S., Shandong University; M.S., Ph.D., Old Dominion University

Marcelin, Isaac, Assistant Professor

B.S., University of Notre Dame of Haiti; B. L., Institut Universitaire des Sciences Juridiques et du; B.A & M.S., Southern Illinois University

Mitchell, Bryant, Associate Professor

B.S., University of Maryland Eastern Shore; M.B.A., Columbia University; Ph.D., Clemson University

Panda, Dandeson, Associate Professor

B.S., University of the District of Columbia; M.B.A., Atlanta University; Ph.D., Howard University

Sampson, Allen, Lecturer

B.S., Morgan State University; M.B.A., Wharton Graduate School of Business, University of Pennsylvania

Sharma, Dinesh, Professor

B.S., Maharshi Dayanand University; M.S., Meerut University; M.S., University of North Carolina; Ph.D., Chaudhary Charan Singh University

Starkey, Arthur, Visiting Lecturer

B.S. and M.S., University of Baltimore

Sum, Vichet, Assistant Professor

B.S., M.S., Ph.D., Southern Illinois University

Thomas-Banks, Leesa, Lecturer

B.A., Oakwood University, J.D., Loyola University (New Orleans)

Wang, Hwei Cheng (Wendy), Associate Professor

MBA., California State University at San Bernadino; DBA, Nova Southeastern University

Dr. Alvernon Walker, Chairperson

MISSION

The mission of the Department of Engineering and Aviation Sciences is to provide quality professional degree programs, to prepare students for employment in their chosen field, to establish close partnerships with and facilitate technology transfers to industry and government, to prepare students for advanced studies, to contribute to economic development of the State, and to provide related service to the campus community and the community at large.

OBJECTIVES

The objectives of the programs offered in the Department of Engineering and Aviation Sciences are as to:

1. Provide students with academic curricula that develop a strong background in Engineering and Aviation Sciences concentration areas.
2. Prepare students for life-long learning.
3. Expose students to social, historical, and ethical issues involving Engineering and Aviation Sciences.
4. Promote interaction between the university and the community through departmental activities by faculty and students.
5. Encourage, through recruitment, outreach, and intervention programs, minorities and women to pursue careers in the Engineering and Aviation Sciences programs.
6. Provide students in the department opportunities for scholarship, work-study arrangements, summer employment, and jobs.

DEGREES OFFERED

Bachelor of Science - Engineering

With Specializations in:

- Aerospace
- Computer
- Electrical
- Mechanical

Bachelor of Science - Aviation Sciences

With concentration in:

- Professional Pilot
- Aviation Electronics
- Aviation Management
- Aviation Software

ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES

UMES Engineering program produces graduates who are expected to achieve the following objectives within a few years after graduation:

- Objective 1: Work as a technically competent engineer at the professional level in industry, government agencies or pursue graduate studies.
- Objective 2: Effectively work on industry or government engineering project teams.
- Objective 3: Be engaged as an effective member of the engineering profession as it relates to and interacts with the global society.
- Objective 4: Actively take steps to remain current with advancing engineering tools and technologies

STUDENT LEARNING OUTCOMES

The graduates of the UMES Engineering program will achieve the following Learning Outcomes:

- a) an ability to apply knowledge of mathematics, science, and engineering
- b) an ability to design and conduct experiments, as well as to analyze and interpret data
- c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d) an ability to function on multidisciplinary teams
- e) an ability to identify, formulate, and solve engineering problems
- f) an understanding of professional and ethical responsibility
- g) an ability to communicate effectively
- h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i) a recognition of the need for, and an ability to engage in life-long learning
- j) a knowledge of contemporary issues
- k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL PROGRAM REQUIREMENTS

The admission of students to the Engineering program is based upon SAT scores, high school or college grades, and preparation in mathematics and science in high school or college. The course sequence and prerequisites for the Engineering program require that the student place into MATH 112, Calculus I, 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 Engineering or Aviation Sciences programs. These students will require additional preparatory courses at UMES prior to starting the core courses in the Engineering program, and this may extend their program by one or more semesters. Successful completion of the Bridge, Jump Start, PACE, or similar programs during the summer prior to students' Freshman year is highly recommended.

Collaborative Agreements with Other Institutions of Higher Learning

UMES maintains collaborative agreements with various community colleges in the state of Maryland to provide students the opportunity to complete a bachelor's degree in Engineering or Aviation Sciences programs 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 Engineering or Aviation Sciences degree must complete all UMES degree requirements. Students normally enter the collaborative program upon completion of their associate degree, but 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 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 Engineering or Aviation Sciences degree if all UMES degree requirements are met. Transfer credit toward a UMES degree for courses taken at a community college is granted in accordance with the MHEC regulations. Collaborative agreement students who wish to enroll in the UMES 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.

CAREER OPPORTUNITIES

Engineering is a profession in which fundamentals of mathematics and natural sciences are applied to develop and create techniques and products for the benefits of humanity. Aerospace engineers design and develop various types of imaginable flying machines such as military fighter jets or unmanned aerial vehicles. Computer engineers deal with all aspects of the design, construction, and operation of computer systems and their hardware and software. Electrical engineers are involved in much of the technology in computers, communication systems, power systems, satellites, microelectronics, and integrated circuits. Mechanical engineers design and develop all types of machinery such as artificial organs, robotics, manufacturing, automotive, or air conditioning.

ENGINEERING Required Courses

GENERAL EDUCATION REQUIREMENTS

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. Students are required to take 12 Alternative Credits before graduating. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H, POLI 220H or POLI 342

SOCI 101 or SOCI 101H

ECON 201 or ECON 201H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200, SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

CHEM 111 or CHEM 111H

CHEM 113 or CHEM 113H

BIOL 111 or BIOL 111H

BIOL 113 and BIOL 113H

PHYS 161

PHYS 163

PHYS 181H

PHYS 183H

Curriculum Area IV – MATHEMATICS

Credits 4

MATH 112

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H; ENGL 001/002/003

ENGL 305/H or ENGL 310/H

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 4**

ENGE 100 First Year Experience Course

In addition, students must take one of the following 3 credit courses from the following list of identified as Emerging Issues

EXSC 111
 HUEC 230
 TMGT 306

Total Required for General Education**Credits 40****SUPPORTING SCIENCE & MATH REQUIREMENTS****Credits 19**

Students may substitute PHYS 182H and 184H for PHYS 262 and PHYS 264

MATH 211 Calculus II	4
MATH 212 Calculus III	4
MATH 241 Elements of Differential Equations for Engineers	3
PHYS 262 General Physics II	3
PHYS 264 General Physics II Lab	1
PHYS 263 General Physics III	3
PHYS 265 General Physics III Lab	1

ENGINEERING CORE REQUIREMENTS**Credits 48**

ENGE 150 Modern Engineering Design	3
ENGE 170 Programming Concepts for Engineers	3
ENGE 240 Basic Circuit Theory	3
ENGE 241 Analog Circuits Laboratory	1
ENGE 250 Digital Logic Design	3
ENGE 251 Digital Logic Laboratory	1
ENGE 260 Statics	3
ENGE 261 Dynamics	3
ENGE 270 Computer Aided Design	3
ENGE 320 Statistics & Probability for Engineers	3
ENGE 340 Analog and Digital Electronics	3
ENGE 341 Analog and Digital Electronics Laboratory	1
ENGE 362 Mechanics of Materials	3
ENGE 370 Computational Methods in Engineering	3
ENGE 380 Instrumentations	3
ENGE 382 Control Systems	3
ENGE 383 Instrumentation & Control Laboratory	1
ENGE 475 Engineering Seminar	1
ENGE 476 Senior Design Project I	2
ENGE 477 Senior Design Project II	2

ENGINEERING SPECIALIZATION REQUIREMENTS**Credits 17**

Students will take five courses and one lab from one of the following areas of specialization:

Computer Specialization (ENCE)**Credits**

ENCE 330 Signals and Systems	3
ENCE 458 VLSI Design	3
ENCE 350 Computer Organization	3
ENCE 460 Digital Signal Processing	3
ENCE 352 Microprocessors and Microcomputers	3
ENCE 462 Digital Control System	3
ENCE 387 Simulation & Virtual Reality	3
ENCE 464 Embedded System Design Laboratory	2
ENCE 452 Artificial Intelligence	3

ENCE 468	Robotics	3
ENCE 454	Computer System Architecture	3
ENCE 469	Robotic & Automation Design Laboratory	2
ENCE 456	Microprocessors Design Laboratory	2
ENCE 472	Selected Topics in Engineering	3

Electrical Specialization (ENEE) Credits

ENEE 330	Signal and Systems	3
ENEE 462	Digital Control System	3
ENEE 348	Electromagnetic Theory	3
ENEE 464	Embedded System Design Laboratory	2
ENEE 385	Power Electronics	3
ENEE 465	Remote Sensing and Image Processing	3
ENEE 387	Simulation & Virtual Reality	3
ENEE 468	Robotics	3
ENEE 443	Communications Systems	3
ENEE 469	Robotic & Automation Design Laboratory	2
ENEE 444	Communications Design Laboratory	2
ENEE 472	Selected Topics in Engineering	3
ENEE 460	Digital Signal Processing	3

Mechanical Specialization (ENME) Credits

ENME 342	Fluid Mechanics	3
ENME 442	Micro Electro-Mechanical Systems	3
ENME 345	Thermodynamics	3
ENME 462	Digital Control System	3
ENME 346	Heat Transfer	3
ENME 464	Embedded System Design Laboratory	2
ENME 422	Mechanisms and Machine Design	3
ENME 468	Robotics	3
ENME 425	Rapid Prototyping & Product Develop.	3
ENME 469	Robotic & Automation Design Laboratory	2
ENME 430	Finite Element Analysis	3
ENME 472	Selected Topics in Engineering	3
ENME 440	Mechatronics	3

Aerospace Specialization (ENAE) Credits

ENAE 342	Fluid Mechanics	3
ENAE 442	Micro Electro-Mechanical Systems	3
ENAE 345	Thermodynamics	3
ENAE 462	Digital Control System	3
ENAE 389	Space Systems Design	3
ENAE 464	Embedded System Design Laboratory	2
ENAE 412	Space Navigation and Guidance	3
ENAE 465	Remote Sensing and Image Processing	3
ENAE 420	Aerodynamics	3
ENAE 467	Design of Autonomous Aerial Systems	3
ENAE 430	Finite Element Analysis	3
ENAE 472	Selected Topics in Engineering	3
ENAE 440	Mechatronics	3

¹Students must take five courses and one Laboratory from one of the areas of specialization.

CURRICULUM GUIDE FOR ENGINEERING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 111	3	ENGE 170	3
CHEM 113	1	ENGL 102	3
ENGE 100	1	ENGL 001/ENGL 003 ¹	0
ENGE 150	3	MATH 211	4
ENGL 101	3	PHYS 161	3
MATH 112	<u>4</u>	PHYS 163	<u>1</u>
	15		14

SOPHMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGE 250	3	ENGE 240	3
ENGE 251	1	ENGE 241	1
ENGE 260	3	ENGE 261	3
ENGL 203	3	ENGE 270	3
MATH 241	3	MATH 212	4
PHYS 262	3	PHYS 263	3
PHYS 264	<u>1</u>	PHYS 265	<u>1</u>
	17		18

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGE 340	3	ENGE 320	3
ENGE 341	1	ENGE 382	3
ENGE 362	3	ENGE 383	1
ENGE 370	3	GEN ED CURR AREA	3
ENGE 380	3	Specialization Elective	3
ENGL 305	<u>3</u>	Specialization Elective	<u>3</u>
	16		16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGE 476	2	ENGE 477	2
ENGE 475	1	GEN ED CURR AREA	3
GEN ED CURR AREA	3	GEN ED CURR AREA	3
GEN ED CURR AREA	3	Specialization Elective	3
Specialization Elective	3	Specialization Elective	<u>3</u>
Specialization Lab	<u>2</u>		
	14		14

Total Credit Hours: 124

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

AVIATION SCIENCES

GENERAL PROGRAM REQUIREMENTS

The Aviation Sciences program does not have any specific admissions requirements for general admission to UMES, although this is subject to change. The course sequence and prerequisites for Aviation Sciences program require that the student place into MATH 109, College Algebra, or higher (except for Aviation Electronics, which requires placement into MATH 112, Calculus I) 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 programs. These students will require additional preparatory courses at UMES prior to starting the core courses in the Aviation Sciences program, and this may extend their program by one or more semesters. Successful completion of the Bridge, Jump Start, PACE, SEA or similar programs during the summer prior to Freshman year is highly recommended.

DEPARTMENTAL REQUIREMENTS

The Aviation Sciences program consists of 120 total credit hours. Students complete 34 credit hours of Aviation core courses and choose one of four concentrations. The concentration areas are Professional Pilot, Aviation Electronics, Aviation Management, Aviation Software, and each consists of 33 credit hours. The curricula include 41 credit hours of general education courses, 6 credit hours of support courses, and 6 hours of Aviation elective courses.

EDUCATIONAL OBJECTIVES

UMES Aviation program produces graduates who are expected to achieve the following objectives within a few years after graduation:

- Objective 1: Students will be prepared for graduate studies in the field of Aviation Sciences and will demonstrate the skills necessary to be employed in the field of aviation.
- Objective 2: Students will demonstrate critical thinking and problem-solving skills in the field of aviation.
- Objective 3: Students will demonstrate knowledge of the inner workings of the aviation industry and practical career applications within their specific concentration.

AVIATION PROGRAM LEARNING OUTCOMES

Aviation programs graduates will be able to demonstrate the ability to:

- a) apply mathematics, science, and applied sciences to aviation-related disciplines;
- b) analyze and interpret data;
- c) work effectively on multi-disciplinary and diverse teams;
- d) make professional and ethical decisions;
- e) communicate effectively, using both written and oral communication skills;
- f) engage in and recognize the need for life-long learning;
- g) assess contemporary issues;
- h) use the techniques, skills, and modern technology necessary for professional practice;
- i) assess the national and international aviation environment;
- j) apply pertinent knowledge in identifying and solving problems;
- k) apply knowledge of business sustainability to aviation issues.

CAREER OPPORTUNITIES

Aviation Sciences is the study of the technical and professional skills and disciplines necessary for the operation and management of aviation enterprises including piloting, business management /administration, and supporting technical areas such as development of aviation specific electronic and software systems. 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

Flight Training

The flight training course syllabus (certified by the Federal Aviation Administration under Part 61 and 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 provides a broad base knowledge and experience that are needed for good decision-making of pilots. Flight training is accepted from FAA Part 61 & 141-approved flight schools operating under contract with UMES. 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.

Flight Training Laboratory Fee

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 UMES tuition. In order to make flight training more easily accessible, the Department of Engineering & Aviation Sciences at the University of Maryland Eastern Shore (UMES) has implemented a flight training Laboratory fee. Students enrolling in designated flight training courses will be charged the fee in accordance with the requirements of the flight training course in which the student is enrolled.

The flight training Laboratory fee will be separate from any other associated costs of flight training and is determined for each practicum course based on the Approved Training Course minimum completion standards and average cost of instruction and aircraft rental. This is a one-time fee that is transferred directly to a UMES-approved flight training provider. These funds must be used for approved flight training purposes toward completion of the associated coursework in which the student is enrolled. UMES has taken into account the likelihood of poor flying conditions and additional flying needed in preparation for the Federal Aviation Administration (FAA) Practical Examinations. Annual updates to the cost of flight training will be made to adjust for the changes in fuel, instruction, and rental costs. Students should refer to the most current version of the UMES Flight Training Handbook for a description of the courses and their associated fees. As of Fall 2013, the flight related fees are as follows*:

AVSC 143:	\$2,500	AVSC 153:	\$6,000	AVSC 163:	\$7,500
AVSC 252:	\$5,500	AVSC 253:	\$5,500	AVSC 254:	\$5,500
AVSC 452:	\$3,000	AVSC 462:	\$2,500	AVSC 472:	\$3,600

These flight laboratory fees are meant to cover the minimum flight hours specified under the Code of Federal Regulations (CFRs) Part 141 necessary to graduate within the Professional Pilot concentration. This charge enables students to apply for additional financial aid. Students interested in financial aid to cover the cost of flight training should meet with their departmental advisor and the financial aid office to discuss the various options available.

*Subject to change. See current version of Flight Training Handbook.

Training Aids

The Aviation program training aids include a complete selection of visual aids, computer access, and the latest software support for pilots, such as PC-based flight simulation programs and FAA written knowledge test preparation packages. The department has an FAA-certified Frasca 142 flight training system and a Precision Flight Controls CAT-V MFD advanced aviation training system on campus for instrument and procedures instruction at all levels, from basic flight to advanced multi-engine operations.

Simulator Use

The FAA allows a portion of student's aeronautical training to be conducted with the University's Flight Training Systems and simulators. This provides a significant cost savings over the use of an aircraft for the same experience. Additionally, solo practice in the simulator is 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 enrolled in pilot ground training courses will be assessed a laboratory fee for simulator use. The lab fee provides for unlimited usage of the flight simulator while under supervision of aviation faculty. Students should review the most current version of the aviation program's handbook for current lab fee rates.

Medical Examination

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. 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 are encouraged to 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. AME's are listed on the internet at www.faa.gov/pilots/amelocator. 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 \$50 - \$75, and for students under age 40 with no abnormal conditions, the examination is good for five years of training.

Aviation Security Requirements

Federal regulations (49 CFR Part 1552) enacted in 2004 require all flight training students to either document US citizenship or complete a Federal security background check. Students may participate in non-flight programs without complying with these regulations, but those in flight programs must comply before their first flight. The background checks apply to all non-US citizens, including nationals of other countries with permanent resident status in the US. These checks include fingerprinting, photographing, and submitting personal data, copies of passports, visas, and other documents to the Transportation Security Administration (TSA). US citizens must present either a current valid US passport or an original or raised-seal official copy of their certificate of birth or naturalization. Non-US citizen students must make application to the US Transportation Security Administration and pay a fee (currently \$130.00) to TSA. This must be accomplished before starting flight training at UMES and again before starting instrument training and multiengine training although the fee will only be charged one time. All actions necessary to accomplish this check may be completed at the UMES campus and/or at the location of the flight training provider when the student arrives for training. Training may begin as soon as the application is completed, but may be suspended if TSA rejects the student or requires further checks. UMES is legally obligated to deny training to any student rejected by TSA. As the TSA Flight Student security program is not under UMES' control, UMES cannot accept any responsibility for it nor can UMES make any promise that any student will pass the checks. More information on the TSA Flight Student security program may be found on the Internet at <https://www.flightschoolcandidates.gov/>.

Credit for Prior Flight Training

Students who arrive with FAA pilot and/or flight instructor certificates and ratings 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 (AABI Criterion 2.9). This may be accomplished by taking standardized test in university simulator laboratory using FAA Practical Test Standards, or via departmental oral exam and interview.

AVIATION SCIENCE PROGRAM
Required Courses

Total number of credits and their distribution

<u>Category</u>	<u>Distribution</u>
I. General Education Courses	41 credit hours
II. Support Requirements	6 credit hours
III. Aviation Core Requirements	34 credit hours
IV. Concentration Requirements	33 credit hours
V. Electives	6 credit hours

GENERAL EDUCATION REQUIREMENTS

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. Students are required to take 12 Alternative Credits before graduating. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:
One course from each of two disciplines below:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II – Social and Behavioral Sciences

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H, POLI 220H or POLI 342

SOCI 101 or SOCI 101H

ECON 201 or ECON 201H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200, SOCI 201

Curriculum Area III – Biological and Physical Sciences

Credits 7

Students must select two approved GEN ED III science courses, and one laboratory course.

ANPT 114, ANPT 114H

BIOL 101, BIOL 103 (lab),

CHEM 101, CHEM 102, CHEM 103 (lab), CHEM 104 (lab)

ENVS 101, NUDT 210

PLSC 184, PLSC 185 (lab).

Students in **Agriculture, Engineering, Exercise Science, Human Ecology, Physician Assistant and Rehabilitation Services only** 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

Credits 6

Students must take 6 credits of math, with at least one course at or above the level of MATH 109.

Aviation Electronics and Aviation Software students are advised to take MATH 112 and one other Math course to fulfill Curriculum Area IV requirements.

Curriculum Area V – English Composition

Credits 9

ENGL	101	Basic Composition I	3
ENGL	102	Basic Composition II	3
ENGL	305	Technical Writing or	
ENGL	310	Advanced Composition	3

Curriculum Area VI – Emerging Issues

Credits 4

AVSC	100	First Year Orientation with Aviation	1
EXSC	111	Personalized Health Fitness or	
		Aviation Course or course as approved by Department	3

SUPPORT REQUIREMENTS

Credits 6

AVSC	390	Aviation Application of Statistics and Research Design or	
BUAD	252	Calculus w/ Business & Management Applications* or	
MATH	210	Elementary Statistics	3
AVSC	170	Software and Simulation Applications in Aviation or	
ENGE	170	Programming Concepts for Engineers or	
BUED	212	Computer Concepts/Applications I	3

**Aviation Electronics and Aviation Software Students will take MATH 211 in place of BUAD 252 to fulfill Support Requirements.*

AVIATION CORE REQUIREMENTS

Credits 34

Students must earn a “C” or better in all major coursework including the concentration requirement.

AVSC	112	Aviation Fundamentals	3
AVSC	131	Air Transportation	3
AVSC	152	Meteorology & Environmental Issues	3
AVSC	201	The National Airspace System	3
AVSC	202	Air Traffic Control	3
AVSC	231	Airline Management I	3
AVSC	241	Aviation Safety	3
AVSC	305	Aviation Career Preparation	1
AVSC	331	Aviation Law	3
AVSC	421	Aviation Psychology	3
AVSC	441	Human Factors in Aviation	3
AVSC	490	Senior Capstone in Aviation	3

CONCENTRATION REQUIREMENTS**Credits 33****Professional Pilot Concentration**

AVSC	141	Private Pilot Ground Laboratory	1
AVSC	143	Primary Flight Training I	2
AVSC	153	Primary Flight Training II	2
AVSC	163	Primary Flight Training III	2
AVSC	161	Instrument Rating Ground	3
AVSC	251	Commercial Pilot Ground	3
AVSC	252	Commercial Pilot Flight I	2
AVSC	253	Commercial Pilot Flight II	2
AVSC	302	Advanced Aircraft Systems	3
AVSC	311	Aerodynamics and Aircraft Per.	3
AVSC	342	Flight Physiology	3
AVSC	451	Certified Flight Inst. Airplane – Grnd.	3
AVSC	452	Certified Flight Inst. Airplane – Ft. or	2
AVSC	472	Multi-Engine Pilot Flight and	1
AVSC	380	Cooperative or Internship	1

Aviation Management Concentration

AVSC	132	Introduction to Aviation Business	3
ACCT	201	Introductory Financial Accounting	3
ACCT	202	Introductory Corp. & Mngmt. Acct.	3
ECON	201	Principles of Macroeconomics	3
ECON	200	Principles of Microeconomics	3
AVSC	232	Airport Management	3
AVSC	261	Aviation Organization and Leadership	3
AVSC	355	Airport Planning	3
AVSC	431	Maintenance Management	3
AVSC	432	Airline Management II	3
AVSC	442	Safety Management	3

Aviation Electronics Concentration

AVSC	302	Advanced Aircraft Systems	3
AVSC	361	Communication Electronics	3
EDTE	211	Electrical & Electronic Technology I	3
EDTE	212	Electrical & Electronic Technology II	3
ETEE	303	Circuit Theory III	3
ETEE	335	Logic and Switching	3
ETEE	355	Advanced Electronics	3
ETEE	421	Instruments and Measurement	4
ETEE	425	Communications and Microwave Tech.	3
ETEE	485	Design Technology I or	
AVSC	298	Aerospace Design I	3
ETEE	486	Design Technology II or	
AVSC	498	Aerospace Design II	3

Aviation Software Concentration

AVSC	302	Advanced Aircraft Systems	3
CSDP	220	Introduction to Computer Prog.	4
CSDP	221	Intro to Computer Prog.: Intensive	4
CSDP	222	Advanced Programming	4
CSDP	250	Introduction to Data Structures	3
CSDP	301	Machine and Assembly Language	3
CSDP	305	Software Engineering I	3

CSDP	321	Introduction to Discrete Structures	3
CSDP	350	Linear Programming	3
CSDP	401	Operating Systems	3

ELECTIVES*

Credits 6

*Students will choose AVSC or other courses approved by the department to complete at least 6 credits. Students pursuing a career in Air Traffic Control are advised to select 6 credits of AVSC Air Traffic Control Operations Coursework. *Elective courses cannot be an AVSC course that is required elsewhere in the curriculum. Courses outside of the AVSC curriculum can be substituted in place of the following AVSC courses approved for the Elective Area: AVSC 132, 141, 142, 143, 153, 161, 162, 163, 170, 188, 232, 251, 252, 253, 254, 261, 288, 298, 301, 302, 310, 311, 312, 323, 326, 342, 355, 361, 365, 380, 381, 382, 390, 398, 431, 432, 442, 451, 452, 461, 462, 472, 498, 499.*

CURRICULUM GUIDE FOR AVIATION SCIENCES

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AVSC 100	1	AVSC 152	3
AVSC 112	3	Concentration course	3
AVSC 131	3	SOCI 101	3
ENGL 101	3	ENGL 102	3
MATH ¹	3	ENGL 001/ENGL 003 ²	0
Concentration Course	<u>3</u>	MATH ¹	<u>3</u>
	16		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AVSC 201	3	AVSC 202	3
AVSC 241	3	AVSC 231	3
Concentration Course	3	ENGL 305 or 310	3
ENGL 203	3	AVSC 170 ³	3
Science Course with Lab	<u>4</u>	Concentration Course	<u>3</u>
	16		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Concentration Course	3	AVSC 305	1
AVSC 331	3	Concentration Course	3
Concentration Course	3	AVSC 390 ⁴	3
GEN ED CURR AREA I	3	GEN ED CURR AREA I	3
PSYC 200	<u>3</u>	Science Course	<u>3</u>
	15		13

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
AVSC Elective	3	AVSC Elective	3
AVSC 421	3	AVSC 441	3
Concentration Course	3	AVSC 490	3
Concentration Course	3	Concentration Course	3
EXSC 111	<u>3</u>	Concentration Course	<u>3</u>
	15		15

Total Credit Hours: 120/121 (varies depending on concentration)

¹Student must select Gen Ed MATH as defined by placement test results. Students must complete 6 credits of MATH with at least 3 credits at or above the level of MATH 109 to meet General Education Requirements. MATH 101 does not count toward graduation requirements.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Students take AVSC 170, ENGE 170 or BUED 212 to meet support requirements

⁴Student take AVSC 390, MATH 210, BUAD 252 or MATH 211 depending on concentration to meet support requirements.

COURSE DESCRIPTIONS FOR AVIATION SCIENCES

AVSC 100 First Year Orientation with Aviation **Credit 1**

This course offers 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 **Credit 3**

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. Aviation Science students in the Professional Pilot Concentration should enroll concurrently in AVSC 141.

AVSC 131 Air Transportation **Credit 3**

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 132 Introduction to Aviation Business **Credit 3**

This course is an introductory course to provide an overview of the structure of business, management and organization, human resources, financial management, production, labor-management relations, marketing, accounting, and insurance as well as the global dimensions of business and social responsibilities of business as these topics relate to aviation business. Also included is an exploration of the management of FBOs and other general aviation enterprises. Prerequisite: AVSC 131.

AVSC 141 Private Pilot Ground Laboratory **Credit 1**

This course provides ground and simulator instruction to meet FAA private pilot aeronautical knowledge requirements. Subjects include all applicable Federal Aviation Regulations (FARs), visual flight rules (VFR) navigation, aviation weather, aircraft operations, safety considerations, etc. Training includes instruction necessary to complete the airmen knowledge requirements of the Private Pilot Airplane airmen knowledge test (FAA written exam). This course is designed for students in the Professional Pilot Concentration and should be taken concurrently with AVSC 112 Aviation Fundamentals. Prerequisite: MATH 101 with "C" or better, placement into MATH 109, or permission of instructor. Co-requisite: AVSC 112

AVSC 142 Private Pilot Flight **Credit 3**

This course includes actual flight and simulator time to meet private pilot 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. This course, completed together with AVSC 162, is the equivalent of AVSC 143, 153, and 163. Co-requisite: AVSC 141.

AVSC 143 Primary Flight Training I**Credit 2**

This course includes actual flight and simulator time to meet the requirements of the first two stages of the FAA 141 Private Pilot Flight syllabus. Topics include the 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 training, maximum performance takeoffs and landings, night flying and emergency operations. Upon completion of this course, the student will have passed the Private Pilot Stage I and Stage II stage checks. Laboratory Fee: \$2,500. Co-requisite: AVSC 141.

AVSC 152 Meteorology & Environmental Issues**Credit 3**

This course covers the following topics: 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. Pre/Co-requisite: AVSC 112.

AVSC 153 Primary Flight Training II**Credit 2**

This course includes actual flight and simulator time to meet the requirements of the final stage of FAA Part 141 Private Pilot flight syllabus and the first stage of the FAA Part 141 Instrument Rating Flight syllabus. Topics include the FAA required maneuvers such as: solo cross-country navigation, and basic radio navigation. Upon successful completion of this, the student will have passed the Private Pilot Stage II stage check, the Private Pilot end of course check, the FAA Private Pilot Airplane Single Engine Land practical test, and the Instrument Rating Stage I stage check. Laboratory Fee: \$6,000. Prerequisites: AVSC 141, AVSC 143. Co-requisite: AVSC 161.

AVSC 161 Instrument Rating Ground**Credit 3**

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. Training includes instruction necessary to complete the airmen knowledge requirements for the Instrument Airplane airmen knowledge test (written exam). Prerequisite: AVSC 141. Co-requisite: AVSC 152.

AVSC 162 Instrument Rating Flight**Credit 3**

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. This course, completed together with AVSC 142, is the equivalent of AVSC 143, 153, and 163. Laboratory fee \$250. Prerequisites: AVSC 141 and AVSC 142. Co-requisites: AVSC 161 and 152.

AVSC 163 Primary Flight Training III**Credit 2**

This course provides flight and simulator training for instrument pilot operations which is necessary to safely and accurately perform standard instrument approaches to operate an airplane under Instrument Flight Rules (IFR) within the National Airspace System. Upon successful completion of this course, the student will have passed the Instrument Rating Stage III and III stage checks, the Instrument Rating end-of-course check, and the FAA Instrument Airplane Rating practical test. Laboratory Fee: \$7,500. Prerequisites: AVSC 153, AVSC 161, and AVSC 152.

AVSC 170 Software and Simulation Applications in Aviation**Credit 3**

This course provides an introduction to the use of software and simulation tools in support of aviation. An introduction to the use of software in support of the following will be covered: operations research as it relates to airlines, airports, and other aviation stakeholders; data management and statistical analysis; airspace and airport capacity modeling; geographic information systems; and simulation. Specific topics will be decided based on the unique and contemporary needs of the field.

AVSC 188 Flight Training**Credit 0**

This course provides students with flight training activities. Students in flight training shall sign up for three sections of this course each semester to ensure three half days of flight training per week. Prerequisite: Enrollment in UMES Flight Training program.

AVSC 201 The National Airspace System**Credit 3**

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.

AVSC 202 Air Traffic Control**Credit 3**

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 Airline Management I**Credit 3**

This course studies the operational requirements of Part 135 and 121 carriers in the National Airspace System. Discussions include value analysis of different aircraft types for various users, cost-effective operations, marketing considerations, facilities, equipment suitability, aircraft acquisition and modernization. Typical subjects include aviation regulations, records and documents associated with air carrier operations. Prerequisite: AVSC 131 or ECON 201.

AVSC 232 Airport Management**Credit 3**

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 economic issues. Prerequisites: AVSC 231 or permission of instructor.

AVSC 241 Aviation Safety**Credit 3**

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.

AVSC 251 Commercial Pilot Ground**Credit 3**

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. Training includes instruction necessary to complete the airmen knowledge requirements for the (FAA written exam) Commercial Pilot Airplane airmen knowledge test (written exam). Prerequisites: AVSC 152, AVSC 153, AVSC 161 and AVSC 253. Co-requisites: AVSC 201 and 241.

AVSC 252 Commercial Pilot Flight I**Credit 2**

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 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. Laboratory Fee: \$5,500. Prerequisite: AVSC 162. Co-requisite: AVSC 251.

AVSC 253 Commercial Pilot Flight II**Credit 2**

This course is actual flight and simulator time for private pilots to learn commercial pilot operations. Emphasis is placed 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. Laboratory Fee: \$5,500. Prerequisite: AVSC 251 and AVSC 252.

AVSC 254 Commercial Pilot Flight III**Credit 2**

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 completion of this course, the student will have mastered the complex aircraft aeronautical knowledge and skill requirements for an FAA Commercial Pilot Certificate. Laboratory Fee: \$5,500. Prerequisite: AVSC 251, AVSC 252 and AVSC 253.

AVSC 261/Online Aviation Organization and Leadership**Credit 3**

This course is a study of the various organizational theories as they apply to the aviation industry. The course will cover the topics of human resources management, labor relations, classical and rational theories of organizational structure and management, the evolution of business organization and the economics of organizations. Prerequisites: AVSC 231.

AVSC 298 Aerospace Design I: Gateway to Space**Credit 3**

The lectures will cover an introduction to space science and spacecraft functionality. The project effort will be organized by the professor, who will act as a Principal Investigator. The class will be divided in teams and asked to design, develop, test and operate a payload or a pico-satellite in response to a Request For Proposal (RFP) for a tailored mission. The project may be a payload for a BalloonSat or Sounding Rocket launch, or the students may be asked to develop a pico-satellite and enter in the "NearSat competition" organized by AIAA and AAS.

AVSC 301 Aircraft Dispatcher**Credit 3**

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.

AVSC 302 Advanced Aircraft Systems**Credit 3**

This course covers all aircraft systems, their theory of design, operations, trouble shooting and maintenance standards. Study includes propulsion systems, associated instruments, auxiliary systems, propeller and control; aircraft structure, aircraft electrical and lighting, hydraulic and pneumatic systems, avionics, brakes and tires, deicing, flight instrumentation, navigation systems, and ELT. This course covers an in-depth understanding of a typical turboprop commuter-type aircraft as well as an overview of the design and development process of commercial aircraft. Prerequisite: AVSC112 and AVSC 251 or permission of instructor.

AVSC 305 Aviation Career Preparation**Credit 1**

This course is designed to prepare Aviation Science students for entry into the aviation career field. Topics and assignments will include resume writing, course portfolio creation, and development of interview skills through the use of mock interviews. This course will prepare students to enter an Internship and complete AVSC 380. Prerequisite: Junior Standing

AVSC 310 Aerial Operations in Remote Sensing**Credit 3**

This course covers the operation of aerial platforms as it relates to remote sensing in support of various scientific endeavors. Topics discussed will include the operation of unmanned aerial systems (UAS), the collection of data using UAS and other aerial platforms, and data analysis using geographic information systems (GIS) and other relevant software tools. Students will engage in a research project, and collect and analyze data in accordance with the objectives of the project. Prerequisite: AVSC 211 or MATH 210 or permission of instructor.

AVSC 311 Aerodynamics & Aircraft Performance**Credit 3**

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. Prerequisite: AVSC 112, MATH 112 or BUAD 252, PHYS 121 or PHYS 161 or PHYS 181, and Junior standing.

AVSC 312 Advanced Aerodynamics and Performance of Flight Vehicles Credit 3

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 323 Sport Pilot Ground School**Credit 1**

This course provides the requisite aeronautical knowledge to successfully pass the Federal Aviation Administration Sport Pilot Certificate Written Exam. Students will cover topics including aircraft design and basic aerodynamics, flight Instruments, Federal Aviation Regulations (FARs), meteorology, ground operations, flight planning and navigation techniques, and required endorsements.

AVSC 326 Air Traffic Control Operations I**Credit 3**

This course provides the requisite aeronautical knowledge to successfully pass the Federal Aviation Administration Air Traffic Selection Training Aptitude Test Written Exam. Students will cover topics including the aircraft separation, NOTAMS, radar, FAA Orders, LOAs, regulations, navigation, publications, IFR structure, weather, PIREPS, communications, ATC clearances and strip marking as it relates to Air Traffic Controller duties. Students will practice hands on air traffic control procedures utilizing desk-top and/or an ATC simulator. Prerequisites: AVSC 202. Laboratory fee: \$250.

AVSC 331 Aviation Law**Credit 3**

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, AVSC 131 and Junior standing.

AVSC 342 Flight Physiology**Credit 3**

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 the associated human factor issues. Prerequisite: AVSC 241 and Junior standing.

AVSC 355 Airport Planning**Credit 3**

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 AVSC 231 or permission of instructor.

AVSC 361 Communication Electronics**Credit 3**

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, ENGE 170 and Junior standing.

AVSC 365 Transportation Security**Credit 3**

This course will focus on Transportation Security Administration regulations covering aviation, railroad, highway, marine, and pipeline transportation. Requirements for all modes of transportation will be covered, with emphasis on aviation security. Personnel and the technology needed to provide a safe and secure environment for airports and airlines will be discussed. Advanced security technology and its use to significantly increase the level of security in transportation will be covered. Prerequisite: Junior standing.

AVSC 380 Cooperative or Internship**Credit 1-3**

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: AVSC 305, Junior standing.

AVSC 381 Cooperative or Internship II**Credit 1-3**

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: AVSC 305, Junior standing.

AVSC 382 Cooperative or Internship III**Credit 1-3**

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. Prerequisites: AVSC 305, Junior standing.

AVSC 390 Aviation Applications of Statistics and Research Design Credit 3

This course is an introductory statistics and research design course designed for Aviation Sciences students. Special emphasis will be made on the use of data and statistical analysis in operations research. Topics to be covered include: descriptive statistics; populations and samples; measures of central tendency and dispersion; elementary probability; distributions; random variables; hypothesis testing; estimation of population means and confidence intervals; Chi square distribution; correlation coefficient; problem definition and statement; literature review; research planning; and ethical issues in research. Prerequisites: MATH 102 or 109, Junior standing.

AVSC 398 Aviation Studies Abroad Credit 3

This course will examine the historical, economic, and political events that shaped the National Airspace System of foreign nations. The goal of the course will be to understand the differences between U.S. operations domestically as compared to abroad. Students will study current trends in international aviation policy by examining foreign Civil Aviation Authority's regulations and discussing their impact on future operations worldwide. Students will study under a host institution as approved by the department. Fees: Will vary on the host site location. Prerequisite: Departmental approval.

AVSC 421 Aviation Psychology Credit 3

This course is designed to introduce students to human factors and crew resource management theory in aviation that relate to diverse areas such as engineering, psychology, physiology, aerospace safety and flight training. Special attention will be paid to the flight crew ergonomics, technology integration, human performance, pilot selection and training. Prerequisite: PSYC 200 or equivalent, AVSC 241 and Junior status.

AVSC 431 Maintenance Management Credit 3

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 emphasis of this course is placed on computer information systems. Seniors or Juniors will demonstrate the knowledge needed to set up and maintain a maintenance program. Prerequisite: Junior standing.

AVSC 432 Airline Management II Credit 3

This course is a study of the business practices, operations, and management principles used by domestic and international airlines. The following topics are discussed: regional airlines, fleet planning, customer services, routing the efficient flow of air traffic, domestic and foreign airline competition, and fare structuring. Prerequisite: AVSC 261 or permission of instructor.

AVSC 441/Online Human Factors In Aviation Credit 3

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 theory and practical application in aviation. The course material will include: performance, design, human senses, information processing, workload, group interaction, fatigue, errors, memory allocation and introduction to controls and displays. Prerequisite: AVSC 421.

AVSC 442 Safety Management**Credit 3**

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 models, risk analysis, and performance measurements. Prerequisite: AVSC 241 and Junior Status.

AVSC 451 Certified Flight Instructor Airplane - Ground**Credit 3**

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. Training includes instruction necessary to complete the airmen knowledge requirements (FAA written exam) for Fundamentals of Instruction and Certified Flight Instructor-Airplane. Prerequisite: AVSC 163, AVSC 251.

AVSC 452 Certified Flight Instructor Airplane - Flight**Credit 2**

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. Laboratory Fee: \$3,000. Prerequisites: AVSC 254, AVSC 311. Co-requisite: AVSC 451.

AVSC 461 Certified Flight Instructor - Instrument (Ground)**Credit 2**

This course provides ground instruction and practice teaching dealing with flight operations pertinent to training students in the instrument flight environment. Training includes instruction necessary to complete the airmen knowledge requirements (FAA written exam) for the Certified Flight Instructor-Instrument (Airplane) rating, and simulator console instructor. Prerequisites: AVSC 254, AVSC 451.

AVSC 462 Certified Flight Instructor - Instrument (Flight)**Credit 1**

Flight instruction and practice teaching dealing with flight operations pertinent to training students in the instrument flight environment are provided in this course. Training includes instruction necessary to complete the aeronautical skill and experience requirements for the practical test for a FAA Certified Flight Instructor-Instrument (Airplane) certificate. Laboratory fee \$2,500. Prerequisite: AVSC 452. Co-requisite: AVSC 461.

AVSC 472 Multi-Engine Pilot Flight**Credit 1**

Students receive 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. Laboratory Fee: \$3,600. Prerequisite: AVSC 254.

AVSC 475 Aviation Operations Research and Decision Theory**Credit 3**

This course covers the topics of operations research, analysis and decision theory as it applies to the field of aviation. Students will gain experience with a suite of operations analysis software currently being used in the industry. Topics to be covered include queuing theory, mathematical models, data sources, and practical application of data. Prerequisite: AVSC 170.

AVSC 485 Advanced Concepts in Geographical Information Systems Credit 3

This is an advanced course for students who have taken on or more courses in geographic information systems (GIS). Emphasis will be on emergent technologies and applications relevant to aviation. An integral component of this course will be field work and the collection and analysis of data by students. Prerequisite: AGNR 483 or AVSC 170 or permission of instructor.

AVSC 490 Senior Capstone Course in Aviation Credit 3

This is the capstone course for all Aviation Science students. The capstone course is a partial requirement for graduation with a degree in Aviation Sciences. The course is a project or design or course in an area of mutual interest to the student and faculty advisor and includes a comprehensive examination in the core aviation studies. Prerequisite: Senior standing.

AVSC 498 Aerospace Design II Credit 3

The course involves a senior design project organized by the professor, who will act as Principal Investigator. Students will be asked to design, develop, test, and operate a, aerospace/aviation payload for a tailored mission. Students will be required to present their design and discuss various design elements that contributed to the overall project. Students will create a detailed project report including a summary of the design project. Prerequisites: AVSC 298 and Senior standing.

AVSC 499 Senior Seminar Credit 3

In this senior seminar course, topics 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

ENAE 342 Fluid Mechanics Credit 3

This course covers fluid properties; fluid statistics; conservation of mass, momentum, and energy in control volumes; steady and unsteady Bernoulli's equation; differential analysis of fluid flow; dimensional analysis and similitude; introduction to laminar and turbulent flow; Introduction to boundary layers; lift and drag. Prerequisite: MATH 241, ENGE 261.

ENAE 345 Thermodynamics Credit 3

This course covers work and heat transfer; the study of classical thermodynamics approach to closed systems and control volumes; properties and processes of gases and vapors; zeroth, first, and second laws of thermodynamics for closed systems and control volumes; entropy; thermodynamic power and refrigeration/heat pump cycles. Prerequisite: ENGE 261

ENAE 389 Space Systems Design Credit 3

This course covers the design of a complete space system, systems analysis, trajectory analysis, entry dynamics, propulsion and power systems, structural design, launch vehicle integration, avionics, thermal and environmental control, human factors, support systems, and weight and cost estimates; and latest practices in space systems and design of a space mission. Prerequisite: ENGE 261, ENGE 362

ENAE 412 Space Navigation and Guidance Credit 3

This course covers fundamentals of astrodynamics; two-body orbital initial-value and boundary-value problems; celestial mechanics, Kepler's problem, Lambert's problem, orbit determination, multi-body methods, mission planning, and recursive algorithms for space navigation; applications to space vehicle navigation and guidance for lunar and planetary missions for both powered flight and midcourse maneuvers. Prerequisite: ENGE 261

ENAE 420 Aerodynamics**Credit 3**

This course covers the introduction to aerodynamics fundamental concepts such as lift, drag, moment, pressure distribution, boundary layers; potential theory of bodies; airfoil theory and applications; finite wing theory and applications; introduction to Navier-Stokes equations; laminar boundary layers; turbulent boundary layers; instability and turbulence/separation; introduction to airfoil design. Prerequisite: ENAE 342.

ENAE 430 Finite Element Analysis**Credit 3**

This course covers the introduction to finite element method and application; relations between stresses, strains, displacements, temperature and material properties; discretization and meshing; force vector, displacement vector, stiffness matrix, assembly process, solution techniques; truss elements, beam elements; triangular and quadrilateral elements; iso-parametric formulation; plane stress and plane strain applications; penalty and Lagrangian methods; software applications. Prerequisite: ENGE 270, ENGE 362

ENAE 440 Mechatronics**Credit 3**

This course covers physical and mathematical modeling of mechanical, electrical, electromechanical, thermal, fluid, and multidisciplinary physical systems; sensors and electronics for measurements of system; embedded/external feedback control using conventional and intelligent control algorithms; computer aided engineering tools for mechatronic system design and analysis; practical applications using mechatronic devices. Prerequisite: ENGE 370, ENGE 382

ENAE 442 Micro-Electro-Mechanical Systems**Credit 3**

Basic integrated circuit manufacturing processes; electronics devices fundamentals; microelectromechanical systems fabrications including surface micromachining, bulk micromachining, and lithography; introduction to micro-actuators and microsensors such as micromotors, grippers, accelerometers and pressure sensors; physics of MEMS, scaling law, heat transfer, mechanics, electrostatics; introduction to micro-fluid systems; mechanical and electrical issues in micromachining; packaging techniques; CAD tools to design microelectromechanical structures. Prerequisite: ENGE 380

ENAE 462 Digital Control Systems**Credit 3**

Introduction to techniques for the analysis and design of digital control systems; linearization; difference equations; z-transforms; design of linear controllers; digital implementation of control systems. Prerequisite: ENGE 382.

ENAE 464 Embedded System Design Laboratory**Credit 2**

Fundamentals of embedded system hardware and firmware design; embedded processor selection; hardware/firmware partitioning; architecture and instruction set of a microcontroller; firmware architecture, design, and debugging; circuit design, layout, and debugging; development tools; a set of design experiments utilizing a popular microcontroller for practical applications. Prerequisite: ENGE 383.

ENAE 465 Remote Sensing and Image Processing**Credit 3**

Passive remote sensing from aerial platforms; basic principles of photogrammetry; geospatial information technology, georeferencing, mosaicking, and rectification; RGB and CIR imagery, multi-spectral imagery; fundamentals of digital image processing; introduction to active remote sensing; applications of remote sensing in engineering and sciences. Prerequisite: ENGE 370

ENAE 467 Design of Autonomous Aerial Systems**Credit 3**

Introduction to unmanned aerial vehicles, manned and unmanned aircraft design; conceptual unmanned aerial vehicles design based on concepts drawn from airplane aerodynamics, aircraft structure, stability and control, propulsion and compressible flows, navigation, guidance, communication, and design of control sensors; design for efficiency, design for performance, design for stability; introduction to ground, wind tunnel and flight testing. Prerequisite: ENAE 420

ENAE 472 Selected Topics in Engineering**Credit 3**

This course covers selected topics on special or current topics and issues relating to engineering structured for students in engineering and other areas. Prerequisite: Permission of instructor

ENGINEERING - COMPUTER**ENCE 330 Signals and Systems****Credit 3**

In this course, the concept of linear systems, state space equations for continuous and discrete systems, time domain analysis of linear systems, Fourier, Laplace, and z-transforms and application of theory to problems in general engineering are examined. This course is cross-referenced as ENEE 330. Prerequisite: MATH 240, MATH 241.

ENCE 350 Computer Organization**Credit 3**

This course provides an introduction to the structure and function of computers, digital computer organization, design of digital computer at the machine and microprogramming level, assembly language programming concepts, data and instruction formats, architecture of the central processing unit, input-output peripherals, registers, memory unit, addressing modes, subroutines and their linkages. Prerequisite: ENGE 250.

ENCE 352 Microprocessors & Microcomputers**Credit 3**

This course focuses on microprocessor architectures, instruction sets, and applications, bus structures, memory, and I/O interfacing. The course also covers assembly language programming, real-time system design, interrupt-driven system design, LSI peripheral configuration and drivers, and embedded-system design. Prerequisite: ENGE 250.

ENCE 387 Simulation & Virtual Reality**Credit 3**

This course offers an introduction to computer simulation and virtual reality; fundamental of 3-D simulation modeling; analysis of model output; interaction devices for virtual environments; physical based simulation; virtual prototypes; data exchange and data communication; user interfaces and interactive applications; complete virtual reality systems; using simulation and virtual reality software for modeling. Prerequisite: ENGE 370.

ENCE 452 Artificial Intelligence**Credit 3**

Introduction to theoretical and computational techniques related to human and machine intelligences, selection of data representations and algorithms useful in the design and implementation of intelligent systems, knowledge representation languages, problem-solving heuristics and machine learning are the focus of this course. Prerequisite: ENGE 370

ENCE 454 Computer System Architecture**Credit 3**

This course provides an overview of fundamentals of computer design; cost and performance models; evaluation methodologies; implementation techniques and tools; instruction set architectures; parallel and pipeline design; memory system design and basic concepts in storage systems. Prerequisite: ENCE 352.

ENCE 456 Microprocessors Design Laboratory**Credit 2**

Hardware designed experiments to provide practical experience in the design, construction, components selection, and interfaces of digital computers and data transmission systems are examined in this course. Prerequisite: ENCE 352. Co-requisite: ENCE 454

ENCE 458 VLSI Design**Credit 3**

This course focuses on the introduction to the concepts of large-scale integrated circuit design; device fabrication and modeling; designing CMOS combinational and sequential circuits; designing arithmetic building blocks and memory structures; interconnection and timing issues; testing and verification; simulation and use of current CAD tools. Prerequisite: ENGE 340

ENCE 460 Digital Signal Processing**Credit 3**

This course explores an introduction to digital signal processing; discrete-time description of signals; z-transform; digital filter structures; infinite and finite impulse response filter design techniques. Prerequisite: ENCE 330.

ENCE 462 Digital Control Systems**Credit 3**

This course offers an introduction to techniques for the analysis and design of digital control systems; linearization; difference equations; z-transforms; design of linear controllers; and digital implementation of control systems. Prerequisite: ENGE 382.

ENCE 464 Embedded System Design Laboratory**Credit 2**

Fundamentals of embedded system hardware and firmware design, embedded processor selection, hardware/firmware partitioning, architecture and instruction set of a microcontroller, firmware architecture, design, and debugging, circuit design, layout, and debugging, development tools, and a set of design experiments utilizing a popular microcontroller for practical applications are examined. Prerequisite: ENGE 383.

ENCE 468 Robotics**Credit 3**

This course examines an introduction to industrial manipulator systems; Kinematic and dynamic models of robotic arms; homogeneous transformations; forward and inverse kinematics; motion control through coordinate transformations; and robotic vision and sensors. Prerequisite: MATH 241, ENGE 382.

ENCE 469 Robotics and Automation Design Laboratory**Credit 2**

This course continues the topics covered in ENCE 468 through laboratory experiments to design and develop flexible automation systems utilizing robot manipulators. Prerequisite: ENCE 468.

ENCE 472 Selected Topics in Engineering**Credit 3**

This course covers selected topics on special or current topics and issues relating to engineering structured for students in engineering and other areas. Prerequisite: Permission of instructor.

ENGINEERING - ELECTRICAL**ENEE 330 Signal and Systems****Credit 3**

In this course, the concept of linear systems, state space equations for continuous and discrete systems, time domain analysis of linear systems, Fourier, Laplace, and z-transforms and application of theory to problems in general engineering are examined. Prerequisite: MATH 241, ENGE 240.

ENEE 348 Electromagnetic Theory**Credit 3**

This course offers an introduction to electromagnetic fields; Coulomb's law; Gauss' law; electrical potential; dielectric materials; capacitance; boundary value problems; Biot-Savart law; Ampere's law; Lorentz force equation; magnetic materials; magnetic circuits; inductance; time varying fields and Maxwell's equations. Prerequisite: MATH 241, PHYS 263.

ENEE 385 Power Electronics**Credit 3**

This course is an overview of the basic principles of power electronics and its applications; power electronics elements and circuits; connections between power electronics and circuit theory; semiconductor devices for electric power, motor drives, and control are examined. Prerequisite: ENGE 340.

ENEE 387 Simulation & Virtual Reality**Credit 3**

This course is an introduction to computer simulation and virtual reality; fundamental of 3-D simulation modeling; analysis of model output; interaction devices for virtual environments; physical based simulation; virtual prototypes; data exchange and data communication; user interfaces and interactive applications; complete virtual reality systems; using simulation and virtual reality software for modeling. Prerequisite: ENGE 370.

ENEE 443 Communication Systems**Credit 3**

This course covers Fourier transforms and linear system analysis; random signals; autocorrelation functions and power spectral densities; analog communication systems; 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. Prerequisite: ENEE 330.

ENEE 444 Communication Design Laboratory**Credit 2**

Emphasis is placed on laboratory experiments exploring the design and development of communication systems based on topics covered in ENEE 443 Communication Systems. Prerequisite: ENEE 443.

ENEE 460 Digital Signal Processing**Credit 3**

This course is an introduction to digital signal processing; discrete-time description of signals; z-transform; digital filter structures; infinite and finite impulse response filter design techniques. Prerequisite: ENEE 330.

ENEE 462 Digital Control Systems**Credit 3**

This course is an introduction to techniques for the analysis and design of digital control systems; linearization; difference equations; z-transforms; design of linear controllers; digital implementation of control systems. Prerequisite: ENGE 382.

ENEE 464 Embedded System Design Laboratory**Credit 3**

This course covers the fundamentals of embedded system hardware and firmware design; embedded processor selection; hardware/firmware partitioning; architecture and instruction set of a microcontroller; firmware architecture, design, and debugging; circuit design, layout, and debugging; development tools; a set of design experiments utilizing a popular microcontroller for practical applications. Prerequisite: ENGE 383.

ENEE 465 Remote Sensing and Image Processing**Credit 3**

This course covers passive remote sensing from aerial platforms; basic principles of photogrammetry; geospatial information technology, georeferencing, mosaicking, and rectification; RGB and CIR imagery, multi-spectral imagery; fundamentals of digital image processing; introduction to active remote sensing; applications of remote sensing in engineering and sciences. Prerequisite: ENGE 370.

ENEE 468 Robotics**Credit 3**

This course is an introduction to industrial manipulator systems; Kinematic and dynamic models of robotic arms; homogeneous transformations; forward and inverse kinematics; motion control through coordinate transformations; robotic vision and sensors. Prerequisite: MATH 241, ENGE 382.

ENEE 469 Robotics and Automation Design Laboratory**Credit 2**

This course provides laboratory experiments to design and develop flexible automation systems utilizing robot manipulators based on topics covered in ENEE 468 Robotics course. Prerequisite: ENEE 468.

ENEE 472 Selected Topics in Engineering**Credit 3**

This course covers selected topics on special or current topics and issues relating to engineering structured for students in engineering and other areas. Prerequisite: Permission of instructor.

ENGINEERING**ENGE 100 First Year Orientations with Engineering****Credit 1**

An overview of the engineering profession and college life; an orientation for incoming freshmen to stress, time management, ethics, and life skills; educational requirements, scholarship availability, career opportunities, and the importance of teamwork are explored. Prerequisite: Engineering Freshman Status.

ENGE 150 Modern Engineering Design**Credit 3**

This course provides an introduction to modern engineering design with emphasis on various aspects of developing a product via hands-on design approach, communication skills, and teamwork, use of product visualization and computer software such as word processing, power point, and spreadsheet; students work as teams to develop and design a working prototype. Prerequisite: MATH 109. Laboratory fee: \$25.00.

ENGE 170 Programming Concepts for Engineers**Credit 3**

This course provides an introduction to algorithms, overview of computers and programming, principles of software development, high level languages, C-programming; input/output, data types and variables, operators and expressions, selection structure, repetition, functions, arrays, pointers, strings, structure data types, linked list, stream and file management and debugging and documentation are provided in this course. Prerequisite: ENGE 150

ENGE 240 Basic Circuit Theory**Credit 3**

The course focuses on basic circuit elements, resistors, capacitors, inductors, independent and dependent sources, and operational amplifier; Kirchhoff's laws; nodal and mesh analysis; superposition; Thevenin and Norton theorems; DC and AC steady state analysis; Transient analysis for first and second order circuits; and phasors. Prerequisite: MATH 211. Co-requisite: MATH 241, ENGE 241.

ENGE 241 Analog Circuit Laboratory**Credit 1**

This course is an introduction to basic measurement techniques and electrical laboratory equipment, power supplies, oscilloscopes, multi-meters, and function generators; and experiments concerning principles taught in ENGE 240 Basic Circuit Theory course. Prerequisite: MATH 211. Co-requisite: ENGE 240.

ENGE 250 Digital Logic Design**Credit 3**

This course is an introduction to number systems, elements of binary arithmetic and codes; Boolean algebra; Karnaugh map and simplification of gate networks; Quine-McCluskey method; adders, subtractors, comparators, multiplexers and demultiplexers, and PLAs; latches, flip-flops, shift registers, counters, and memories; design and analysis of combinational logic and synchronous sequential circuits. Prerequisite: ENGE 170. Co-requisite: ENGE 251.

ENGE 251 Digital Logic Laboratory**Credit 1**

This course provides an introduction to basic laboratory skills in operating digital test equipment, testing digital logic circuits, generating test inputs and analyzing outputs, and emphasis is placed on experiments concerning principles taught in ENGE 250 Digital Logic Design course. Prerequisite: ENGE 170. Co-requisite: ENGE 250.

ENGE 260 Statics**Credit 3**

This course offers addition, subtraction, and multiplication of force and moment vectors, equilibrium of particles, planar, and 3-dimensional rigid bodies under the action of forces and moments, applications of equilibrium principles to simple trusses, frames, and machines, center of mass and centroids, moments of inertia; internal forces and moments; and shear force and bending moment diagrams. Prerequisite: MATH 112.

ENGE 261 Dynamics**Credit 3**

This course covers kinematics and kinetics of particles and rigid bodies; relative motion, force acceleration, work energy, and impulse momentum relationships in Cartesian, normal tangential, polar, spherical, and cylindrical coordinate systems; and an introduction to design analysis involving dynamics principles. Prerequisite: MATH 211, ENGE 260.

ENGE 270 Computer Aided Design**Credit 3**

This course is an introduction to 3-D solid modeling, engineering drawings, assembly modeling and computer animation based on parametric feature-based CAD systems such as Solid Works along with an overview on main geometric modeling theoretical concepts behind commercial CAD systems. Prerequisite: ENGE 150.

ENGE 320 Statistics and Probability for Engineers**Credit 3**

This course examines probability, random variables and processes, discrete and continuous distributions and densities, collection and presentation of sample data, frequency distributions and histograms, confidence intervals, hypothesis testing, basic problems of statistical inference, linear regression and correlation, designing engineering experiments. Prerequisite: MATH 241.

ENGE 340 Analog & Digital Electronics**Credit 3**

Conceptual operation of PN-junction diodes, bipolar junction transistors (BJTs), and mono-oxide semiconductor field effect transistors (MOSFETs); transistor circuits for inverters, NAND, and NOR gates; semiconductor memory; large and small signal characteristics of diodes and transistors; basic transistors configurations; DC bias and small signal analysis of BJTs and MOSFETs; multiple-transistor circuits such as operational and differential-amplifiers; frequency response of simple amplifiers. Prerequisite: ENGE 240. Co-requisite: ENGE 341.

ENGE 341 Analog & Digital Electronics Laboratory**Credit 1**

This course provides laboratory experiments concerning topics taught in ENGE 340 analog and digital electronics course. Prerequisite: ENGE 241. Co-requisite: ENGE 340.

ENGE 362 Mechanics of Materials**Credit 3**

Students will be introduced to stress, strain, materials properties, and Hooke's law; distortion of engineering materials in relation to changes in stress or temperature; torsion of circular rods and tubes; bending and shear stresses in beams; deflection of beams; thin wall pressure vessels; combined loading; stress and strain transformation; buckling of columns; engineering applications. Prerequisite: MATH 211, ENGE 260.

ENGE 370 Computational Methods in Engineering**Credit 3**

Fundamentals of linear algebra and basic operations of vectors and matrices are discussed; students will also study error analysis, solution of a system of linear equations, iterative solution of nonlinear equations, numerical integration, and numerical solution of differential equations. An introduction to Matlab software programming and applications relating to the computational functions in Matlab is included. Prerequisite: MATH 211. Co-requisite: MATH 241.

ENGE 380 Instrumentations**Credit 3**

This course provides principles of measurement and instrumentation, transduction and calibration, noise measurement and signal conditioning, data acquisition, recording, and presentation, sensor selection to measure temperature, pressure, flow, level, force, and torque, transducers to measure translational displacement, velocity, acceleration, and vibration, rotational displacement, velocity, acceleration measurement and sensor application to measure different physical phenomena. Prerequisite: ENGE 240. Co-requisite: ENGE 340.

ENGE 382 Control Systems**Credit 3**

Mathematical models of control system are discussed in addition to Laplace transform; signal flow graph; frequency and time domain characteristics of the system response; methods of linear control system analysis and designs, root locus, Bode, and Nyquist plots; stability theory; design specifications in time and frequency domains; compensator design; and PID controller design. Prerequisite: MATH 241. Co-requisite: ENGE 383.

ENGE 383 Instrumentation & Control Laboratory**Credit 1**

This course involves experiments on topics covered in ENGE 380 Instrumentations and ENGE 382 Control Systems courses. Prerequisite: ENGE 380. Co-requisite: ENGE 382.

ENGE 476 Senior Design Project I**Credit 2**

Students are introduced to a design project to demonstrate their ability to engage in the practice of engineering as a profession. Students in consultation with the supervising professor and course coordinator must identify and implement a design project. The topic may be analytical, numerical, experimental, or field-oriented, utilizing knowledge gained from academic and research experiences integrated in the curriculum. A written proposal, literature search, and an oral presentation are required. Use of professional engineering standards and a design approach are required. Prerequisite: Senior Standing and Permission of instructor.

ENGE 475 Engineering Seminar**Credit 1**

This is a general seminar course that covers current topics in General Engineering. Prerequisite: Permission of instructor and Senior Standing.

ENGE 477 Senior Design Project II**Credit 2**

This course is a continuation of ENGE 476 Senior Design Project I, with the same standards and requirements. A progress report, a final report, and an oral presentation are required. Prerequisite: ENGE 476.

ENGINEERING – MECHANICAL

ENME 342 Fluid Mechanics

Credit 3

This course explains fluid properties, fluid statistics, conservation of mass, momentum, and energy in control volumes, steady and unsteady Bernoulli's equation, differential analysis of fluid flow, and dimensional analysis and similitude. This course also provides an introduction to laminar and turbulent flow in addition to an introduction to boundary layers, lift and drag. Prerequisite: MATH 241, ENGE 261.

ENME 345 Thermodynamics

Credit 3

This course offers insight into work and heat transfer, the study of classical thermodynamics approach to closed systems and control volumes, properties and processes of gases and vapors, zeroth, first, and second laws of thermodynamics for closed systems and control volumes, entropy, thermodynamic power and refrigeration/heat pump cycles. Prerequisite: ENGE 261.

ENME 346 Heat Transfer

Credit 3

This course examines conduction, convection, radiation, heat storage, energy conservation, steady-state/transient conduction, thermal circuit modeling, multidimensional conduction, surface radiation properties, enclosure radiation exchange, surface convection/fluid streams over objects, non-dimensional numbers, laminar, turbulent, thermo buoyant flow, boiling and condensation and heat exchangers. Prerequisite: ENME 342.

ENME 422 Mechanisms and Machine Design

Credit 3

This course focuses on Kinematic and dynamic analysis of motion of linkages, cams, and gears/gear trains, synthesis and analysis of motion in machines, visualizing motion in mechanisms and machinery using simulation software environments as well as exploration of machine/mechanism design solution for specified requirements. Prerequisite: ENGE 261, ENGE 370.

ENME 425 Rapid Prototyping and Product Development

Credit 3

This is an introduction to rapid prototyping; product development process; materials for rapid prototyping; CAD solid model interaction with rapid prototyping systems; applications of rapid prototyping technologies to product development and design; rapid tooling process, rapid manufacturing process; reverse engineering. Prerequisite: ENGE 270, ENGE 362.

ENME 430 Finite Element Analysis

Credit 3

This is an introduction to finite element method and application; relations between stresses, strains, displacements, temperature and material properties; discretization and meshing; force vector, displacement vector, stiffness matrix, assembly process, solution techniques; truss elements, beam elements; triangular and quadrilateral elements; iso-parametric formulation; plane stress and plane strain applications; penalty and Lagrangian methods; and software applications. Prerequisite: ENGE 270, ENGE 362.

ENME 440 Mechatronics

Credit 3

In this course, emphasis is placed on physical and mathematical modeling of mechanical, electrical, electromechanical, thermal, fluid, and multidisciplinary physical systems; sensors and electronics for measurements of system; embedded/external feedback control using conventional and intelligent control algorithms; computer aided engineering tools for mechatronic system design and analysis and practical applications using mechatronic devices. Prerequisite: ENGE 370, ENGE 382.

ENME 442 Micro-Electro-Mechanical Systems**Credit 3**

This course offers basic integrated circuit manufacturing processes; electronics devices fundamentals; microelectromechanical systems fabrications including surface micromachining, bulk micromachining, and lithography; introduction to micro-actuators and microsensors such as micromotors, grippers, accelerometers and pressure sensors; physics of MEMS, scaling law, heat transfer, mechanics, electrostatics; introduction to micro-fluid systems; mechanical and electrical issues in micromachining; packaging techniques; and CAD tools to design microelectromechanical structures. Prerequisite: ENGE 380.

ENME 462 Digital Control Systems**Credit 3**

This is an introduction to techniques for the analysis and design of digital control systems; linearization; difference equations; z-transforms; design of linear controllers; and digital implementation of control systems. Prerequisite: ENGE 382.

ENME 464 Embedded System Design Laboratory**Credit 2**

Fundamentals of embedded system hardware and firmware design are the focus of this course. Students will also learn embedded processor selection, hardware/firmware partitioning; architecture and instruction set of a microcontroller, firmware architecture, design, and debugging, circuit design, layout, and debugging; development tools and a set of design experiments utilizing a popular microcontroller for practical applications. Prerequisite: ENGE 383.

ENME 468 Robotics**Credit 3**

This course provides an introduction to industrial manipulator systems, Kinematic and dynamic models of robotic arms, homogeneous transformations, forward and inverse kinematics, motion control through coordinate transformations, and robotic vision and sensors. Prerequisite: MATH 241, ENGE 382.

ENME 469 Robotics and Automation Design Laboratory**Credit 2**

This course involves laboratory experiments to design and develop flexible automation systems utilizing robot manipulators based on topics covered in ENME 468 Robotics course. Prerequisite: ENME 468.

ENME 472 Selected Topics in Engineering**Credit 3**

This course offers selected topics on special or current topics and issues relating to engineering structured for students in engineering and other areas. Prerequisite: Permission of instructor.

DIRECTORY OF FACULTY

Burrows-McElwain, J. Bryan, Lecturer

B.S., University of Maryland Eastern Shore; M.S., Embry-Riddle Aeronautical University; ABD, University of Maryland Eastern Shore

Dabipi, Ibibia K., Professor

B.S., Texas A&I University; M.S., Ph.D., Louisiana State University

Hartman, Christopher, Lecturer and Coordinator, Aviation Sciences

B.S., University of Maryland Eastern Shore, M.S., Embry Riddle Aeronautical University

Ibrahim, Mamoun Y., Laboratory Manager

B.S., University of Gezira; M.S., Tuskegee University

Jin, Yuanwei, Associate Professor

B.S., M.S., East China Normal University; Ph.D., University of California at Davis

Matin, Payam H., Associate Professor

B.S., University of Science and Technology; M.S., University of Tehran; Ph.D., Oakland University

Nagchaudhuri, Abhijit, Professor

B.S., Jadavpur University; M.S., Tulane University; Ph.D., Duke University

Stockus, Anthony J., Coordinator, Engineering

B.A., Chapman College; M.B.A., Central Missouri State University

Sharma, Rajnish, Assistant Professor

B.Tech, M.Tech, Indian Institute of Technology; Ph.D., Texas A&M University

Walker, Alvernon, Chairperson, Associate Professor

B.S., M.S., North Carolina A&T State University; Ph.D., North Carolina State University

Zhang, Lei, Assistant Professor

B.S., Yanshan University; M.S., Tianjin University; Ph.D., University of Nevada at Las Vegas

DEPARTMENT OF HOTEL AND RESTAURANT MANAGEMENT

<http://www.umes.edu/SBT>

Dr. Ernest P. Boger, Chairperson

MISSION

The mission of the Department of Hotel and Restaurant Management (HRM) within the School of Business and Technology is to prepare entry level hospitality management professionals with essential skills for long term hospitality career success and industry leadership.

HRM also fosters research and service of direct application and benefit to the State of Maryland and the global hospitality industry.

The essential skills referenced in the mission statement translate operationally into a six-point graduate success profile objective/outcome that holds that UMES/HRM graduates will possess:

- Hospitality Attitude
- Marketing Mindedness
- Quantitative Competence
- Technological Fluency
- Relevant Work Experience
- International/Multicultural Sensitivity

STUDENT LEARNING OUTCOMES

This profile is delivered across the HRM curriculum and measured via a Student Learning Outcome Assessment Process (SLOAP) with the expectation that students will be able to:

- identify, describe and apply the fundamental principles and practices of foodservice operations and management;
- identify, describe and apply the fundamental principles and practices of hotel operations and management;
- apply proper hospitality terminology in professional industry communications;
- manage food production and service, including design of staffing schedules and timelines, plan and analyze menus;
- apply hospitality marketing research theory and techniques, including survey design and analysis in both verbal and written formats;
- identify, integrate and apply basic accounting, cost accounting, financial analysis and reporting necessary for effective decision-making in the hospitality industry;
- identify, describe and be able to analyze legal and ethical issues relevant to the hospitality industry;
- identify and distinguish between technology applications and examine and evaluate technology to augment professional practices in the hospitality industry;
- develop, organize and plan hospitality events and demonstrate the ability to evaluate, critique and prepare related summaries including recommendations for improvements;
- demonstrate hospitality professionalism and demeanor; and
- identify and describe the basic principles of tourism theory, operations and management.

OBJECTIVES

The objectives of the Department of Hotel and Restaurant Management are to:

1. Demonstrate adequate knowledge in general and specific matters of communication, mathematics, computers, social and natural sciences, humanities, and health and physical education.

2. Explain the historical development and current market segmentation of the hospitality industry.
3. Plan, purchase and prepare meals in quantity and reflecting a variety of service styles in hospitality experience.
4. Demonstrate basic management skills of planning, organizing and controlling.
5. Demonstrate basic business administration skills of accounting, financial analysis and marketing.
6. Demonstrate basic knowledge and management skills related to front office, housekeeping and engineering departments of hotel operations.

DEGREES OFFERED

Bachelor of Science – Hotel and Restaurant Management

Bachelor of Science – PGA Golf Management

DEPARTMENTAL REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Hotel and Restaurant Management is based upon the general admission requirements of the University.

Students wishing to pursue a major in Hotel and Restaurant Management must meet all University of Maryland Eastern Shore entrance requirements. Freshmen must take a Basic Skills Test during their first semester as a major and demonstrate ability at a determined grade level. In order to remain in good standing in Hotel and Restaurant Management Department Degree programs, the student must maintain a minimum GPA of 2.0 with no grade less than “C” in major coursework and general education courses, where required. Transfers into the major must present an overall GPA of not less than 2.0. All majors must show progress in major and professional course work, attend and actively participate in the Student Professional Association (Eta Rho Mu) and demonstrate interest in the hospitality industry.

All Hotel and Restaurant Management (HRM) majors are required to complete 1000 hours of hospitality work experience as a requirement for graduation.

Specific business attire, culinary uniform requirements and related requirements are available in the HRM Student Handbook.

Students majoring in Hotel and Restaurant Management must complete a total of 120 hours of University courses. This includes 41 credit hours of General Education Requirements, 64 hours of major core requirements, 3 credit hours of supportive courses and 12 hours of departmental electives.

CAREER OPPORTUNITIES

The bachelor’s degree in Hotel and Restaurant Management at UMES prepares graduates for a wide variety of entry level management positions in the hospitality industry. These include Hotel Front Office, Housekeeping, and Marketing positions, as well as Banquet, Restaurant and Special event Management. Broader foodservice areas include contract operations, quick service to upscale free standing restaurant management, and private catering as lucrative career paths. The prevalence of major overlapping skill sets in the hospitality industry means that graduates will also be prepared for a selection of complimentary management career paths in travel/tourism, entertainment and related supportive industry services. While preparation for management is at the core of the HRM curriculum, sufficient emphasis is placed on entrepreneurship for those individuals who are motivated to own their own business and create long-term wealth.

HOTEL AND RESTAURANT MANAGEMENT

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from each of two disciplines:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 201

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 7

Students must select **two** science courses and **one** science laboratory course from the following.

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)

ENVS 101, NUDT 210

PHYS 101, PHYS 103 (lab)

PLSC 184, PLSC 185 (lab).

Curriculum Area IV – MATHEMATICS

Credits 3

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

MATH 109, if a student needs MATH 101, they must take that before Math 109;

MATH 110, MATH 111H, MATH 112.

MATH 101 does not satisfy the General Education Requirement or count towards graduation.

Students must attain a grade of "C" or better to pass Math 101.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES**Credits 7**

Students must complete 3 courses as defined by the department.

HMGT 102	First Year Experience
EXSC 111	Personalized Health Fitness
TMGT 306	Ecology and Cultural Tourism

Total Required for General Education**Credits 41****SUPPORTING COURSE REQUIREMENTS****Credits 3**

Students must complete BUAD 132

MAJOR CORE REQUIREMENTS**Credits 64**

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
FMGT 350	Commercial Food Production	3
FMGT 371H	Hospitality Purchasing	3
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	0.5
HMGT 200B	Professional Development	.05
HMGT 220H	Technology Management in the Hospitality Industry	4
HMGT 300A	Hospitality Experience	.05
HMGT 300B	Hospitality Experience	.05
HMGT 301H	Front Office Management	3
HMGT 303	Hospitality Facilities Operations & Maintenance	3
HMGT 305	Entrepreneurship and Small Business	3
HMGT 340	Hospitality Industry Accounting	3
HMGT 350	Marketing Hospitality and Leisure Services	3
HMGT 401	Law and the Hospitality Industry	3
HMGT 402	Human Resource Management	3
HMGT 404	Hospitality Facilities Design Project	3
HMGT 440	Financial Analysis for the Hospitality Industry	3
HMGT 490H	Hospitality Research I	3
HMGT 491	Hospitality Research II	3
HMGT 497	Professional Development	1
HMGT 498	Professional Development	1

MAJOR ELECTIVES**Credits 12**

Students must complete at least 12 credit hours from the following courses:

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
CARM 499	Independent Studies in Culinary Art Mgmt.	3
FMGT 499	Independent Studies in Food and Beverage Mgmt.	3

HMGT	309	Beer, Wine and Spirits	3
HMGT	405	Resort and Convention Management	3
HMGT	470	Hospitality Management Internship (Fall)	1-6
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 Mgmt.	1-3
TMGT	130H	Analysis of Travel and Tourism	3
TMGT	300	Tourism Transportation Systems	3
TMGT	306	Eco & Cultural Tourism (Emerging Issue)	3
TMGT	309	Tourism Economics	3
TMGT	420	Marketing of Tourism Destination	3
TMGT	499	Independent Study	1-3

CURRICULUM GUIDE FOR HOTEL AND RESTAURANT MANAGEMENT

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
BUAD 132	3	ENGL 001/ENGL 003 ¹	0
GEN ED AREA III	3	MATH 102	3
GEN ED AREA III Lab	1	GEN ED CURR AREA III	3
HMGT 101	3	FMGT 101	2
HMGT 102	1	FMGT 110	2
HMGT 100A	<u>.5</u>	HMGT 100B	.5
	14.5	HMGT 110	<u>0</u>
			13.5

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	EXSC 111	3
HRM Elective ²	3	GEN ED CURR. AREA II	3
ECON 200 or		FMGT 212	3
ECON 201	3	GEN ED CURR. AREA I	3
FMGT 211	3	HMGT 220	4
HMGT 200A	.5	HMGT 200B	.5
GEN ED CURR AREA I	<u>3</u>	HMGT 120	<u>0</u>
	15.5		16.5

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HMGT 340	3	TMGT 306	3
ENGL 305 or		HMGT 303	3
ENGL 310	3	FMGT 301	3
HMGT 301	3	HMGT 350	3
HMGT 305	3	FMGT 371	3
HMGT 350	3	HMGT 300B	.5
HMGT 300A	<u>.5</u>	HMGT 130	<u>0</u>
	15.5		15.5

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HMGT 402	3	HRM Elective	3
HMGT 440	3	HRM Elective	3
HMGT 404	3	HMGT 401	3
HRM Elective	3	HMGT 491	3
HMGT 490	3	HMGT 498	<u>1</u>
HMGT 497	<u>1</u>		13
	16		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Student should select TMGT 130 to satisfy this Elective.

MINOR PROGRAMS

The Department of Hotel and Restaurant Management offers minors for HRM majors only for the following area: Culinary Arts Restaurant Management (CARM) and Travel/Tourism Management (TMGT)

HRM majors can only earn the minor in Culinary Arts Restaurant Management (CARM) by completing the following 18 credit hour sequence of courses: CARM 301, CARM 303, CARM 401, CARM 403, CARM 405 and CARM 407, **in addition to the 120 hours required for the HRM major.**

HRM majors only can earn the minor in Travel/Tourism Management (TMGT) by completing the following 18 credit hour sequence of courses: TMGT 130, TMGT 300, TMGT 309, TMGT 420 and TMGT 499, **in addition to the 120 hours required for the HRM major.**

HRM also offers minors for Non-HRM majors only for the following area: Food and Beverage Management and Hotel Administration. Non-HRM majors can earn the minor in Food and Beverage Management by completing the following 18 credit hour sequence of courses in the following: FMGT 211, FMGT 212, FMGT 301, FMGT 350, and FMGT 371.

Non-HRM majors can earn the minor in Hotel Administration by completing the following 18 credit hour sequence of courses in the following: HMGT 101, HMGT 301, HMGT 340, HMGT 350, HMGT 401 and HMGT 402.

COURSE DESCRIPTIONS

CULINARY ARTS

CARM 301 American Cuisine

Credit 3

In this course students examine the major culinary regions of North American; emphasis is placed on cultural habits, food availability, geographic locations, etc., and how those variables affect and influence each region cooking style and the actual cuisine. Students will prepare foods from the regions and display the appropriate cooking methods and techniques. Course is formatted as one 50 minute lecture and one four and one-half hour laboratory per week. Chef knives and uniforms are required.

CARM 303 International Cuisine

Credit 3

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.

CARM 401 Garde Manager

Credit 3

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.

CARM 403 Baking Basic Breads

Credit 3

This course introduces students to the basic fundamentals of bread baking. Different types of breads will be discussed and produced: quick, traditional, regional and international breads. The components of bread baking will be applied; also, different mixing, leavening agents and baking techniques will be discussed and executed. Course is formatted as one 50 minute lecture and one four and one-half hour laboratory per week. Chef knives and uniforms are required.

CARM 405 Pastry Shop

Credit 3

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.

CARM 407 Classical Kitchen

Credit 3

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.

CARM 499 Independent Studies in Culinary Art Management

Credit 3

CARM 499 is designed to permit the student to obtain directed study in the specialized area of the hospitality industry identified as Culinary Art Management. The course is structured to meet the needs of the student. The enrolled student is assigned a faculty member with whom eh/she 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. The ultimate objective is to provide the student with a learning opportunity not available in regular scheduled CARM electives. Prerequisite: Junior or Senior standing; written permission of Department Chair.

FOOD AND BEVERAGE MANAGEMENT

FMGT 101 Applied Food Service Sanitation

Credit 2

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.

FMGT 110 Restaurant and Table Service

Credit 2

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

Credit 3

This introductory course in food production includes basic foods nutrition, overview of the kitchen brigade, culinary terminologies, products identification, cooking techniques, knives skills, utensils and equipment usage and sanitary care. Also, produce, present and evaluate cooked products. The course format is two 50 – minutes lectures and two – hour laboratory periods per week. Chef knives set and appropriate commercial kitchen uniforms are required.

FMGT 212 Food Production II

Credit 3

In this course students are introduced to leadership/management, while continuing to advance their culinary and production knowledge by executing upscale luncheons for 50 paying guests. Also students learn to plan and organize commercial kitchen: staffing, menu planning, recipes, and production schedules and communicate using culinary terminologies. One 50 – minute lecture and one 5 hour laboratory per week is class format. Chef knives set and appropriate commercial kitchen uniforms are required. Prerequisite: FMGT 211 with minimum passing grade “C”.

FMGT 301/Online Food & Beverage Cost Accounting

Credit 3

This course emphasizes cost accounting and budget and pricing techniques for the hospitality industry. Recipe costs, portion control, product yields, inventory methods and valuation, and menu engineering are studied. Prerequisites: HRM or PGM Department Major, HMGT 340, Curriculum Area II (ECON 200 or 201), and Curriculum Area IV (Mathematics) requirements must be met.

FMGT 350 Commercial Food Production

Credit 3

This upper level production course emphasizes equipment, foods, staffing, schedule, planning, and kitchen brigade organization management. The class also, produces and present 4 gourmet dinners for 50 paying guests; emphasizing Haute Cuisine, Bridging, Foods and Wine Pairing. Other major areas of concentration include cost awareness and control, profitability and staff management. Also, Front of the House – Service Management, Middle of the House – Production and Back of the House – Stewarding/Sanitation Management are highlight. This course meets two 50 – minute lectures and one 5 hour laboratory per week. Prerequisite: FMGT 212 with minimum passing grade “C”.

FMGT 371 Hybrid Hospitality Purchasing**Credit 3**

This course emphasizes the managerial principles of the purchasing function and covers fundamental concepts, supplier selection, best practices, purchase specifications and purchase orders, product yield, and the receiving, storing, and issuing of hospitality products. An application research project is required. The laboratory component of this course emphasizes the development and use of knowledge related to hospitality supplier selection, purchase specifications and purchase orders, product yield, and best practices. Prerequisites: HRM Department Major, Curriculum Area II (ECON 200 or 201), and Curriculum Area IV (Mathematics) requirements must be met.

FMGT 499 Independent Studies in Food and Beverage Measurement**Credit 3**

FMGT 499 is designed to permit the student to obtain directed study in the specialized area of the hospitality industry identified as Food and Beverage Management. The course is structured to meet the needs of the student. The enrolled student is assigned a faculty member with whom eh/she 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. The ultimate objective is to provide the student with a learning opportunity not available in regular scheduled FMGT electives. Prerequisite: Junior or Senior standing; written permission of Department Chair.

HOTEL AND RESTAURANT MANAGEMENT**HMGT 100A/B, 200A/B, 300A/B Professional Development****Credit ½**

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 101 Introduction to the Hospitality Industry**Credit 3**

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 102 First Year Experience**Credit 1**

The purpose of the course is to facilitate a seamless transition from high school to college. Essential skills for success are identified and application explored. These include cognitive skills as well as lifestyle patterns critical to immediately adjusting personally and socially to the college environment.

HMGT 110, 120, 130 Hospitality Experience**Credit 0**

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 works 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**Credit 4**

This course provides an introduction to basic computing concepts and functions and the use of computers and application-specific software in the hospitality industry, including Microsoft Office 2007, point-of-sale, enterprise management, sales and catering, and property management systems. Prerequisite: HRM Department Major or PGA Golf Management Program Major.

HMGT 301 Front Office Management**Credit 3**

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 302 Managing Housekeeping Operations**Credit 3**

This course examines the role, strategies and methods employed by housekeeping operations management to ensure achieving high standards of cleanliness, safety, security, and service in a cost-effective and environmentally friendly manner.

HMGT 303 Hospitality Facilities, Operations, and Maintenance**Credit 3**

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 305 Entrepreneurship**Credit 3**

This course focuses on the development and assessment of the viability of small and micro business ventures. Emphasis is on the business planning process, the management of small enterprises, feasibility studies, and formulation of business plans, risk management and entrepreneurial characteristics. Sources of public and private start-up incubator funding will be explored, along with franchising opportunities. Major applications and case study material will be drawn from lodging, foodservice, and PGA model golf shop operations.

HMGT 309 Beer, Wine and Spirits**Credit 3**

This course provides a comprehensive study of alcoholic beverages, with an emphasis on the origin, production, classification, and service of beer, wine, and spirits; bartending basics; alcohol awareness, liability, and the responsible serving of alcoholic beverages. An application research project is required. Prerequisite: HRM Department Major or PGA Golf Management Program Major and students must be 21 years old.

HMGT 340 Hospitality Industry Accounting**Credit 3**

This course focuses on accounting practices, concepts, principles, and legal and ethical issues in the hospitality industry. The accounting cycle, adjusting entries, corporate transactions, and the preparation and analysis of financial statements are emphasized. Prerequisite: HRM Department Major or Minor, or PGA Golf Management Program Major, Curriculum Area II (ECON 200 or 201), and Curriculum Area IV (Mathematics) requirements must be met.

HMGT 350/Online Marketing Hospitality and Leisure Services**Credit 3**

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/Online Law and the Hospitality Industry**Credit 3**

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/Online Human Resources Management**Credit 3**

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.

HMGT 404 Hospitality Facilities Design Project**Credit 3**

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. Prerequisites: Senior status, FMGT 301, HMGT 303 and HMGT 350.

HMGT 405 Resort & Convention Management**Credit 3**

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.

HMGT 440 Financial Analysis for the Hospitality Industry**Credit 3**

This course provides a comprehensive study of financial analysis concepts and techniques necessary for managerial decision making. Ratio analysis, operations budgeting, cost approaches for pricing, capital budgeting and investment, managing working capital, and feasibility studies are emphasized. Prerequisites: HRM Department Major, Curriculum Area II (ECON 200 or 201), Curriculum Area IV (Mathematics), FMGT 301, and HMGT 340 requirements must be met.

HMGT 470, 475, 480 Hospitality Management Internship**Credit 1-6**

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, HMGT 301, HMGT 303, HMGT 340, and written permission of HRM Department Chairperson.

HMGT 488 Hospitality Co-op**Credit 3**

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 Chairperson and BUAD 132, FMGT 101, FMGT 211, FMGT 212, HMGT 101.

HMGT 490 Hospitality Research I**Credit 3**

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.

HMGT 491 Hospitality Research II**Credit 3**

This course is the second semester of the senior-level hospitality projects-based class (see HMGT 490). Prerequisite: HMGT 490 or written permission of HRM instructor.

HMGT 497 Professional Development**Credit 1**

This course is an extension of HMGT 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 Chairperson.

HMGT 498 Professional Development Credit 1

This course is an extension of HMGT 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 Chairperson.

HMGT 499 Independent Study in Hotel and Restaurant Management Credit 1-3

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 Chairperson, 3.0 GPA, and Junior/Senior status.

TRAVEL AND TOURISM MANAGEMENT

TMGT 130 Analysis of Travel and Tourism Credit 3

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 Credit 3

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 (Emerging Issue) Credit 3

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. The cultural aspects emphasize African-American history and heritage.

TMGT 309 Tourism Economics Credit 3

This course includes the application of economic principles and research methods to tourist and tourism industry behavior.

TMGT 420 Marketing of Tourism Destinations Credit 3

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 Credit 1-3

This course provides an opportunity for comprehensive review of the tourism planning and policy process used to develop or modify major travel destination areas.

DIRECTORY OF FACULTY

Binns, Karl V., Lecturer

B.S., Morris Brown College; M.B.A. Morgan State University; Ph.D, University of Maryland Eastern Shore

Boger, Ernest P., Chair & Associate Professor

B.A., University of South Florida; M.B.A., University of North Texas; D.Mgt., Revans University

Callahan, Susan, Chef, Lecturer, Universities of Shady Grove

B.S., Mount Saint Mary College; M.A. Adelaide University

Dillon, William, Director & Assistant Professor, PGA Golf Management Program

B.S., Winthrop University; M.S., Southern Wesleyan University

Gormley, Richard, Assistant Professor

B.S., University of Washington; M.B.A., Loyola University

O'Rourke, Ruth K., Director, Universities of Shade Grove

B.S., Widener University; M.S., Virginia Tech

Prosser, Christopher, Lecturer/PGM Internship Coordinator

B.S. Campbell University, M.B.A., Benedictine University

Quinn, Katherine A., Assistant Professor

B.S., University of Maryland College Park; M.B.A., University of Maryland College Park, PH.D, University of Maryland Eastern Shore

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; M.S., Wilmington University

PGA GOLF MANAGEMENT

www.umes.edu/pgm

Mr. William C. Dillon, Director

MISSION

The PGA Golf Management Program at the University of Maryland Eastern Shore prepares students for a career in the golf industry as members of the Professional Golfers' Association of America. In partnership with the PGA, UMES provides quality education to our students by assisting them in understanding the business and playing aspects of the game of golf.

OBJECTIVES

A degree in PGA Golf Management with the Professional Golfers' Association of America (PGA) accreditation represents a career field emphasis that enjoys specific synergies with University of Maryland Eastern Shore (UMES) academic and physical assets. Students who satisfactorily complete the major in PGA Golf Management will receive a Bachelor of Science (B.S.) degree and be prepared to:

1. Begin a career with a major golf resort or independent golf course operation.
2. Assume a supervisory role with a major golf course management company.
3. Represent leading golf equipment and golf fashion manufacturers and merchandisers.
4. Provide leadership in golf tournament and related special event planning including banquet or other food & beverage requirements.
5. Commence a professional golf teaching career.
6. Obtain membership within The Professional Golfers' Association of America.

DEGREES OFFERED

Bachelor of Science - PGA Golf Management

DEPARTMENTAL REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Hotel and Restaurant Management is based upon the general admission requirements of the University. Students are admitted into the UMES PGA Golf Management Program on a competitive basis. Prospective students must first apply for entrance into UMES. Once admitted to the University, they then petition for admittance into the PGA Golf Management Program. A verification of a USGA handicap of 12 or less will be required. This must be verified by handicap card or equivalent. All PGA Golf Management majors will take 41 credit hours in General Education. The GNST 100 one-credit requirement will be met with PGMT 122-Orientation to Professional Golf Management. The EXSC 111 three-credit requirement will be satisfied when the student successfully passes the PGA Playing Ability Test (PAT). The major core requirement of 77 credit hours for PGM majors includes courses that have a significant impact on the day-to-day professional operations and activities of golf courses, pro shops, club houses, related supportive services and golf product/image marketing. Three hours of supportive courses are required. Nine additional hours of major electives must be completed including HMGMT 405-Resort, Club and Convention Management, and TMGT 130-Analysis of Travel & Tourism. One hundred thirty (130) earned credit hours are required for the degree in PGA Golf Management.

Transfers are accepted on a case-by-case basis. Transfer students will be required to meet all the PGA Golf Management Program graduation requirements of the University and the PGA of America.

Handicap Verification includes:

1. A copy of a current USGA handicap index card indicating a handicap of 12 or less.
2. The Handicap Verification Form filled out by a PGA Professional or High School Golf Coach.
3. Successful completion of the PGA's Playing Ability Test.

DESCRIPTION OF PROGRAM

The PGA Golf Management Program at the University of Maryland Eastern Shore prepares students for a career in the golf industry. The PGA Golf Management program attracts and educates bright, highly-motivated men and women to service all aspects of this developing industry while working toward membership in the Professional Golfers' Association of America. It is a comprehensive degree program that integrates all the curriculum requirements of a Hotel & Restaurant Management major with the knowledge base of the PGA Golf Management Program including sixteen month of structured internship experience and a Playing Ability Test (PAT).

PGA GOLF MANAGEMENT PROGRAM REQUIREMENTS

University of Maryland Eastern Shore students in the PGA Golf Management Program must complete the following PGA of America requirements prior to graduation to receive the PGA Golf Management specialty:

1. Sixteen (16) months of full time cooperative/internship work at three different types of qualifying facilities (one of which must be a green grass facility).
2. The passing of the PGA's Playing Ability Test (met prior to beginning Level 3).
3. Completion of all four levels of the PGA/PGM educational courses and tests.
4. A PGA Golf Management student has 8 years to obtain PGA membership from the first day after successful completion of the Qualifying Level of the PGA Golf Management Program.

PGA MEMBERSHIP REQUIREMENTS

1. Twelve (12) membership credits for college degree.
2. Sixteen (16) membership credits for completion of the PGA Golf Management Program.
3. Six (6) membership credits for completion of all membership requirements.
4. Two (2) membership credits for attending 2 national workshops hosted by the PGA Career Services Department.

PROBATIONARY STANDARDS

Members of the UMES PGA Golf Management Program will be placed on PGA Golf Management Probation at the beginning of an academic semester due to any one of the following:

1. Cumulative grade point average less than 2.0
2. Failure to hand in appropriate work experience activities on due dates
3. Failure to attend PDP as required. This includes the two individual lessons and four PGMSA tournaments per semester until the PAT is passed.
4. Not attempting the PAT a minimum of one time per semester
5. "No-Show" at a PAT

6. Missing two or more PGMSA meetings
7. Outstanding Fees
8. Disruptive or disrespectful behavior
9. Failure to complete all incomplete tests within the six month time period

DISMISSAL FROM THE PGA GOLF MANAGEMENT PROGRAM

The following reasons are grounds for dismissal from the PGA Golf Management Program:

1. Less than a 2.0 cumulative GPA for two consecutive semesters.
2. Probation within the PGM Program for two consecutive semesters.
3. Not participating in a PAT a minimum of two times per year until it has been passed.
4. Failure to pass the PGA PAT by the beginning of Level 3.
5. Committing a grievous act while on internship which results in termination.
6. Students who fail a checkpoint a total of three times.
7. Any behavior which is considered unethical by the PGA of America or to be a violation of the Code of Ethics as found in the PGA Constitution.

PGA GOLF MANAGEMENT FEES

A. PGA Golf Management Student Association Fees

Paid every semester to the PGMSA Treasurer	\$50.00
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B. Semester PGA Golf Management Fees

Golf Course Access Fees	\$400.00
(includes Great Hope Golf Course and Range, Nutters Crossing Golf Course, UMES range, UMES PGA Golf Management paraphernalia)	
PGA Playing Ability Test (PAT) until passed	\$100.00
Course Fees (Payable to facility on day of play)	TBD
PGMSA Tournament Fee	\$100.00
Player Development Fee until PAT is passed	\$50.00

C. PGA Golf Management Program

August Freshman Year

Qualifying Level Portal Access	\$200.00
Qualifying Level Test	\$60.00
Student Affiliate Fee	\$50.00

January of Freshman Year

Level 1 Portal Access	\$560.00
Level 1 Seminar	\$660.00
Level 1 Tests (Golf car, Intro to teach, TO)	\$180.00

August Sophomore Year

Level 1 Tests (Cust rel., Business Plan)	\$120.00
Student Affiliate Fee	\$50.00

January of Sophomore Year

Level 2 Portal Access	\$350.00
Level 2 Tests (Intermediate Teach)	\$60.00
Level 2 Seminars	\$660.00

August Junior Year

Level 2 Tests (Turf, Golf Oper, Merch & Inv)	\$180.00
Student Affiliate Fee	\$50.00

January Junior Year

Level 3 Portal Access	\$350.00
Level 3 Tests (Player Dev, F & B)	\$120.00

August Senior Year

Level 3 Tests (HR & Sup/Del)	\$60.00
Student Affiliate Fee	\$50.00

January Senior Year

Level 3 Seminars	\$660.00
Level 3 Test (Advanced Teaching)	\$60.00

NOTE: These prices are estimates based on the latest information from PGA and UMES and are subject to change annually.

PGA GOLF MANAGEMENT
Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements. Students should consult their assigned advisor when selecting any course.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select ENGL 203¹ plus one course in each of two disciplines:

Discipline A: ARTS

ARTS 101, ARTS 310, MUSI 100, MUSC 101, MUSC 109

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines:

Discipline A: **SOCIAL SCIENCES**

ECON 200 or ECON 200H, or ECON 201 or ECON 201H,

Discipline B: **BEHAVIORAL SCIENCES**

CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 200, SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select PLSC 184 and PLSC 185 (lab) plus one course with lab from the following:

BIOL 101, BIOL 103 (lab)

CHEM 101, CHEM 103 (lab)

Curriculum Area IV - MATHEMATICS

Credits 3

MATH 102, MATH 109

Curriculum Area V - ENGLISH COMPOSITION

Credits 9

ENGL 101 or ENGL 101H¹

ENGL 102 or ENGL 102H¹

ENGL 305/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 6

GNST 100 First Year Experience: this course has been incorporated into Core Course

PGMT 122: Orientation to PGA Golf Management

In addition, students must complete 6 credit hours with the following two courses:

EXSC 111: Personalized Health Fitness: This requirement is filled by successfully completing the PGA Player Ability Test.

TMGT 306: Eco & Cultural Tourism

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

FOUNDATION KNOWLEDGE		Credits 77
PGMT 122	Orientation to PGM	3
PGMT 170	PGM Internship I	1
PGMT 210	Tournament Operations	3
PGMT 222	PGM I	3
PGMT 230	Introduction to Teaching Principles	3
PGMT 270	PGM Internship II	1
PGMT 322	PGM II	3
PGMT 330	Intermediate Teaching Principles	3
PGMT 340	Player Development Programs	3
PGMT 353	Turfgrass Management	3
PGMT 355	Merchandising and Inventory	3
PGMT 370	Internship III	1
PGMT 422	PGM III	3
PGMT 430	Advanced Teaching Methods	3
PGMT 470	PGM Co-op	3
HMG 220	Technology Management	4
HMG 301	Front Office Management	3
HMG 303	Facilities, Operations, and Maintenance	3
HMG 305	Entrepreneurship	3
HMG 340	Hospitality Accounting	3
HMG 350	Hospitality Marketing	3
HMG 401	Hospitality Law	3
HMG 402	Human Resources Management	3
FMGT 101	Food Service Sanitation	2
FMGT 110	Table Service	2
FMGT 211	Food Production I	3
FMGT 212	Food Production II	3
FMGT 301	Food & Beverage Cost Accounting	3

SUPPORTIVE COURSES		Credits 3
Students must select one 3 credit course from the following:		
AGNR 333A	Weed Science	3
AGNR 423	Plant Nutrition and Soil Fertility	3
AGNR 463	Plant Genetics and Breeding	3
BUAD 300	Business Ethics/Online	3
CSDP 220	Intro to Computer Programming	4
EXSC 352	Exercise and Sport Psychology	3
EXSC 360	Exercise and Sport Nutrition	3
HORT 333	Landscape Design	3
NUDT 210	Elements of Nutrition	3
RECR 413	Therapeutic Recreation	3
SOIL 203	Intro to Soil Science	3
SOIL 443	Soil Chemistry	3

MAJOR ELECTIVE		Credits 9
Students must select HMG 405 and TMGT 130 plus one course from the following:		
HMG 304	Facilities Design Project	3
HMG 309	Beer, Wine, and Spirits	3
HMG 440	Financial Analysis	3
HMG 497	Professional Development	3
HMG 498	Professional Development	3
HMG 499	Independent Study	1-3
FMGT 350	Commercial Food Production	3
PGMT 499	Independent Study	1-3

CURRICULUM GUIDE FOR PROFESSIONAL GOLF MANAGEMENT

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	ENGL 102	3
PGMT 122	3	ENGL 001/ENGL 003 ¹	0
FMGT 101	2	PGMT 210 Hybrid	3
GEN ED CURR AREA I	3	FMGT 110	2
PLSC 184	3	PGMT 230	3
PLSC 185	<u>1</u>	GEN ED CURR AREA III/Lab ²	4
	15	MATH 102	<u>3</u>
			18

SUMMER

PGMT 170	1
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SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	Supportive Course	3
HMGMT 220	4	FMGT 212	3
PGMT 222	3	PGMT 330	3
FMGT 211	3	GEN ED CURR AREA II	3
ECON 200 or 201 AREA II	<u>3</u>	GEN ED CURR AREA I ³	<u>3</u>
	15		15

SUMMER

PGMT 270	1
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JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PGMT 353	3	HMGMT 350	3
HMGMT 301	3	HMGMT 303	3
PGMT 355	3	FMGT 301	3
PGMT 322	3	PGMT 340	3
HMGMT 340	3	ENGL 305	<u>3</u>
HMGMT 305	<u>3</u>		15
	18		

SUMMER

PGMT 370	1
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SENIOR YEAR I

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
HMGMT 405	3	HMGMT 401	3
PGMT 422	3	PGMT 430	3
HMGMT 402	3	TGMT 306	3
Major Elective	3	Playing Ability Test	<u>3</u>
TMGT 130	<u>3</u>		15
	15		

SUMMER

PGMT 470	3
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SENIOR YEAR II

<i>First Semester</i>	
PGMT 470: Continued	

Total Credit Hours: 130_____

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²Student must select one science course and one science laboratory course.

³Student must select a course from either discipline to satisfy as an Elective.

COURSE DESCRIPTIONS FOR PROFESSIONAL GOLF MANAGEMENT

PGMT 122 Orientation to PGA Golf Management

Credit 3

This course is the first in a series of four. This course describes the career opportunities, challenges, and benefits of a career as a PGA Professional. It also presents the structure of the PGA/PGM program and related program completion requirements. It also introduces *The PGA Constitution, Bylaws, and Regulations*. Topics covered include the evolution of the PGA during the past century; the PGA's organizational structure; the rights, responsibilities, and classifications of PGA membership; requirements for professional development; and procedures for dealing with membership issues. Additionally, it presents the structure and relevance of *The Rules of Golf*, published by the USGA and used throughout the industry. The course also highlights several common Rules and offers a procedure and helpful tips on how to address on-course Rules questions as a PGA Professional. Finally, the history, evolution, and importance of *The Rules of Golf* featured, among other methods, as a way to promote respect and adherence to the Rules. The First Year Experience (FYE) and test will be incorporated in this course. Prerequisite: Golf Management major.

PGMT 170 Professional Golf Management Internship I

Credit 1

A twelve-week supervised and paid internship at a PGA-approved golf facility is the centerpiece of this "hands-on" experience. This is the first of three internships, normally offered during summer months. Duties and responsibilities are approved by the faculty member and supervised by the PGA professional at the site. Evaluation is conducted by the faculty member and the on-site professional. Written reports and evaluations are required at the completion of each phase of instruction. The actual site location and thereby placement is contingent on the availability of PGA-sanctioned courses in and around areas where students are able to acquire housing. PGM Faculty, the student and the PGA collaborate on the final placement decision. A minimum cumulative GPA of 2.0 is required for each internship. PGMT 170 internships will emphasize the following skill sets: golf car fleet management, customer relations, rules of golf, tournament operations, golf club design and repair, career enhancement, introduction to teaching, and player development. Prerequisite: PGMT 122.

PGMT 210 (Hybrid) Tournament Operations and Golf Car Fleet Management

Credit 3

This course covers the skills and knowledge required to successfully plan and run golf tournaments at the facility level. The course covers all aspects of golf tournaments: planning, organizing, running, and reviewing an event. It also includes Rules-related topics such as forming a Committee, marking the golf course, and facilitating rulings. Additionally, although this course does not have a corresponding stand-alone seminar, this course covers planning, operating, and maintaining a golf car fleet at a facility in an on-line setting. The course focuses on operational topics, such as rental policies and procedures, as well as preventive maintenance routines and proper car storage. The course also features planning and business aspects, such as how to determine the number and type of cars for the fleet, whether to purchase or lease them, and how much to charge for rental. Prerequisite: PGMT 122.

PGMT 220 Golf Club Design and Repair

Credit 3

Students are presented with the technical content required to custom fit and merchandise equipment. This course incorporates a hands-on-training component which produces a work product output of one or more custom-fitted clubs for the student. Prerequisite: PGM Major

PGMT 222 Professional Golf Management I

Credit 3

The course introduces the PGA Customer Relations Model, which includes customer greeting routines, seven interpersonal skills, and four strategies for effectively guiding interactions with customers, supervisors, employees, vendors, and others. Additionally, taking a case-study approach, business planning features several business techniques and principles necessary for planning and budgeting. Some of the tasks covered include creating a business plan, developing a budget for a golf facility, and performing forecasts of rounds, revenues, expenses, and profit.

PGMT 230 Introduction to Teaching Principles**Credit 3**

This course introduces three major content areas: human learning, teaching process and procedures, and elements of the game. It includes topics related to laws, principles, preferences, biomechanics, and teaching technologies. The course also addresses club performance variables and how they can affect the swing, body movement, and ball flight. The course provides guidance on how to measure and observe these club performance variables to establish the effect on a player's performance. Prerequisite: PGMT 122.

PGMT 270 Professional Golf Management Internship II**Credit 1**

A twelve-week supervised and paid internship at a PGA-approved golf facility is the centerpiece of this "hands-on" experience. This is the second of three internships, normally offered during summer months. Duties and responsibilities are approved by the faculty member and supervised by the PGA professional at the site. Evaluation is conducted by the faculty member and the on-site professional. Written reports and evaluations are required at the completion of each phase of instruction. The actual site location and thereby placement is contingent on the availability of PGA-sanctioned courses in and around areas where students are able to acquire housing. PGM Faculty, the student and the PGA collaborate on the final placement decision. A minimum cumulative GPA of 2.0 is required for each internship. PGMT 270 internships will emphasize the following skill sets: customer relations, business planning and operations, analysis of the swing, and golf club design and repair. Prerequisite: PGMT 170.

PGMT 322 Professional Golf Management II**Credit 3**

This course focuses on managing the golf operation in a way that delivers upon the business plan, offering the desired level of service to customers, while also maintaining a viable, sustainable business. The course includes four elements: the pre-seminar, seminar, work experience activities, and a knowledge test. Prerequisite: PGMT 222.

PGMT 330 Intermediate Teaching Principles**Credit 3**

This course focuses on the knowledge of learning – specifically, the different kinds of feedback that students can receive from a variety of sources, and the different kinds of practice conditions that facilitate learning. It also looks at using proper preparation and communication techniques to build relationships that help the students improve his or her golf skills. Additionally, it describes drills, warm-ups, and shot techniques that intermediate students can use to improve their skills. Prerequisites: PGMT 230.

PGMT 340 Player Development Programs and Teaching Business**Credit 3**

This business and marketing course views teaching and player development programs as a part of an overall strategy for increasing facility business and growing the game of golf. This course includes strategies and tactics for meeting the needs of numerous golfer populations and facility business goals by developing a program of instructional services.

PGMT 350 Golf Shop Operations**Credit 3**

This course is an in-depth study of the business of golf and all aspects of managing the business of golf to include planning, organizing, staffing, directing and controlling. Marketing aspects of merchandising and inventory control are highlighted. Students learn how to develop, retain and lead staff within a high performance work environment. Other topics will include open-to-buy plans, merchandise assortment plans, vendor relations, inventory management and merchandise display and promotion. Prerequisite: PGMT 122 and HMGMT 305.

PGMT 353 Agronomy and Turf Grass Management**Credit 3**

This is an introduction to turf grasses and maintenance procedures necessary for meeting modern golf course playability standards. Accordingly, students learn how to identify, select, establish and manage turf for specific recreational and competitive use in golf course settings. Technical knowledge obtained will also have applications for commercial and residential use. Emphasis is placed during the class on communicating with golf course superintendents and the customers about regular practices and protocol. Specific topics include basic plant physiology, Integrated Pest Management strategy, turf grass identification, fertility requirements, cultural practices, as well as environmental concerns. Campus facilities will be used to support a minimum 4-week laboratory experience. Human resource, financial, and governmental issues are also discussed.

PGMT 355 Merchandising and Inventory**Credit 3**

This course provides the important skills and tasks required to run a successful merchandising operation within a PGA approved golf shop. Emphasis will be placed on particular customer needs and wants within individual golf shop environment. Creative and cost effective inventory management to maximize financial health of the business will be stressed. Understanding of the individual golf shop manager's role as a valued added consultant will be highlighted as a competitive advantage as discounters and management companies continue to proliferate. Prerequisites: HMG 305.

PGMT 370 Professional Golf Management Internship III**Credit 1**

This twelve-week golf-facility-based exercise is number three in a coordinated series of three supervised internships. It is designed to provide a broad base of exposure to all aspects of golf management. Specific duties and assignments are approved on site by the responsible faculty member and the PGA Professional. The student will complete assigned duties and responsibilities as approved by the faculty member and supervised by the PGA professional at the site. Written reports and evaluations are required at the completion of each phase of instruction. A minimum cumulative GPA of 2.0 is required for each internship. Site locations are determined by the availability of PGA-approved sites and student preference, with faculty member approval. PGMT 370 internships will emphasize the skill sets of philosophy and swing concepts, merchandising and inventory, supervising and delegating, and food and beverage. Prerequisite: PGMT 270.

PGMT 422 Professional Golf Management III**Credit 3**

This course covers a wide range of topics related to recruiting and managing employees, including hiring, training, compensation, staff performance, evaluation, dismissal, job discrimination laws, and other legal issues faced by PGA professionals. The supervising and delegating portion builds on the Level 1 Customer Relations course and introduces a performance system for supervising employees and delegating work responsibilities. The course also presents core principles associated with motivating and managing individuals and teams; additionally, this course is designed to encourage PGA Golf Management students to refine their career aspirations and pursue their interest in the golf industry. The course delineates essential career development strategies and presents examples of career-enhancing actions. Prerequisite: PGMT 322

PGMT 430 Advanced Teaching Methods**Credit 3**

This course builds on Level 1 and 2 courses and emphasizes the seamless integration of learning, teaching, and game elements. It addresses the quality and flow of teaching in order to maximize positive student behavior change and skill transfer to the course. The course also covers elements of the mental game and more advanced shot-making. The club-fitting component centers on effective processes and procedures for club fitting. Prerequisites: PGMT 230 and PGMT 330.

PGMT 470 Professional Golf Co-Op**Credit 3**

PGMT 470 is an intense, extended and supervised 7-month paid work experience at a PGA certified site. The Co-op is available only after all academic requirements are met. It is the final work experience incorporating academic learning with the everyday practical application of the golf business. Emphasis will be on preparing students' professional portfolios and preparing for the Level III Challenge/Response. Graduation requirements (except Level III) must be met prior to registering for PGMT 470. Prerequisite: PGMT 370.

DIRECTORY OF FACULTY

Dillon, William, Assistant Professor & Director

B.S., Winthrop University, M.S., Southern Wesleyan University

Prosser, Christopher, Lecturer/Internship Coordinator

B.S., Campbell University, M.B.A., Benedictine University

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

www.umes.edu/MCS

Dr. Robert Johnson, Chairperson

MISSION

The Department of Mathematics and Computer Science offers Bachelor of Science degree programs in Mathematics, Mathematics Education, and Computer Science and a Master of Science degree in Applied Computer Science. The Department also provides, for all undergraduate and graduate programs, service courses in mathematics and computer sciences.

Computing Resources: Students in both undergraduate and graduate degree programs benefit from the wide variety of computing resources made available at the University of Maryland Eastern Shore. Both Unix-based and Windows-based systems provide rich computing environments both for majors as well as students in service courses. The Department has a Sun UNIX Laboratory consisting of 12 Sun Blade 150 workstations, a Sun V1280 server, and two Computer Laboratories equipped with 35 Windows based Intel I7 64 bit workstations. To assist students in service courses in mathematics, the Department has a Mediated Learning Laboratory that provides online tutoring, homework, quizzes, and test preparation materials. In addition, students have several other campus computer facilities available to complete required coursework.

OBJECTIVES

The Department seeks to:

1. Attract and retain students in Departmental programs by providing current and challenging curricula, effective advisement, and innovative instructional strategies;
2. Attract and retain well qualified faculty dedicated to preparing students, both academically and socially, to be competitive in the global workforce environment;
3. Develop and implement up-to-date curricula that provides a balance between theory and practice;
4. Develop and maintain up-to-date computing facilities and other learning/instructional environments;
5. Provide co-curricular opportunities for students via participation in faculty/student research projects, student programming and design competitions, professional or student organizations, and pre-professional internships;
6. Encourage undergraduate and graduate students to participate in inter-disciplinary research activities and industry-funded design projects;
7. Develop and maintain mutual cooperation and partnerships with area industries.

DEGREES OFFERED

Bachelor of Science - Mathematics (Non-Teaching)

Bachelor of Science - Mathematics Education

Bachelor of Science - Computer Science with Business Focus

Bachelor of Science - Computer Science

Master of Science – Applied Computer Science (for details, see Graduate Catalog)

GENERAL PROGRAM REQUIREMENTS

Prospective freshmen students must have earned a high school diploma from an accredited school or have completed the requirements for and have received the GED. Additionally, students must have successfully completed the following: four years of English; three years of Social Science/ History; two years of a laboratory-based science; three years of mathematics, including Algebra I, II and Geometry; and two years of a foreign language.

DEPARTMENTAL REQUIREMENTS

Mathematics Non-Teaching – This program is designed for persons who wish to pursue careers in mathematical analysis or modeling in government, industrial, financial, consulting, or academic settings. The content of this program covers a broad spectrum of pure and applied mathematics. Courses are offered in a variety of topics including Calculus, Real and Complex Analysis, Number Theory, Topology, Linear Algebra, Modern Algebra, Statistics, Numerical Analysis, and Probability. It is highly recommended that students take 300 and 400 upper level computer science, natural science, and engineering and technology courses relevant to their field of interest. The program requires 120 credit hours with a grade of “C” or better in required major and elective courses.

Mathematics Education - This program is designed for persons who wish to pursue careers in secondary mathematics education. The content of this program is similar to that of Mathematics Non-teaching. It is supplemented by professional education coursework. The program requires 130 credit hours with a grade of “C” or better in the required major courses, electives, and professional education courses. Students should consult the Department of Education about the minimum GPA requirement for admission into education programs.

Computer Science - The Computer Science program is ideal for persons who wish to pursue their careers in government agencies, private corporations or graduate study in computer science-related interdisciplinary degree programs. The content of this degree program is designed to train students in the theory and application of computer science in a variety of disciplines. Courses are offered in a variety of topics including programming languages, data structures, computer organization and architecture, software engineering, operating systems, and other computer science areas. It is highly recommended that students take 300 and 400 upper level computer science, natural sciences, and engineering and technology courses relevant to the field of interest. Completion of the B.S. degree in Computer Science requires 120 credits, with a grade of “C” or better in the required major computer science courses electives and in the mathematics courses.

Computer Science with Business Focus - This program is designed for persons who wish to pursue careers in information systems, operations research, and database management. The content of this program is designed to train students in the theory and application of computer science and its application in business disciplines. Courses include Software Engineering, Operations Research, Computer Organization, Data Structures and Algorithms, Theory of Computation, Programming Languages, Databases and Operating Systems. Courses in accounting and other business areas augment the Computer Science curriculum. It is highly recommended that students take 300 and 400 upper level computer science, natural sciences, and engineering and technology courses relevant to the field of interest. The program requires 120 credit hours, with a grade of “C” or better in the required major courses, electives, and in the mathematics courses.

¹Please consult the UMES Graduate Catalog for additional information.

MATHEMATICS (NON-TEACHING)

CAREER OPPORTUNITIES

A B.S. degree in Mathematics Non-Teaching will offer opportunities in research organizations, public and private industry, government and academia.

DEPARTMENTAL REQUIREMENTS

This Program covers a broad spectrum of pure and applied mathematics. Courses are offered in a variety of topics including Calculus, Real and Complex Analysis, Number Theory, Topology, Linear Algebra, Modern Algebra, Statistics, and Probability. It is designed for persons who wish to pursue careers in statistics, actuarial science, mathematical modeling, and graduate study in mathematics or statistics. It is advisable that students take 300 and 400 upper level computer science, natural sciences, engineering and technology courses relevant to the field of interest. The program requires 120 credit hours with a grade of "C" or better in required major and other mathematics courses.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select:

Discipline E: SPEECH ENGL 203¹ plus:

Two courses from the following:

Discipline C: LANGUAGE

FREN 101 and FREN 102 or SPAN 101 and SPAN 102

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 200H

ECON 201 or ECON 201H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H

POLI 200 or POLI 200H, or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201, SOWK 200 or SOWK 200H

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and **one** science laboratory course from the following.

BIOL 111, BIOL 113 (lab) and

BIOL 112, BIOL 114 (lab) or

CHEM 111, CHEM 113 (lab) and

CHEM 112, CHEM 114

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area IV – MATHEMATICS **Credits 4**
 MATH 112

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**
 ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 4**
 CSDP 100 First Year Experience or other Departmental orientation course
 EXSC 111 Personalized Health Fitness

Total Required for General Education **Credits 40**

PROGRAM CORE REQUIREMENTS **Credits 43**

MATH	211	Calculus and Analytic Geometry II	4
MATH	212	Calculus and Analytic Geometry III	4
MATH	232	Introduction to Linear Algebra	3
MATH	300	Foundations of Mathematics	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	412	Linear Algebra	3
MATH	442	Complex Analysis	3
MATH	443	Real Analysis	3
MATH	490	Senior Seminar	1
CSDP	341	Numerical Analysis	3

MAJOR ELECTIVES **Credits 9**

Students should consult with their assigned advisor and select at least three additional courses according to their desired interest:

PURE MATHEMATICS CONCENTRATION

MATH	301	College Geometry	3
MATH	302	Number Theory	3
MATH	440	Topology	3
MATH	444	Real Analysis II	3
MATH	498	Topics in Math. I	3
MATH	499	Topics in Math. II	3
MATH	413	Modern Algebra II	3

APPLIED MATHEMATICS CONCENTRATION

MATH	302	Number Theory	3
MATH	350	Linear Programming	3
MATH	410	Mathematical Statistics II	3
CSDP	442	Numerical Analysis II	3
MATH	455	Mathematical Modeling	3
MATH	498	Topics in Math. I	3
MATH	499	Topics in Math. I	3

Other 300 and 400 level courses in Mathematics and Computer Science may be substituted for some of these electives.

SUPPORTIVE COURSE REQUIREMENTS**Credits 16**

PHYS	181H	Introductory Physics I (Honors)	3
PHYS	183H	Introductory Physics I (Honors) Laboratory	1
PHYS	182H	Introductory Physics II (Honors)	3
PHYS	184H	Introductory Physics II (Honors)	1
CSDP	221	Introduction to Computer Programming Intensive	4
CSDP	222	Advanced Programming	4

FREE ELECTIVE COURSES**Credits 12**

It is advisable to take 300 and 400 upper level mathematics, computer science, engineering, and technology courses relevant to fields of interest.

CURRICULUM GUIDE FOR MATHEMATICS NON-TEACHING

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 112	4	MATH 211	4
ENGL 101	3	ENGL 102	3
EXSC 111 ¹	3	ENGL 001/ENGL 003 ²	0
GNST 100	1	GEN ED CURR AREA III ³	3
GEN ED CURR AREA III ³	3	GEN ED CURR AREA III ⁴	1
GEN ED CURR AREA III ⁴	<u>1</u>	CSDP 221	<u>4</u>
	15		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 212	4	MATH 321	4
ENGL 203	3	GEN ED CURR AREA II ⁵	3
CSDP 222	4	FREN 102 or	
FREN 101 or		SPAN 102	3
SPAN 101	3	GEN ED CURR AREA II ⁶	3
MATH 300	<u>3</u>	MATH 232	<u>3</u>
	17		16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 342	3	MATH Elective	3
PHYS 181H	3	PHYS 182H	3
PHYS 183H	1	PHYS 184H	1
MATH 309	3	MATH 411	3
ENGL 305	<u>3</u>	MATH 310	3
	13	Free Elective	<u>3</u>
			16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 443	3	MATH 442	3
MATH 412	3	MATH 490	1
CSDP 341	3	MATH Elective	3
MATH Elective	3	Free Elective	3
Free Elective	<u>3</u>	Free Elective	<u>3</u>
	15		13

Total Credits Hours: 120

¹Course cannot be repeated for credit.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Student must select one science course from GEN ED CURR AREA III.

⁴Student must select one science laboratory course from GEN ED CURR AREA III.

⁵Student must select from GEN ED CURR AREA II:A.

⁶Student must select from GEN ED CURR AREA II:B.

MATHEMATICS EDUCATION

The content of this program is similar to that of Mathematics Non-teaching. It is supplemented by professional education coursework. This program is designed for persons who wish to pursue careers in secondary mathematics education.

CAREER OPPORTUNITIES

A B.S. degree in Mathematics Education provides entry level employment in Middle School/High School teaching, and curriculum development and supervision roles in public school systems.

DEPARTMENTAL REQUIREMENTS

The program requires 130 credit hours with a grade of “C” or better in the required major courses and required professional education courses. Students should consult the Department of Education about the minimum GPA requirement for education majors.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select:

Discipline E: SPEECH ENGL 203¹ plus:

Two courses from the following:

Discipline C: LANGUAGE

FREN 101 and FREN 102 or SPAN 101 and SPAN 102

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201 or ECON 201H

ECON 200 or ECON 200H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H

POLI 200 or POLI 200H, or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and **one** science laboratory course from the following.

PHYS 181H and PHYS 183H (lab)

PHYS 182H and PHYS 184H (lab)

Curriculum Area IV – MATHEMATICS

Credits 4

MATH 112

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area V - ENGLISH COMPOSITION¹	Credits 9
ENGL 101 or ENGL 101H	
ENGL 102 or ENGL 102H	
ENGL 001/002/003	
ENGL 305/H/Online or ENGL 310/H/Online	

Curriculum Area VI - EMERGING ISSUES	Credits 4
EDCI 100 First Year Experience or other Departmental orientation course	
EXSC 111 Personalized Health Fitness	

Total Required for General Education	Credits 40
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PROGRAM CORE REQUIREMENTS	Credits 39
MATH 211 Calculus and Analytic Geometry II	4
MATH 212 Calculus and Analytic Geometry III	4
MATH 232 Introduction to Linear Algebra	3
MATH 300 Foundations of Mathematics	3
MATH 301 College Geometry	3
MATH 302 Number Theory	3
MATH 304 History of Math 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

PROFESSIONAL EDUCATION REQUIREMENTS	Credits 42
EDCI 200 Introduction to Contemporary Education	3
EDCI 201 PRAXIS Preparation (at least one credit)	1 ²
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 425C Curriculum and Instruction in Mathematics	3
EDCI 480 Teaching Internship: Secondary Program (7-12): Middle School	6
EDCI 490 Teaching Internship: Secondary Program (7-12): Middle School	6
EDSP 428 Communication and Collaboration in Special Education	3
PSYC 305 Developmental Psychology	3
PSYC 307 Educational Psychology	3

SUPPORTIVE COURSE REQUIREMENTS	Credits 8
CSDP 221 Introduction to Computing Programming Intensive	4
CSDP 222 Advanced Programming	4

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²Course does not count toward graduation.

CURRICULUM GUIDE FOR MATHEMATICS EDUCATION

FRESHMAN

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 112	4	MATH 211	4
ENGL 101	3	ENGL 102	3
FREN 101 or		ENGL 001/ENGL 003 ³	0
SPAN 101	3	FREN 102 or	
GEN ED CURR AREA II ¹	3	SPAN 102	3
EDCI 100	1	CSDP 221	4
EXSC 111 ²	<u>3</u>	PSYC 200	<u>3</u>
	17		17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 212	4	MATH 232	3
ENGL 203	3	PYSC 307	3
PHYS181H	3	MATH 300	4
PHYS183H	1	PHYS182H	3
EDCI 200	3	PHYS184H	1
EDCI 201 ⁴	1	GEN ED CURR AREA II ¹	<u>3</u>
CSDP 222	<u>3</u>		17
	17		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 342	3	EDCI 406	3
MATH 321	4	EDCI 409	3
EDCI 311	3	MATH 302	3
MATH 309	3	MATH 411	3
ENGL 305 or		MATH 310	<u>3</u>
ENGL 310	<u>3</u>		15
	16		

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 301	3	EDCI 400	3
MATH 304	3	EDCI 480	6
EDCI 410	3	EDCI 490	<u>6</u>
EDCI 425C	3		15
EDSP 428	<u>3</u>		
	15		

Total Credits Hours: 129

¹Student must select course from GEN ED CURR AREA II:A or B.

²EXSC 111 cannot be repeated for credit.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Course does not count toward graduation.

COMPUTER SCIENCE

The content of this degree program is designed to train students in the theory and application of computer science and the application in a variety of disciplines. Courses are offered in a variety of topics including programming languages, data structures, computer organization and architecture, software engineering, operating systems, and other computer science topics. The Computer Science program is ideal for persons who wish to pursue their careers in government agencies or private corporations or graduate study in computer science-related multi-disciplines. It is advisable that students take 300 and 400 upper level computer science, natural sciences, engineering and technology courses relevant to the field of interest.

CAREER OPPORTUNITIES

Career opportunities in computer science include: Software Engineering, Systems Analysts, Computer Programming, Project Management, Government, Public, and Private Organizations, Academia, and Research Organizations.

DEPARTMENTAL REQUIREMENTS

Completion of the B.S. degree in Computer Science requires 120 credits, with a grade of "C" or better in required major and advanced computer science courses and courses in mathematics.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select:

Discipline E: SPEECH ENGL 203¹ plus:

Two courses from the following:

Discipline C: LANGUAGE

FREN 101 and FREN 102 or SPAN 101 and SPAN 102

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201 or ECON 201H

ECON 200 or ECON 200H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H

POLI 200 or POLI 200H, or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201, SOWK 200 or SOWK 200H

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203.

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES Credits 8

Students must select **two** science courses and **two** science laboratory courses from the following.

BIOL 111, BIOL 113 (lab) and
 BIOL 112, BIOL 114 (lab) or
 CHEM 111, CHEM 113 (lab) and
 CHEM 112, CHEM 114

Curriculum Area IV – MATHEMATICS Credits 4

MATH 112

Curriculum Area V - ENGLISH COMPOSITION¹ Credits 9

ENGL 101 or ENGL 101H
 ENGL 102 or ENGL 102H
 ENGL 001/002/003
 ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES Credits 4

CSDP 100 First Year Experience or other Departmental orientation course
 EXSC 111 Personalized Health Fitness

Total Required for General Education Credits 40**PROGRAM CORE REQUIREMENTS****A) Computer Science** Credits 47

CSDP	221	Introduction to Computer Programming	4
CSDP	222	Advanced Programming	4
CSDP	250	Data Structures	3
CSDP	301	Computer Organization & Assembly Language Programming	3
CSDP	305	Software Engineering I	3
CSDP	332	Internet Programming	3
CSDP	351	Computer Architecture	3
CSDP	390	Social, Ethical and Legal Issues in Computer Science	3
CSDP	398	Computer Language Topics A: Java	3
CSDP	399	Computer Language Topics B: UNIX	3
CSDP	401	Operating Systems	3
CSDP	403	Computer Language Theory	3
CSDP	404	Database Management Systems	3
CSDP	450	Algorithms and Data Structures	3
CSDP	490	Senior Design Project	3

***Advanced Computer Science Electives (choose one)** Credits 3

CSDP	331	Data Warehousing and Data Mining	3
CSDP	341	Numerical Analysis I	3
CSDP	402	Computer Networks	3
CSDP	405	Software Engineering II	3
CSDP	406	Introduction to Artificial Intelligence	3
CSDP	442	Numerical Analysis II	3
CSDP	498	Selected Topics in Computer Science A	3
CSDP	499	Selected Topics in Computer Science B	3

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

MATH (In addition to courses satisfying Curr Area IV)			Credits 16
MATH	211	Calculus II	4
MATH	232	Introduction to Linear Algebra	3
MATH	309	Introduction to Probability	3
MATH	323	Introduction to Discrete Structures	3
MATH	360	Statistics for Scientists	3

SCIENCE (In addition to courses satisfying Curr Area III) **Credits 4**
 Additional science courses offered in Biology or Chemistry above the 111 level,
 or Physics at the 181 level or above.

Broadening Courses (In addition to courses satisfying Curr Area I) **Credits 6**
 Two additional courses in Arts, Humanities, Social Science or Behavioral Science

FREE ELECTIVE COURSES **Credits 4**
 It is recommended taking 300 and 400 upper level computer science, natural sciences,
 engineering, and technology courses relevant to fields of interest.

CURRICULUM GUIDE FOR COMPUTER SCIENCE

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113 or	1	BIOL 114 or	1
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
ENGL 101	3	ENGL 102	3
CSDP 100	1	ENGL 001/ENGL 003 ²	0
EXSC 111 ¹	3	CSDP 221	4
GEN ED CURR AREA III	3	MATH 112	<u>4</u>
FREE Elective	<u>1</u>		15
	15		

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 203	3	CSDP 250	3
MATH 211	4	BIOL or CHEM or PHYS ³	4
CSDP222	4	MATH 323	3
FREN 101 or		MATH 309	3
SPAN 101	<u>3</u>	FREN 102 or	
	14	SPAN 102	<u>3</u>
			16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CSDP 301	3	CSDP 305	3
CSDP 398	3	CSDP 399	3
CSDP 403	3	CSDP 390	3
MATH 232	3	MATH 360	3
ENGL 305	<u>3</u>	CSDP 332	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CSDP 404	3	CSDP 401	3
CSDP 450	3	CSDP Elective	3
CSDP 351	3	CSDP 490	3
GEN ED CURR AREA II	3	GEN ED CURR AREA ⁴	3
GEN ED CURR AREA ⁴	<u>3</u>	FREE Elective	<u>3</u>
	15		15

Total Credits Hour: 120

¹EXSC 111 cannot be repeated for credit.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Student must take one course in addition to GEN ED CURR AREA III.

⁴Student must take two courses in addition to GEN ED CURR AREA II.

COMPUTER SCIENCE WITH BUSINESS FOCUS

The content of this program is designed to train students in the theory and application of computer science and its application in business disciplines. Courses include Software Engineering, Operations Research, Computer Organization, Data Structures and Algorithms, Theory of Computation, Programming Languages, Databases and Operating Systems. Courses in accounting and other business areas augment the Computer Science curriculum. This program is designed for persons who wish to pursue careers in information systems, operations research, and database management. It is advisable that students take 300 and 400 upper level computer science, natural sciences, engineering and technology courses relevant to the field of interest.

DEPARTMENTAL REQUIREMENTS

The program requires 120 credit hours, with a grade of “C” or better in the common required courses, the required major and advanced courses in the electives and in the mathematics courses.

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credit 9

Students must select:

Discipline E: SPEECH ENGL 203¹ plus:

Two courses from the following:

Discipline C: LANGUAGE

FREN 101 and FREN 102 or SPAN 101 and SPAN 102

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credit 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 201 or ECON 201H

ECON 200 or ECON 200H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H

POLI 200 or POLI 200H, or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201, SOWK 200 or SOWK 200H

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses **two** science laboratory courses from the following.

BIOL 111, BIOL 113 (lab) and

BIOL 112, BIOL 114 (lab) or

CHEM 111, CHEM 113 (lab) and

CHEM 112, CHEM 114

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area IV – MATHEMATICS **Credits 4**
MATH 112

Curriculum Area V - ENGLISH COMPOSITION¹ **Credits 9**
ENGL 101 or ENGL 101H
ENGL 102 or ENGL 102H
ENGL 001/002/003
ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES **Credits 4**
CSDP 100 First Year Experience or other Departmental orientation course
EXSC 111 Personalized Health Fitness

Total Required for General Education **Credits 40**

PROGRAM CORE REQUIREMENTS

Computer Science **Credits 47**

CSDP 221	Introduction to Computer Programming	4
CSDP 222	Advanced Programming	4
CSDP 240	Principles of Data Processing	3
CSDP 241	File Structures	3
CSDP 250	Data Structures	3
CSDP 301	Computer Organization & Assembly Language Programming	3
CSDP 305	Software Engineering I	3
CSDP 331	Data Warehousing and Data Mining	3
CSDP 332	Internet Programming	3

Advanced (15 credits)

CSDP 390	Social, Ethical & Legal Issues in Computer Science	3
CSDP 402	Computer Networks	3
CSDP 404	Database Management Systems	3
CSDP 405	Software Engineering II	3
CSDP 490	Senior Design Project	3

***Advanced Computer Science Electives (choose one) (3 credits)**

CSDP 406	Introduction to Artificial Intelligence	3
CSDP 407	Advanced Databases	3
CSDP 498	Selected Topics in Computer Science: A	3
CSDP 499	Selected Topics in Computer Science: B	3
CSDP 398	Computer Language Topics A: Java	3
MATH 350	Linear Programming	3

MATH (In addition to courses satisfying Curr Area IV) **Credits 9**

MATH 210	Elementary Statistics	3
MATH 232	Introduction to Linear Algebra	3
MATH 323	Introduction to Discrete Structures	3

ECONOMICS AND BUSINESS **Credits 18**

Core (15 credits)

ECON 201	Principles of Macroeconomics	3
ECON 200	Principles of Microeconomics	3
ACCT 201	Introductory Financial Accounting	3
ACCT 202	Introductory Corporate and Managerial Accounting	3

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

BUSINESS ELECTIVE I (CHOOSE 1 – 3 CREDITS)

MKTG 308, FINA 340, or BUAD 302

3

***ADVANCED BUSINESS ELECTIVES (CHOOSE 1)**

MKTG 310, MKTG 312, MKTG 314, MKTG 315, MKTG 401, MKTG 404, FINA 341, FINA 440, FINA 441, BUAD 303, BUAD 412, BUAD 420

BROADENING COURSES (In addition to courses satisfying Curr Areas I and II) Credits 6

Two additional courses in Arts, Humanities, Social Science or Behavioral Science

CURRICULUM GUIDE FOR COMPUTER SCIENCE WITH BUSINESS FOCUS

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112 and	3
BIOL 113 or	1	BIOL 114 or	1
CHEM 111		CHEM 112 and	
CHEM 113		CHEM 114	
ENGL 101	3	ENGL 102	3
CSDP 100	1	ENGL 001/ENGL 003 ³	0
EXSC 111 ¹	3	CSDP 221	4
GEN ED CURR AREA II ²	<u>3</u>	MATH 112	<u>4</u>
	14		15

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ACCT 201	3	GEN ED CURR AREA II ²	3
ECON 201	3	ACCT 202	3
ENGL 203	3	ECON 200	3
CSDP 222	4	FREN 102 or	
FREN 101 or		SPAN 102	3
SPAN 101	<u>3</u>	CSDP 250	<u>3</u>
	16		15

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>First Semester</i>	<i>Credit</i>
MATH 210	3	CSDP 241	3
CSDP 240	3	CSDP 305	3
MATH 232	3	CSDP 332	3
Business Elective ⁴	3	CSDP 390	3
ENGL 305	<u>3</u>	MATH 323	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CSDP 301	3	Advanced Business Elective ⁵	3
CSDP 404	3	CSDP 490	3
CSDP 405	3	Advanced Information System ⁶	3
CSDP 402	3	CSDP 331	3
Broadening Course ⁷	<u>3</u>	Broadening Course ⁷	<u>3</u>
	14		15

Total Credit Hours: 120

¹EXSC 111 cannot be repeated for credit.

²Certain Business Electives may require specific choices for these courses.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Student must select a Business Elective.

⁵Student must select an Advanced Business Elective

⁶Student must select a CS Elective

⁷Student must take two courses in addition to GEN ED CURR AREA II.

MINOR PROGRAMS

The Department offers a minor in both Computer Science and in Mathematics as well as a graduate program leading toward an M.S Degree in Applied Computer Science¹ (unique in the state of Maryland).

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. Students in a program (like computer science directed toward science or business) that requires Calculus I or the first computer course cannot do any of our minors since all these specifically require MATH 112 or CSDP 221.

For double majors, students are allowed to substitute other upper-level courses, approved by the chair, for such duplicate required courses.

MATHEMATICS

A student can minor in Mathematics by taking 20 credits in Mathematics including Math 112 (Calculus I), Math 211 (Calculus II) and at least three 3-credit 300 and 400 level courses in Mathematics. A 3-credit 300 or 400 level computer science course may be used in place of one of the 300 or 400 level mathematics courses.

COMPUTER SCIENCE

A student may minor in Computer Science by taking the following courses: CSDP 221 (Introduction to Computer Programming: Intensive), CSDP 222 (Advanced Programming), CSDP 250 (Data Structures), CSDP 332 (Internet Programming), and two 3-credit 400 level computer science courses. Twenty (20) credits are needed for the minor in Computer Science.

COMPUTER SCIENCE WITH BUSINESS FOCUS

A student may minor in Computer Science with business focus by taking the following courses: CSDP 221 (Introduction to Computer Programming: Intensive), CSDP 222 (Advanced Programming), CSDP 250 (Data Structures), CSDP 332 (Internet Programming), CSDP 404 (Database management), CSDP 407 (Advanced Data base management). Twenty (20) credits are needed for the minor in Computer Science with Business Focus.

COURSE DESCRIPTIONS FOR COMPUTER SCIENCE

The Department of Mathematics and Computer Science requires that, prior to enrolling in any departmental course, students should earn a grade of “C” or better in all course prerequisites.

CSDP 100 Computer Science Orientation **Credit 1**

This course is a survey of Computer Science with special emphasis on topics of importance to computer scientists. It also provides an exploration of skills required and resources available to students majoring Computer Science. Topics include nature of problems, hardware, human factors, security, social, ethical and legal issues, familiarization of various aspects of computing and networks. This course must be taken by all Computer Science major and minor students.

CSDP 120 Introduction to Computing **Credit 3**

This course is for students new to 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 120 does not satisfy the General Education Area III Requirement.**

CSDP 121¹ Microcomputer Applications **Credit 3**

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 disciplines, such as medicine, administration, accounting, social sciences and humanities, will be considered. **Prerequisite:** High School Mathematics. CSDP 121 does not satisfy the General Education Area III Requirement.

CSDP 150¹ Office Automation Workshop **Credit 1**

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. This course may be repeated (with different topics) for a maximum of six credits. **Prerequisite:** Variable, depending on topic selected. CSDP 150 does NOT satisfy the General Education Area III Requirement.

CSDP 151¹ Special Software Workshop **Credit 1**

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 software tools. The course may be repeated for a maximum of six credits. **Prerequisite:** Variable, depending on the topic selected. CSDP 151 does NOT satisfy the General Education Area III Requirement.

CSDP 152¹ Programming Techniques Workshop **Credit 1**

This course is an intensive introduction to special programming techniques, e.g., handling disk files on computers and writing computer-assisted instruction materials. This course involves considerable hands-on experience in the area chosen. The course may be repeated (with different topics) for a maximum of six credits. **Prerequisite:** Variable, depending on the topic selected. CSDP 152 does NOT satisfy the General Education Area III Requirement.

CSDP 153¹ Programming Language Workshop **Credit 1**

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. This course may be repeated (with different topics) for a maximum of six credits. **Prerequisite:** Variable, depending on the topic selected. CSDP 153 does NOT satisfy the General Education Area III Requirement.

CSDP 154¹ Computer Hardware Workshop**Credit 1**

This course is an intensive introduction to new hardware and hardware methodology in special areas, e.g., microcomputer interaction 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. Prerequisite: Variable, depending on the topic selected. CSDP 154 does NOT satisfy the General Education Area III Requirement.

CSDP 155 Computer Utilities Workshop**Credit 1**

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. The course may be repeated (with different topics) for a total of six credits. Prerequisite: Variable, depending on topic selected. CSDP 155 does not satisfy the General Education Requirement in Area III Requirement.

CSDP 220 Introduction to Computer Programming**Credit 4**

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, programming methodology, social and ethical implications of computing. The programming language Visual BASIC is used to learn input/output, arithmetic computation, and debugging of programs in the computer laboratory. Prerequisites: MATH 102 or MATH 109 or MATH 110. Students planning on continued study in Computer Science might well consider CSDP 221 instead.

CSDP 221 Introduction to Computer - Programming: Intensive**Credit 4**

The course, primarily for departmental majors, 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, programming methodology, and social and ethical implications of computing. 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 109 or MATH 110.

CSDP 222 Advanced Programming**Credit 4**

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 221.

CSDP 240 Principles of Data Programming**Credit 3**

This course is an introduction to the COBOL language and its business data processing environment. Topics include the six divisions: arithmetic, input/output, control statements, control-break logic, tables, and searching logic. The course is a computer laboratory-based course involving extensive coding and debugging of small to large programs. Prerequisite: CSDP 221.

CSDP 241 File Structures**Credit 3**

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.

¹Course does not satisfy the GEN ED CURR AREA III Requirement.

CSDP 250 Data Structures**Credit 3**

This course covers the properties, implementation and analysis of data structures and object-oriented programming styles. Topics covered include linked lists, queues, stacks, binary trees, B-trees, graphs and heaps. Prerequisite: CSDP 222.

CSDP 301 Computer Organization and Assembly Language Programming Credit 3

This course covers the basics of computer organization with emphasis on the lower-level abstraction of a computer system, including digital logic, instruction set and assembly language programming. Topics include data representation; logic gates; simplification of logical expressions; design and analysis of simple combinational circuit, such as decoders and multiplexers, flip-flops and registers; design and analysis of simple synchronous sequential circuit, random-access and read-only memories; instruction set architecture; and programming in assembly language. Prerequisite: CSDP 222

CSDP 305 Software Engineering I**Credit 3**

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 ethical and social implications of computing, concepts of software design, software module structures, data flow diagrams, system dynamics, engineering system analysis, real-time data flow, and introduction to object-orientation and requires written and oral presentations. Computer Aided Software Engineering (CASE) will be introduced. Prerequisite: CSDP 250.

CSDP 309 Introduction to Probability**Credit 3**

This course covers sample spaces, axioms, and elementary theorems of probability; it also covers combinatorics, dependence, conditional probability, random variables, probability distributions which include the Binomial, Geometric, Poisson, Negative Binomial, Hypogeometric, Uniform, Normal, Gamma, and Chi-Square, expectation, mean variance, and moment generating functions, Chebychev's inequality; examples of stochastic processes are also studied. Prerequisite: MATH 211.

CSDP 331 Data Warehousing and Data Mining**Credit 3**

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**Credit 3**

This course introduces students to various 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**Credit 3**

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 351 Computer Architecture**Credit 3**

This course covers how computer hardware works, logical aspects of system implementation as seen by the programmer and what considerations go into the design of a computer and components. Topics include processor design, instruction set design and addressing; control structures and microprogramming; memory management, caches, and memory hierarchies; interrupts and I/O structures; and advanced topics. Prerequisite: CSDP 301.

CSDP 390 Social, Ethical and legal issues in Computer Science**Credit 3**

The growth in computer usage and the number of networks in the information age of 21st century have placed responsibilities on computer scientists to properly use both computers and networks. Issues such as professional, social, ethical and legal responsibilities, intellectual property, piracy, hacking, Internet crimes, viruses, privacy, crime and civil liberties are addressed. **Prerequisite:** Students must have a junior status and have a basic understanding and awareness of computer programming.

CSDP 398 Computer and Language Topics A**Credit 3**

This is 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, LISP, ADA, PROLOG). At least one section in JAVA, to satisfy major requirements will be given each year. This course may be repeated (with different topics) for a maximum of 12 credits. Prerequisite: CSDP 222

CSDP 399 Computer and Language Topics B**Credit 3**

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., UNIX, PROLOG, XML, C#). At least one section in UNIX to satisfy major requirements will be given each year. This course may be repeated (with different topics) for a maximum of 12 credits. Prerequisite: CSDP 222.

CSDP 401 Operating Systems**Credit 3**

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**Credit 3**

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.

CSDP 403 Computer Language Theory**Credit 3**

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 301 and MATH 323.

CSDP 404 Database Management Systems**Credit 3**

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 models, physical and logical database design, relational databases, query language, transaction management, reliability, and security, and considers the social and ethical implications of computing. This course has a significant writing component. Prerequisite: CSDP 250.

CSDP 405 Software Engineering II**Credit 3**

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 factor issues involving software design, reliability, team productivity, and project management are addressed for a clearer understanding of software engineering. Prerequisite: CSDP 305.

CSDP 406 Introduction to Artificial Intelligence**Credit 3**

This course is designed to provide an introduction to the different topics of Artificial Intelligence as well as the basic principles that Artificial Intelligence application areas are based on. Topics covered include automated reasoning, knowledge representation, automated interpretation systems and automated behavior. Prerequisite: CSDP 250

CSDP 407 Advanced Database**Credit 3**

This course is intended for computer science students and professionals who have already acquired a basic background on databases. The objective of the course is to introduce the students to the most advanced concepts and recent issues in several areas of database technology, including the following: advanced database design and implementation, transaction management and concurrency control, distributed database management systems, object-oriented databases, and client/server systems. The course includes laboratory work and individual database application projects. Prerequisites: CSDP 404

CSDP 442 Numerical Analysis II**Credit 3**

This course extracts numerical solutions of systems of equations by direct and iterative methods, ordinary differential equations, optimization, evaluation of determinants, matrix inversion, and calculation of eigenvalues and eigenvectors, and partial differential equations. This course makes use of the powerful MATLAB software utilizing a more practical approach to link every method to real engineering and/or science problems without deriving theoretical concepts. **Prerequisite:** CSDP 341 and MATH 212.

CSDP 450 Algorithms and Data Structures**Credit 3**

This course will focus on the design and analysis of algorithms. Topics include: review of data structures, analysis of algorithms, brute force algorithms, searching techniques, divide-and-conquer, sorting and selection, dynamic programming, graph algorithms, greedy algorithms, P and NP, and coping with NP-completeness. Prerequisites: CSDP 250 and MATH 323.

CSDP 490 Senior Design Project**Credit 3**

This course deals with formal software development techniques applied to the definition, design, coding, testing and documentation of a computer programming project. Each student completes an individual project. **Prerequisite:** Senior Standing.

CSDP 498 Selected Topics in Computer Science A**Credit 3**

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**Credit 3**

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

The Department of Mathematics and Computer Science requires that, prior to enrolling in any departmental course, students should earn a grade of "C" or better in all course prerequisites.

MATH 101¹ Intermediate Algebra**Credit 3**

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 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. This course does not satisfy the General Education Requirement in Mathematics and does not count towards graduation requirements.

MATH 102 Applications of College Mathematics**Credit 3**

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 applications 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: MATH 101 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 placement test).

MATH 109 College Algebra**Credit 3**

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 placement test).

MATH 110 Trigonometry and Analytic Geometry**Credit 3**

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 functions, 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 placement test).

¹MATH 101 does not satisfy the General Education Requirement and does not count towards graduation.

MATH 111H Honors Elementary - Mathematical Analysis**Credit 4**

This course covers the content of both MATH 109 and MATH 110 in one semester. As such, it is limited to those students with three (3) years of secondary school mathematics (including Trigonometry).

MATH 112 Calculus I**Credit 4**

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 a least "C" or better.

MATH 210 Elementary Statistics**Credit 3**

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 Baysean inference; Regression and correlation in two variables; and Times Series Analysis and applications. **Prerequisite:** MATH 102 or MATH 109 or MATH 110 or MATH 111H.

MATH 211 Calculus II**Credit 4**

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; advanced work with transcendental functions; and an introduction to series and sequences. Prerequisite: MATH 112.

MATH 212 Calculus III**Credit 4**

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**Credit 3**

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 241 Elements of Differential Equations for Engineers**Credit 3**

This course is an introduction to ordinary differential equations which presents basic techniques for solving first and second order differential equations, both linear and non-linear, and systems of differential equations. Emphasis is placed on qualitative and numerical methods, as well as on formula solutions. Prerequisite: MATH 211.

MATH 300 Foundations of Mathematics**Credit 3**

This course covers sets, relations, prepositional 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 301 College Geometry**Credit 3**

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 also essential as a part of the training of prospective teachers of secondary school mathematics. Prerequisite: MATH 110 or MATH 111H and MATH 300.

MATH 302 Number Theory**Credit 3**

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 and MATH 300.

MATH 304 History of Mathematics and Computer Science**Credit 3**

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**Credit 3**

This course covers sample spaces, axioms, and elementary theorems of probability; it also covers combinatorics, dependence, conditional probability, random variables, probability distributions which include the Binomial, Geometric, Poisson, Negative Binomial, Hypogeometric, Uniform, Normal, Gamma, and Chi-Square, expectation, mean variance, and moment generating functions, Chebychev's inequality; examples of stochastic processes are also studied. Prerequisite: MATH 211.

MATH 310 Mathematical Statistics I**Credit 3**

This course covers bivariate and multi-variate distributions of random variables and their properties, limit theorems (law of large numbers and the central limit theorem) transformation of variables for the discrete and continuous types, and T and F distributions; point and interval estimation; the maximum likelihood; unbiasedness; efficiency; sufficiency; MVU of estimators and other characteristics of point estimators; Cramer and Rao Blackwell Theorems, testing of hypotheses, and Neyman Pearson Lemma. Prerequisite: MATH 309.

MATH 321 Differential Equations**Credit 4**

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 211.

MATH 323 Introduction to Discrete Structures**Credit 3**

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.

MATH 342 Advanced Calculus**Credit 3**

This course includes a review of the real numbers, topology of Cartesian spaces, limits, convergence, continuity, differentiability, integration, infinite series and products, Fourier series, and Laplace transforms. Prerequisite: MATH 212 and MATH 300.

MATH 350 Linear Programming**Credit 3**

This course introduces the concepts of Models, model-building and operations research methods. It includes a review of linear algebra and convexity, mathematical background; graphic method, simplex computation procedures, special cases, degeneracy, duality and its applications; transportation, production, scheduling and inventory control problems; PERT Network Analysis Techniques and game theory and software application to the solution of linear programming problems. (LINDO and MATHLAB). Prerequisites: MATH 232

MATH 360 Statistics for Scientists**Credit 3**

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 309.

MATH 410 Mathematical Statistics II**Credit 3**

Correlation, linear and multiple regression techniques are covered mathematically as well as using available statistical software. In addition, design of experiments, analysis of covariance techniques; analysis of categorical data including the chi-square and goodness-of-fit tests, contingency tables and non-parametric statistics are covered. Prerequisites: MATH 212, MATH 232 and MATH 310.

MATH 411 Modern Algebra**Credit 3**

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 and MATH 300.

MATH 412 Linear Algebra**Credit 3**

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. Prerequisites: MATH 211, MATH 232, and MATH 411.

MATH 413 Modern Algebra II**Credit 3**

This course is a continuation of Math 411. Specific topics include Sylow's Theorems and Free Abelian Groups from Group Theory; Fundamental Homomorphisms/Isomorphisms Theorems and Ideals (Maximal) from Ring Theory; and Extension Fields leading to the study of Galois Theory. Prerequisite: Math 411.

MATH 440 Topology**Credit 3**

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 homomorphisms, separation properties, and pathologies are included. Prerequisite: MATH 300 and either MATH 212 or MATH 411 or permission of instructor.

MATH 442 Complex Analysis**Credit 3**

This course extracts numerical solutions of systems of equation by direct and iterative methods, ordinary differential equations, optimization, evaluate of determinants, matrix inversions, and calculation of eigenvalues and eigenvectors, and partial differential equations. This course makes use of the powerful MATLAB software utilizing a more practical approach and links every method to real engineering and/or science problems without deriving theoretical concepts. Prerequisites: Math 212 and MATH 300.

MATH 443 Real Analysis I**Credit 3**

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. Prerequisites: MATH 300 and either MATH 212 or permission of instructor.

MATH 444 Real Analysis II**Credit 3**

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.

MATH 455 Mathematical Models**Credit 3**

This course covers construction, development, and study of mathematical models for real applications; Markov chain models; models for linear optimization; and selected case studies. Prerequisites: MATH 212 and MATH 443.

MATH 490 Senior Seminar**Credit 1**

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**Credit 3**

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**Credit 3**

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.

DIRECTORY OF FACULTY

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B.S., Grambling State University, M.S., North Texas State University, Ph.D., Oklahoma State University

Casavant, Albert E., Assistant Professor

B.Sc., Brown University, M.S., and Ph.D., University of Illinois, Urbana-Champaign

Chapin, Jr., Edward William, Assistant Professor

B.S. Trinity College at Hartford, M.A. and Ph.D., Princeton University

Chi, Albert, Assistant Professor

M.A. and M.Ed. Emporia State University, Ph.D. Oklahoma State University

Elbeshir, Manal, Lecturer

B.S., University of Khartoum, M.S., University of Maryland Eastern Shore

Hura, Gurdeep, Professor

B.E. Jabalpur University India, M.S., Ph.D., University of Roorkee, India

Johnson, Robert, Chair and Associate Professor

B.S., University of Louisiana, M.S. Southern University, Ph.D., St. Louis University

Jones-Douglas, Lois E., Lecturer

B.S., M.S., University of Maryland Eastern Shore

Kohl, Russell W., Assistant Professor

B.S., M.S., Ph.D., Delaware State University

Malik, Bashir Malik, Associate Professor

B.S., University of Khartoum, Ph.D., University of Essex, England

Penmatsa, Satish, Assistant Professor

B.S., Andhra University, M.S., Ph.D., University of Texas at San Antonio

Rababaah, Aaron, Assistant Professor

B.S., University of Jordan; M.S., Indiana University South Bend; Ph.D., Tennessee State University

Ridlon, Candice, Assistant Professor

B.S. Florida State University, M.Ed. Valdosta State University, Ph.D. Florida State University

Salamabi, Manal, Lecturer

B.S., University of Khartoum, M.S., University of Maryland Eastern Shore

Seaton, Daniel, Associate Professor

B.S., Frostburg University, M.S., Shippensburg University, Ed.D., Virginia Polytechnic Institute and State University

Sharma, Rakesh, Lecturer

B.S., James Madison University, M.S. North Carolina Central University

Ukoha, Ojiabo, Lecturer

B.B.A., M.B.A., Kennesaw State University, M.S., Clark Atlanta University, Ph.D. University of MD Eastern Shore

Williams, Mark, Associate Professor

B.A., Oakland University, M.S., Ph.D., University of Cincinnati

Zhu, Weiwei, Assistant Professor

B.A., Harbin University of Science and Technology, M.A., Truman State University; M.S., and Ph.D., University of Missouri-St. Louis

Dr. Derrek B. Dunn, Chairperson**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.

OBJECTIVES

The educational experiences offered by the Department of Technology will provide students with opportunities to:

1. Demonstrate an operational knowledge of the techniques associated with the design, construction and maintenance of residential and commercial structures;
2. Exercise independent judgment and sound ethical values in expediting work without jeopardizing its effectiveness, safety or cost;
3. Organize and manage personnel, materials and equipment for carrying out construction, maintenance and operation of complex engineering systems;
4. Demonstrate effective communication of ideas by means of spoken and written language as well as graphic techniques;
5. Solve technical problems that translate ideas into functioning, machines, structures and systems;
6. Plan and implement instructional programs to meet the needs of students in a technological age;
7. 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;
8. Improve the professional technical practice of Construction Management, Engineering Technology, and Technology Education through continuing education and community service; and
9. Demonstrate humanistic values and responsibilities that promote active participation as productive citizens.

DEGREES OFFERED

Bachelor of Science - Construction Management Technology
Bachelor of Science - Engineering Technology
Bachelor of Science - Technology Education
Masters of Education¹ - Career and Technology Education

GENERAL PROGRAM REQUIREMENTS

The admission of students to the undergraduate programs in the Department of Technology is based upon the general admission requirements of the University.

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. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses.

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. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses.

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 are required for graduation. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses.

¹Please consult the UMES Graduate Catalog for further details.

CONSTRUCTION MANAGEMENT TECHNOLOGY

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.

The goal of the Construction Management Technology program is the preparation of well educated professionals for challenging careers in the construction industry. Emphasis is placed on preparing professionals who are capable of managing the total construction process. Graduates qualify for employment with general contracting and subcontracting firms and in government.

DEPARTMENTAL REQUIREMENTS

Students must complete 126 semester hours of designated coursework including supervised internship in the construction industry. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses. Course requirements other than those listed should be selected in consultation with the advisor or Department Chairperson.

CAREER OPPORTUNITIES

A degree in Construction Management Technology prepares individuals for challenging careers in the construction industry with the ability to manage and supervise the total construction process.

CONSTRUCTION MANAGEMENT TECHNOLOGY GENERAL

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select Discipline E: SPEECH ENGL 203¹ plus:

One course from:

Discipline A: ARTS

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

or

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

One course from:

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 200H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and two science laboratory courses from the following:

PHYS 121, PHYS 123 (lab)

PHYS 122, PHYS 124 (lab).

Curriculum Area IV – MATHEMATICS

Credits 8

MATH 109, if a student needs MATH 101, he/she **must** take before MATH 109, MATH 110, MATH 111H, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 1

EDTE 100 First Year Experience Course

Total Required for General Education

Credits 41

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

SUPPORTIVE COURSES**Credits 12**

ACCT 201, BUAD 302, ENVS 101, ECON 201 or ECON 201H

ELECTIVE BUSINESS COURSES**Credits 6**

BUAD 132, BUAD 300, BUAD 304, BUAD 412, FINA 340, FINA 441, FINA 442

REQUIRED COURSES IN MAJOR**Credits 67**

CMTE 201	Architectural Drawing	3
CMTE 205	Computer Applications in Construction	3
CMTE 214	Construction Surveying	3
CMTE 230	Construction Materials	3
CMTE 286	Construction Planning & Scheduling	3
CMTE 295	Construction Management Internship I	2
CMTE 313	Statics	3
CMTE 314	Strength of Materials	4
CMTE 315	Environmental Technology I	3
CMTE 316	Environmental Technology II	3
CMTE 317	Soils in Construction	3
CMTE 325	Construction Methods and Equipment	3
CMTE 342	Construction Estimating I	3
CMTE 350	Green Building Fundamentals	3
CMTE 395	Construction Management Internship II	2
CMTE 413	Structural Design I	3
CMTE 414	Structural Design II	3
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
EDTE 131	Computer-Assisted Drawing and Design I (CAD)	3

CURRICULUM GUIDE FOR CONSTRUCTION MANAGEMENT TECHNOLOGY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDTE 131	3	ENGL 102	3
ENGL 101	3	ENGL 001/ENGL 003 ²	0
MATH 111 ¹	4	ECON 201 ³	3
ARTS 101	3	CMTE 230	3
EDTE 100	<u>1</u>	ENVS 101	<u>3</u>
	14		12

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 121 ⁴	3	MATH 112	4
PHYS 123 ⁴	1	CMTE 214	3
CMTE 201	3	HIST 101	3
ENGL 203	3	PHYS 122	3
CMTE 205	3	PHYS 124	1
ECON 200	<u>3</u>	SOCI 201 ⁵	<u>3</u>
	16		17

SUMMER

CMTE 295	<u>2</u>
	2

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CMTE 325	3	CMTE 350	3
CMTE 313	3	CMTE 314	4
CMTE 315	3	CMTE 316	3
CMTE 286	3	CMTE 342	3
ENGL 305 or		BUAD 302	<u>3</u>
ENGL 310	3		16
ACCT 201	<u>3</u>		
	18		

SUMMER

CMTE 395	2
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SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CMTE 317	3	CMTE 414	3
CMTE 413	3	CMTE 426	3
CMTE 425	3	CMTE 454	3
CMTE 445	3	CMTE 458	2
BUAD Elective ^{6,7}	<u>3</u>	BUAD Elective ^{6,7}	<u>3</u>
	15		14

Total Credits Hours: 126

¹Course satisfies GEN ED CURR AREA IV.

²The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

³Course satisfies GEN ED CURR AREA II:A.

⁴Courses satisfy GEN ED CURR AREA III.

⁵Course satisfies GEN ED CURR AREA II:B.

⁶Students must select from BUAD 132, 300, 304, 412, FINA 340, 441, 442 or MKTG 308.

⁷BUAD 302 is the prerequisite for BUAD 304, 306 and 412.

ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

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. 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 goal of the **Engineering Technology** program is to prepare students for a challenging career in Electrical/Electronic Engineering Technology. After receiving the Bachelor of Science degree, graduates are employed as Engineering Technologists. The emphasis in engineering technology courses is the practical design and utilization of devices and systems, with a strong laboratory program supporting the lecture courses.

DEPARTMENTAL REQUIREMENTS

It is anticipated that most students from community colleges will transfer about 60 credit hours. Total semester credits required for graduation is 126. A minimum grade of “C” must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses. Course requirements other than those listed should be selected in consultation with the advisor or Department Chairperson. Electrical/Electronics Engineering Technology requires a minimum total of 24 credit hours of Technical Elective courses.

CAREER OPPORTUNITIES

A degree in Engineering Technology provides an engineering education with emphasis on manufacturing systems operations, technical applications and managerial services in government and in industry.

¹These are community college level courses; they, or appropriate substitutions, should be completed before enrolling at UMES.

²Students must complete a minimum of 18 credit hours.

³Students must complete a minimum of 6 credit hours.

**ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY GENERAL
Required Courses**

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select ENGL 203¹ plus one course in each of two disciplines.

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 200H

ECON 201 or ECON 201H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses **two** science laboratory courses from the following.

PHYS 121, PHYS 123 (lab)

PHYS 122, PHYS 124 (lab).

Curriculum Area IV – MATHEMATICS

Credits 7

MATH 110, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 1

EDTE 100 First Year Experience Course

Total Required for General Education

Credits 40

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

SUPPORTIVE COURSES**Credits 12**

CHEM 111 and 113, CSDP 221, MATH 211

TECHNICAL ELECTIVE COURSES**Credits 30****Group I**

Students must select 18 credits from the following courses:

CMTE 313, CSDP 222, EDTE 131, EDTE 132, ETEE 222, ETME 318, ETEE 425, ETME 474.

Group II

Students must select 6 credits from the following courses:

BUAD 302, BUAD 410, BUAD 411, BUAD 412, ECON 303

Group III

Students must select 6 credits from any course offered by the university.

REQUIRED COURSES IN MAJOR**Credits 44**

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 and Switching Circuits	3
ETEE 346	Control Circuits	3
ETEE 355	Advanced Electronic and Computer Networks	3
ETEE 421	Instrumentation and Measurements	4
ETEE 485	Design Technology I	3
ETEE 486	Design Technology II	3

CURRICULUM GUIDE FOR ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Computer-Assisted Drawing and Design I (CAD-I)	3	Electronics I	3
Gen. College Physics I	3	Gen. College Physics II	3
Gen. College Physics I Lab	1	Gen. College Physics II Lab	1
Trigonometry & Analytical Geometry	3	Calculus I	4
Basic Composition I	3	English Composition II	3
First Year Experience Seminar	<u>1</u>	English Proficiency Exam	<u>0</u>
	14		14

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Circuit Technology I	3	Circuit Technology II	3
Electronics II	3	Electronics III	3
Principles of Chemistry I	3	Electronics Laboratory	4
Principles of Chemistry I Lab	1	Introduction to Computers	4
Calculus II	4	Literature, Foreign Language	<u>3</u>
Fund. Contemporary Speech	<u>3</u>		17
	17		

The following paradigm 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

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ETEE 303	3	ETEE 346	3
ETEE 421	4	ETEE 314	3
ENGL 305	3	ETEE 355	3
ETEE 335	3	CSDP 221	4
One Course in Literature, Foreign Lang. <u>or</u> Fine Arts	<u>3</u>	FREE Elective	<u>3</u>
	16		16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ETEE 485	3	ETEE 486	3
Technical Elective	3	FREE Elective	3
One course in: Literature <u>or</u> Foreign Language	3	Technical Elective	3
Technical Elective	3	Technical Elective	3
Technical Elective	<u>3</u>	Technical Elective	3
	14	FREE Elective	<u>3</u>
			18

Total Credit Hours: 126

MECHANICAL ENGINEERING TECHNOLOGY

The curriculum in Engineering Technology (ETEE/ETME) follows TAC/ABET recommendations and offers upper division courses leading to a Bachelor of Science Degree in **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 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.

The goal of the **Engineering Technology** program is to prepare students for a challenging career in Mechanical Engineering Technology. After receiving the Bachelor of Science degree, graduates are employed as Engineering Technologists. The emphasis in engineering technology courses is the practical design and utilization of devices and systems, with a strong laboratory program supporting the lecture courses.

DEPARTMENTAL REQUIREMENTS

It is anticipated that most students from community colleges will transfer about 60 credit hours. Total semester credits required for graduation is 126. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses. Course requirements other than those listed should be selected in consultation with the advisor or Department Chairperson. Electrical/Electronics Engineering Technology requires a minimum total of 15 credit hours of Technical Elective courses.

CAREER OPPORTUNITIES

A degree in Engineering Technology provides an engineering education with emphasis on manufacturing systems operations, technical applications, and managerial services in government and industry.

MECHANICAL ENGINEERING TECHNOLOGY GENERAL

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select ENGL 203¹ plus one course in each of two disciplines.

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Discipline E: SPEECH

ENGL 203¹

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

ECON 200 or ECON 200H

ECON 201 or ECON 201H

Discipline B: BEHAVIORAL SCIENCES

CRJS 101

HUEC 203, HUEC 220, HUEC 361

PSYC 200

SOCI 201

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

Students must select **two** science courses and **two** science laboratory courses from the following.

PHYS 121, PHYS 123 (lab)

PHYS 122, PHYS 124 (lab).

Curriculum Area IV – MATHEMATICS

Credits 7

MATH 110, MATH 112.

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

Curriculum Area VI - EMERGING ISSUES

Credits 1

EDTE 100 First Year Experience Course

Total Required for General Education

Credits 40

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

SUPPORTIVE COURSES**Credits 18**

BUAD 411, BUAD 410, CHEM 111, CHEM 113, CSDP 221, MATH 211

TECHNICAL ELECTIVE COURSES**Credits 15**

Students must 15 credits from the following courses:

CMTE 214, CMTE 316, CMTE 413, CSDP 222, CSDP 341, EDTE 111, EDTE 341, EDTE 342, ENGE 370, ETEE 303, ETEE 314, ETEE 474, ETME 304, ETME 360, ETME 395, ETME 476, MATH 212, MATH 241, MATH 321.

FREE ELECTIVE COURSE**Credits 3**

Students must select 3 credits from any course offered by the university.

REQUIRED COURSES IN MAJOR**Credits 50**

CMTE 313	Statics	3
CMTE 314	Strength of Materials	4
EDTE 131	Computer-Assisted Drawing and Design I (CAD)	3
EDTE 132	Computer-Assisted Drawing and Design II (CAD)	3
ETEE 201	Circuit Technology I	3
ETEE 202	Circuit Technology II	3
ETME 301	Thermodynamics and Heat Power	3
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, and Air Conditioning	3
ETME 445	Computer Integrated Manufacturing	3
ETME 475	Mechanical Systems Design I	3

CURRICULUM GUIDE FOR MECHANICAL ENGINEERING TECHNOLOGY

The following paradigm 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

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
First Year Experience Seminar	1	Behavioral Sciences	3
English Composition I ¹	3	Computer-Assisted Drawing	
Computer-Assisted Drawing		and Design II (CAD-II)	3
and Design I (CAD-I)	3	English Composition II ²	3
Trig. and Analytic Geometry ³	3	Calculus I ³	4
General College Physics I	3	General College Physics II	3
General College Physics I Lab	<u>1</u>	General College Physics II Lab	1
	14	English Proficiency Exam	<u>0</u>
			17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
Statics	3	Strength of Materials	4
Fund. of Contemporary Speech ⁴	3	Principles of Microeconomics ⁵	3
Circuit Technology I	3	Circuit Technology II	3
Principles of Chemistry I	3	Literature, Foreign Language	
Principles of Chemistry I Lab	1	or Fine Arts	3
Literature, Foreign Lang.		Calculus II	<u>4</u>
or Fine Arts	<u>3</u>		17
	16		

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

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305 ⁶	3	ETME 318	3
ETME 301	3	ETME 342	3
ETME 303	3	ETME 356	3
ETME 381	4	CSDP 221	4
ETEE 325	<u>3</u>	FREE Elective	<u>3</u>
	16		16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 411	3	BUAD 410	3
ETME 423	3	ETME 475	3
ETME 445	3	Technical Elective	3
Technical Elective	3	Technical Elective	3
Technical Elective	<u>3</u>	Technical Elective	<u>3</u>
	15		15

Total Credit Hours: 126

¹Course satisfies GEN ED CURR AREA V. Students must pass English Composition I with a grade of "C" or better before taking ENGL 203.

²Course satisfies GEN ED CURR AREA V. Students must pass English Composition II with a grade of "C" or better before taking ENGL 203.

³Course satisfies GEN ED CURR AREA IV.

⁴Course satisfies GEN ED CURR AREA I.

⁵Course satisfies GEN ED CURR AREA II:A. ⁶Course satisfies GEN ED CURR AREA V.

TECHNOLOGY EDUCATION

Teacher Certification

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. The Technology Education Teacher Certification sequence (based on established state requirements) may be pursued by education majors who also desire certification in Technology Education.

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.

DEPARTMENTAL REQUIREMENTS

A sequence of professional education and liberal studies courses are required to develop leadership and citizenship skills needed for successful teaching. A total of 126 credits are required for graduation. A minimum grade of "C" must be achieved in prerequisite courses, major core courses, supportive courses, technical elective courses, and selected general education courses. *Course Requirements other than those listed should be selected in consultation with the advisor or Department Chairperson.

CAREER OPPORTUNITIES

A degree in Technology Education prepares professionals who will qualify for certification to teach technology education at the middle school and high school levels.

TECHNOLOGY EDUCATION GENERAL

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Students must select ENGL 203¹ plus one course in each of two disciplines.

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

Students must select one course in each of two disciplines.

Discipline A: SOCIAL SCIENCES

AGEC 213 or AGECE 213H

ECON 200 or ECON 200H

ECON 201 or ECON 201H

GEOG 201 or GEOG 202

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

POLI 200 or POLI 200H,

POLI 220H or POLI 342

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 11

Students must select **two** science courses and two science laboratory courses from the following as well as BIOL 101.

PHYS 121, PHYS 123 (lab)

PHYS 122, PHYS 124 (lab)

BIOL 101

Curriculum Area IV – MATHEMATICS

Credits 6

MATH 109, if a student needs MATH 101, he/she **must** take before MATH 109;

MATH 109, MATH 110

Curriculum Area V - ENGLISH COMPOSITION¹

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

Curriculum Area VI - EMERGING ISSUES **Credits 1**
EDTE 100 First Year Experience Course

Total Required for General Education **Credits 42**

PROFESSIONAL EDUCATION COURSES **Credits 42**
EDCI 200A, EDCI 201¹, EDCI 311, EDCI 400, EDCI 406, EDCI 409, EDCI 410, EDCI 425D, EDCI 460/470D, EDSP 428, PSYC 303/305, PSYC 307

REQUIRED COUSES IN MAJOR		Credits 42
EDTE 111	Technology and Society	3
EDTE 131	Computer-Assisted Drawing and Design I (CAD)	3
EDTE 211	Electrical and Electronics Technologies I	3
EDTE 232	Information and Communication Technologies	3
EDTE 314	Biotechnology and Agricultural Technologies	3
EDTE 341	Transportation Technologies	3
EDTE 342	Energy and Power Technologies	3
EDTE 351	Construction Technologies	3
EDTE 361	Manufacturing Technologies	3
EDTE 410	Foundations of Technology	3
EDTE 467	Instructional Analysis and Curriculum Development	3
EDTE 481	Facilities Organization and Management	3
EDTE 482	Core Technologies I	3
EDTE 483	Core Technologies II	3

¹Does not count toward meeting graduation requirements.

CURRICULUM GUIDE FOR TECHNOLOGY EDUCATION

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDTE 111	3	ARTS 101 ³	3
EDTE 131	3	MATH 110 ²	3
ENGL 101 ¹	3	ENGL 102 ¹	3
MATH 109 ²	3	ENGL 001/ENGL 003 ⁶	0
EDTE 100	<u>1</u>	EDCI 200	3
	13	BIOL 101 ⁴	3
		EDCI 201 ⁵	<u>1</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
SOCI 201	3	EDTE 211	3
ECON 201 ⁷	3	EDTE 232	3
PHYS 121 ⁴	3	EDTE 314	3
PHYS 123	1	PHYS 122 ⁴	3
ENGL 203 ⁸	<u>3</u>	PHYS 124	1
	13	EDTE 341	<u>3</u>
			16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PSYC 305	3	EDCI 409	3
EDTE 351	3	EDTE 361	3
PSYC 307	3	EDTE 467	3
EDCI 311	3	EDTE 342	3
ENGL 305 ¹	3	EDCI 406	3
ENGL 204 ⁸	<u>3</u>	EDTE 482	<u>3</u>
	18		18

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
EDCI 410	3	EDCI 400	3
EDTE 481	3	EDCI 460	6
EDSP 428	3	EDCI 470	<u>6</u>
EDTE 483	3		15
EDCI 425D	3		
EDTE 410	<u>3</u>		
	18		

Total Credit Hours: 126

¹Course satisfies GEN ED CURR AREA V.

²Course satisfies GEN ED CURR AREA IV. If student needs MATH 101, he/she must take the course before MATH 109.

³Course satisfies GEN ED CURR AREA I:A.

⁴Course satisfies GEN ED CURR AREA III.

⁵Course does not count towards graduation.

⁶The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁷Course satisfies GEN ED CURR AREA II:A.

⁸Course satisfies GEN ED CURR Requirement.

MINOR PROGRAMS

In order to minor in Construction Management Technology, it is recommended that the Department Chair be contacted as early as possible. A minor advisor will be assigned by the chairperson. 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 Chair.

TECHNICAL

Students interested in a minor in Construction Management Technology and in technical applications should complete the following courses, totaling 25 credits:

CMTE 201	CMTE 313	EDTE 131	CMTE 300-400 Level Course
CMTE 214	CMTE 314	EDTE 132	
CMTE 230			

MANAGEMENT

Students interested in a minor in Construction Management Technology and in management applications should complete the following courses, totaling 24 credits:

CMTE 201	CMTE 325	CMTE 425	EDTE 131
CMTE 230	CMTE 342	CMTE 445	EDTE 132

MECHANICAL ENGINEERING TECHNOLOGY

Students interested in a minor in Mechanical Engineering Technology should complete the following courses, totaling 25 credits:

CMTE 313	EDTE 131	ETME 301	ETME 423
CMTE 314	EDTE 132	ETME 303	
		ETME 356	

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

CMTE 230	EDTE 351	ETME 356	EDTE ¹
	EDTE 361		

Design and Communication Technology

CMTE 201	EDTE 131	EDTE 132	EDTE 232
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Energy and Transportation Technology

EDTE 211	EDTE 312	EDTE 341	EDTE 342
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Six additional semester hours to include

EDTE 481	EDTE 499
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¹Student must select a Technical elective.

Additional professional education courses, as listed below for Career and Technology Education, and student teaching may also be required by the State for certification. A total of 27 credits is required.

Technical Applications For Industry

CMTE 230	EDTE 131	EDTE 351	Elective
ETME 356	EDTE 132	EDTE 361	
	EDTE 211		
	EDTE 212		

CAREER AND TECHNOLOGY EDUCATION CERTIFICATION

The University of Maryland is designated as one of the institutions which offer certification and endorsement courses in Career and Technology Education. The courses which are offered are those required for certification in Maryland as a Trade and Industry teacher or Professional Technical Education teacher, depending on the CTE teacher's date of employment. The department also offers courses leading to the Maryland Work-Based Learning endorsement and courses for CTE teachers to complete their Advanced Professional certification (APC).

To become certified as a trade-industrial and service occupations (T & I) 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:

EDCI 409	EDSP 200B	EDTE 368	EDTE 437
EDCI 410	EDTE 370	EDTE 440	

To become certified as a professional technical education (PTE) teacher in the State of Maryland, a person must successfully complete 12 credit hours of instruction. The following courses will satisfy the Standard (SPC) Certification Requirements.

EDTE 368	Academic Literacy in CTE ¹
EDTE 481	Differentiated Learning in CTE ¹

To earn the Work-Based Learning endorsement for the State of Maryland, CTE teachers must complete 9 credit hours of instruction. The following courses will satisfy those requirements:

EDTE 445	EDTE 467	EDTE 480
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¹*Course numbers in approval process

COURSE DESCRIPTIONS IN CONSTRUCTION MANAGEMENT TECHNOLOGY

CMTE 201 Architectural Drawing

Credit 3

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

Credit 3

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 214 Construction Surveying

Credit 3

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

Credit 3

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

Credit 3

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 205.

CMTE 295 Construction Management Internship I

Credit 2

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 313 Statics

Credit 3

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 314 Strength of Materials

Credit 4

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 313 and MATH 112.

CMTE 315 Environmental Technology I**Credit 3**

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**Credit 3**

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**Credit 3**

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 230 and CMTE 325.

CMTE 325 Construction Methods and Equipment**Credit 3**

This course is the study and analysis of construction methods, materials, equipment safety methods and OSHA safety standards for personal safety, employed on residential, commercial, institutional, and industrial construction projects. Lecture one hour. Laboratory four hours. Prerequisites: CMTE 201, CMTE 230, and MATH 110 or 111.

CMTE 342 Construction Estimating I**Credit 3**

This is the first course of a two course sequence which will concentrate on the classification of work, quantity survey techniques, as well as cost estimating of labor, material, and equipment used residential construction projects are covered in this course. Lecture three hours. Prerequisites: CMTE 201, CMTE 230 and CMTE 325, MATH 110 or MATH 111H.

CMTE 350 Green Building Fundamentals**Credit 3**

This course covers the fundamental concepts of sustainable design and green building practices. The course includes green building materials, water use efficiency, renewable energy, indoor environmental quality, and the LEED Green Building Certification Program and other rating systems. Prerequisite: CMTE 325.

CMTE 395 Construction Management Internship II**Credit 2**

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 413 Structural Design I**Credit 3**

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 314.

CMTE 414 Structural Design II**Credit 3**

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 314.

CMTE 425 Construction Management I**Credit 3**

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: effective communications, procurement, management accounting, change orders, claims, value engineering, quality control, safety and management applications. Lecture three hours. Prerequisites: CMTE 286, CMTE 325, and CMTE 342.

CMTE 426 Construction Management II**Credit 3**

This course covers construction industry labor organizations and ethics; contract documents, their relationships, meanings and significance in construction; construction contract administration; human relations and communications. Safety, health, risk management are topics that are also included in this course. Lecture three hours. Prerequisite: CMTE 286, CMTE 425 and CMTE 445.

CMTE 445 Construction Estimating II**Credit 3**

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. 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**Credit 3**

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 325.

CMTE 458 Senior Seminar**Credit 2**

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**Credit 1-6**

This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. An Independent Study Contract must be prepared and submitted for the Department Chair's approval within the first week of the semester. Student cannot take more than two 499 courses for a total of 6 credits. Prerequisite: Consent of the instructor and approval of the Department Chairperson.

TECHNOLOGY EDUCATION**EDTE 100 First Year Experience Seminar****Credit 1**

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. The course will assist students in developing skills that will assist them in adjusting personally and socially to the college environment. First-year students will develop skills in critical thinking, information literacy, self-awareness, and communication to facilitate a successful transition. In addition, to providing information needed for student success at the University of Maryland Eastern Shore, this course serves as a conduit for students entering the fields of Technology. Lecture one hour. Prerequisite: None.

EDTE 111 Technology and Society**Credit 3**

This course examines the nature of technology and society within the context of the designed world: its meaning, application, significance, the role it has played in our history and its importance in today's technological society. Course content focuses on: the characteristics and scope of technology; the nature of technology within the context of the designed world; the design and development process; 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. Prerequisite: None.

EDTE 131 Computer-Assisted Drawing and Design I (CAD)**Credit 3**

The attributes of design, the engineering design process, and the basics of technical drawing are covered in this course. The design process is utilized to solve problems and design contemporary products. Basic technical drawing skills are developed, such as sketching, coordinate systems, the principles and theory of visualization, shape description, orthographic projection, basic descriptive geometry, axonometric drawings, and developments. Students use and apply computer-assisted drawing and design (CADD) software to produce basic technical drawings and three-dimensional designs. Engineering design and problem solving are used to research and develop renderings and solid three-dimensional models. Lecture two hours. Laboratory two hours. Prerequisite: None.

EDTE 132 Computer-Assisted Drawing and Design II (CAD)**Credit 3**

This course covers advanced computer-assisted drawing and design software 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. Laboratory two hours. Prerequisite: EDTE 131 or permission of instructor.

EDTE 211 Electrical and Electronics Technologies I**Credit 3**

This is a study of electricity and electronic technologies within the context of the designed world. Different systems and technologies are presented to provide an overview of how systems relate to technology. Technical concepts and principles of different types of circuits, laws, symbols, scientific principles, design and test equipment are analyzed and applied to electronic technological systems. Theories and principles applied to communication devices such as computers, cell phones, and audio systems are studied. Students design, build, test, and evaluate systems. Laboratory two hours. Prerequisites: PHYS 121 and MATH 110.

EDTE 212 Electrical and Electronics Technologies II**Credit 3**

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 hours. Laboratory two hours. Prerequisite: EDTE 211.

EDTE 232 Information and Communication Technologies**Credit 3**

This course covers information and communications systems within the context of the design world. 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 communications are discussed. Lecture two hours; laboratory two hours. Prerequisite: EDTE 132 or permission of instructor.

EDTE 314 Biotechnology and Agricultural Technologies**Credit 3**

A study of techniques that use living organisms or parts of an organism to make or modify products to improve plants or animals, including humans, within the context of the designed world is covered in this course. Developing micro-organisms and agricultural products for specific uses is also examined. Medical technologies as related to biotechnology are infused through the course. Lecture two hours. Laboratory two hours. Prerequisite: BIOL 101.

EDTE 341 Transportation Technologies**Credit 3**

This course covers transportation systems used to transport people and goods within the context of the designed world and STEM disciplines. 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 and/or permission of instructor.

EDTE 342 Energy and Power Technologies**Credit 3**

The use and impact of energy and power systems within the context of STEM and the designed world 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 examined. Lecture two hours. Laboratory two hours. Prerequisite: EDTE 341 or permission of instructor.

EDTE 351 Construction Technologies**Credit 3**

The structures, systems, processes, and procedures of construction technologies are examined within the context of the designed world. 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 and/or permission of instructor.

EDTE 361 Manufacturing Technologies**Credit 3**

This course is a study of the principles of manufacturing goods, processes, and systems within the context of the designed world. Personnel management, organizational structures, durable and non-durable goods, product design, interchangeability, and product marketing are covered. Students research and select products suitable of mass-production using an enterprise system. Emphasis is placed on the manufacturing design process. The social, cultural and economic problems and benefits are also examined. Lecture two hours. Laboratory two hours. Prerequisite: Junior standing.

EDTE 368¹ Curriculum Development and Methods of Teaching I**Credit 3**

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 370¹ Curriculum Development and Methods of Teaching II**Credit 3**

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.

¹Career and Technology Education Certification and Endorsement course.

EDTE 410 Foundations of Technology**Credit 3**

The course focuses on the development of STEM knowledge, skills and dispositions regarding the following aspects of technology: 1) its evolution, 2) systems, 3) core concepts, 4) design, and 5) utilization. It addresses the three dimensions of technological literacy: knowledge, ways of thinking and acting, and capabilities with the goal of students developing the characteristics of a technologically literate citizen. This course explores teaching/learning strategies that enable students to build their own understanding. Prerequisite: Senior standing or Permission of instructor.

EDTE 415 History and Principles of Career and Technology Education**Credit 3**

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 437¹ Student Performance Assessment**Credit 3**

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 440¹ Integrating Math and Science in Occupational and Technical Education**Credit 3**

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**Credit 3**

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 450¹ Mentoring: Expectations and Responsibilities**Credit 3**

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**Credit 3**

This advanced curriculum design course covers how to design a standards-based unit of instruction based on an instructional analysis in a content area in order to develop curriculum materials. Students learn how to design, implement, and evaluate technology-oriented curriculum. Emphasis is placed on the integration and utilization of national and state content standards not only in Technology Education but also on academic areas such as math and science. Based on these standards and the backward mapping process, goals, objectives, indicators, student learning activities, instructional materials, and assessment instruments are designed. Lecture three hours. Prerequisite: Permission of instructor.

¹Career and Technology Education Certification and Endorsement course.

EDTE 480 Coordination of Work-Based Learning**Credit 3**

Study of a variety of work-based learning programs will be covered including cooperative work-experience internships, mentorships, job shadowing, and apprenticeship. Mission, trends and current practices in these programs will be discussed. Methods and techniques of coordination in comprehensive and part-time programs at the secondary and adult levels are covered. Prerequisite: Permission of instructor.

EDTE 481¹ Facilities Organization and Management**Credit 3**

Basic elements of designing, creating, and managing Technology Education learning environments, both classroom and laboratory facilities, are covered relative to state instructional standards. Room layout, selection of tools, supplies, equipment, safety and layout arrangements will be studied. Modular laboratory design and management will be examined. Lecture three hours. Prerequisite: Senior standing.

EDTE 482 Core Technologies I**Credit 3**

The core technologies are the building blocks of all technology systems within the context of the designed world. Mechanical and structural technologies will be examined with regard to common components, simple controls, basic system design, safety, and applications. Students will design, build, operate, and analyze a technological model, prototype or simulation related to the core technologies. An overview of materials technology will 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 will be 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**Credit 3**

The core technologies are the building blocks of all technology systems within the context of the designed world. Electrical, electronic, optical, fluid, and thermal technologies will be examined with regard to common components, simple controls, basic system design, safety, and applications. The context for the study of these core technologies will be the design and development of technology systems to solve practical problems. Students will design, build, operate, and analyze a technological model, prototype or simulation related to the core technologies studied in this course. Communication skills will be developed through the documentation of the design and development process. Topical investigations and modular activity packages will be 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**Credit 3**

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**Credit 3**

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.

¹Career and Technology Education Certification and Endorsement course.

EDTE 486 Instructional Technology and Media Development**Credit 3**

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 487 Foundations of Technology I**Credit 3**

The course focuses on the development of STEM knowledge, skills, and dispositions regarding the following aspects of technology: 1) its evolution, 2) systems, 3) core concepts, 4) design, and 5) utilization. It addresses the three dimensions of technological literacy: knowledge, ways of thinking and acting, and capabilities with the goal of students developing the characteristics of a technologically literate citizen. This course explores teaching/learning strategies that enable students to build their own understanding. Prerequisite: Senior standing or permission of instructor.

EDTE 488E Work-Based Learning Externship**Credit 3**

This course is an externship in work-based learning where the student participates in an on-site experience in a business or industry. The student rotates through all aspects of the business or industry from planning and production to marketing and management. Prerequisite: EDTE 480.

EDTE 499 Undergraduate Research in Technology Education**Credit 1-6**

This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. An Independent Study Contract must be prepared and submitted for the Department Chair's approval within the first week of the semester. Student cannot take more than two 499 courses for a total of 6 credits. Prerequisite: Consent of the instructor and approval of the Department Chair.

ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY**ETEE 303 Circuit Technology III****Credit 3**

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 221 and MATH 211.

ETEE 314 Electric Power and Machinery**Credit 3**

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**Credit 3**

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**Credit 3**

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.

ETME 303 Machine Design I**Credit 3**

This course covers design and selection of machine elements, power transmissions, shafts, couplings, keys, threaded fasteners, belts, rivets, welding, lubrication, and sleeve bearings with roller bearings. Lecture three hours. Prerequisites: CMTE 314, MATH 112 and permission of instructor.

ETME 304 Machine Design II**Credit 3**

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. Prerequisite: ETME 303.

ETME 318 Applied Dynamics**Credit 3**

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 313 and MATH 211.

ETME 325 Engineering Materials**Credit 3**

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**Credit 3**

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 313 and MATH 211.

ETME 356 Manufacturing Processes**Credit 3**

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**Credit 3**

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**Credit 4**

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 221, EDTE 212 and MATH 112.

ETME 395 Industrial Practice**Credit 3**

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 **Credit 3**

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 **Credit 3**

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 221 and ETME 356.

ETME 475 Mechanical Systems Design I **Credit 3**

This course covers the design process; creativity, analysis, synthesis, and decision making, applications of analytical techniques and experimental results, and 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: CSDP 221, ETME 303 and MATH 211.

ETME 476 Mechanical Systems Design II **Credit 3**

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 are also covered. 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 **Credit 1-6**

This course is designed for the junior-senior undergraduate student who has an interest in pursuing a special problem as an independent research project. An Independent Study Contract must be prepared and submitted for the Department Chair's approval within the first week of the semester. Student cannot take more than two 499 courses for a total of 6 credits. Prerequisite: Consent of the instructor and approval of the Department Chair.

DIRECTORY OF FACULTY

Arumala, Joseph, Professor

B.S., University of Lagos; M.S., Ph.D.; Clemson University, P.E.

Dunn, Derrek B., Professor and Chairperson

B.S., North Carolina A&T State University; M.S and Ph.D. Virginia Polytechnic Institute and State University

Fotouhi, Kenny M., Professor

B.S., Tehran Polytechnic; M.S., Oklahoma State University; Ph.D., University of Missouri-Rolla

Loveland, Thomas, Associate Professor and M.Ed. CTED Coordinator

B.A., M.A., and Ph.D., University of South Florida.

Molavi, Jeffrey M., Associate Professor

B.S. National University of Tehran; M.S. and Ph.D., University of Colorado

Salgado, Carlos A., Associate Professor

B.S., National Autonomous University of Nicaragua; M.S., Ohio State University; Ph.D., University of Maryland

Shapoorain, Bijan, Visiting Lecturer and Interim Director

B.S, and M.S, University of Oklahoma

Yilmaz, Emin, Professor

B.S. and M.S., Middle East Technical University, Turkey; Ph.D., University of Michigan, P.E.

DEPARTMENT OF EXERCISE SCIENCE

www.umes.edu/ExerciseScience

Dr. Margarita Treuth, Chairperson

MISSION

The educational mission of the Department of Exercise Science is to enable students to develop the knowledge of exercise science, value physical activity and understand how exercise scientists work to improve the health and wellness of individuals and the community.

OBJECTIVES

The objectives of the programs offered in Exercise Science are as follows:

1. To provide students with academic curricula to develop a strong background in Exercise Science concentration areas.
2. To provide courses and learning experiences to students to develop the knowledge, skills, and abilities for core program competencies, including health program administration, outcome assessments, health appraisals, and clinical exercise testing.
3. To prepare students to integrate knowledge of the cardiovascular, pulmonary, metabolic, and musculoskeletal systems with current practices and research.
4. To provide opportunities for students to acquire and to effectively utilize technology as professionals in the health and exercise science professions.
5. To prepare students for employment and leadership positions in health fitness, exercise science, allied health and the sport industry.
6. To prepare students for graduate study and continued professional development.
7. To promote interaction between the university and the community through departmental activities.

DEGREES OFFERED

Bachelor of Science – Exercise Science with Clinical Concentration

Bachelor of Science – Exercise Science with Health Fitness Concentration

DEPARTMENTAL REQUIREMENTS

The admission of students to the undergraduate program in the Department of Exercise Science is based upon the general requirements of the University. Exercise Science majors must complete a minimum of 120 credit hours of University courses. Each concentration possesses its own criteria for the Exercise Science degree.

Clinical Concentration - Majors must complete a minimum of 120 credit hours of University courses. Included in the 120 hours are a minimum of 42 credit hours of General Education Requirements; 31 credit hours of support courses and 47 credit hours of major courses.

Health Fitness Concentration - Majors must complete a minimum of 120 credit hours of University courses. Included in the 120 hours are a minimum of 42 credit hours of General Education Requirements; 27 credit hours of support courses and 51 credit hours of major courses.

CAREER OPPORTUNITIES CLINICAL CONCENTRATION

The Clinical Concentration prepares graduates seeking careers or graduate study in medically related professions such as physical therapy, occupational therapy, chiropractic, cardiac

rehabilitation, sports medicine and physician assistant.

DEPARTMENTAL REQUIREMENTS

Students must complete a minimum of 120 credit hours of University courses. Included in the 120 hours are a minimum of 42 credit hours of General Education Requirements; 31 credit hours of support courses and 47 credit hours of major courses.

CLINICAL CONCENTRATION

Required Courses

GENERAL EDUCATION REQUIREMENTS

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.

MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Discipline E: SPEECH ENGL 203¹ plus:

One course from two *different* disciplines:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

One course in *each of the two* disciplines:

Discipline A: SOCIAL SCIENCES

SOCI 101 or SOC 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

BIOL 111, BIOL 113 (lab)

BIOL 112, BIOL 114 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 110

If a student needs MATH 101², he/she **must** take before Math 109;

If a student needs MATH 109², he/she **must** take before Math 110.

Curriculum Area V - ENGLISH COMPOSITION

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of "C" or above before taking ENGL 203

²MATH 101 or 109 does not satisfy the General Education Requirement or count towards graduation. Student must attain a grade of "C" or better to pass MATH 101.

Curriculum Area VI - EMERGING ISSUES	Credits 7
EXSC 100 First Year Experience Seminar	
EXSC 111 Personal Health and Fitness	
EXSC 365 Contemporary Issues in Exercise Science and Sports	

Total Required for General Education Credits 42

SUPPORTING REQUIREMENTS	Credits 31
BIOL 231 Human Anatomy and Physiology I	3
BIOL 232 Human Anatomy and Physiology II	3
BIOL 233 Human Anatomy and Physiology Laboratory I	1
BIOL 234 Human Anatomy and Physiology Laboratory II	1
BIOL 301 Microbiology	3
BIOL 303 Microbiology Laboratory	1
CHEM 111 Principles of Chemistry I	3
CHEM 112 Principles of Chemistry II	3
CHEM 113 Principles of Chemistry Laboratory I	1
CHEM 114 Principles of Chemistry Laboratory II	1
PHYS 121 General College Physics I	3
PHYS 122 General College Physics II	3
PHYS 123 General College Physics Laboratory I	1
PHYS 124 General College Physics Laboratory II	1
PSYC 305 Human Growth and Development	3

MAJOR REQUIREMENTS	Credits 47
EXSC 200 Introduction to Exercise Science	3
EXSC 202 Personal and Community Health	3
EXSC 301 Measurements in Exercise Science	3
EXSC 302 Sport Medicine and First Aid	3
EXSC 311 Kinesiology	4
EXSC 332 Exercise Physiology	3
EXSC 333 Exercise Physiology Laboratory	1
EXSC 355 Exercise Testing and Prescription	3
EXSC 360 Exercise and Sport Nutrition	3
EXSC 382 Socio-Cultural Analysis of Sports	3
EXSC 445 Health Aspects of Aging	3
EXSC 455 Health Fitness Management	3
EXSC 464 Adult Health Fitness Programming	3
EXSC 475 Advanced Strength and Conditioning	3
EXSC 490 Internship in Exercise Science	6

**CURRICULUM GUIDE FOR EXERCISE SCIENCE
(CLINICAL CONCENTRATION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BIOL 112	3
BIOL 113	1	BIOL 114	1
ENGL 101	3	ENGL 102	3
EXSC 100	1	ENGL 001/ENGL 003 ¹	0
MATH 110	3	EXSC 111 ²	3
GEN ED CURR AREA I	3	EXSC 200	3
GEN ED CURR AREA II	<u>3</u>	GEN ED CURR AREA II	<u>3</u>
	17		16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
ENGL 203	3	EXSC 311	4
EXSC 202	3	EXSC 382	3
EXSC 302	3	EXSC 455	<u>3</u>
GEN ED CURR AREA I	<u>3</u>		14
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 111	3	CHEM 112	3
CHEM 113	1	CHEM 114	1
PHYS 121	3	PHYS 122	3
PHYS 123	1	PHYS 124	1
EXSC 332	3	EXSC 301	3
EXSC 333	1	EXSC 365	3
ENGL 305	<u>3</u>	EXSC 355	<u>3</u>
	15		17

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 301	3	EXSC 360 Online	3
BIOL 303	1	EXSC 464	3
EXSC 445	3	EXSC 490 ³	<u>6</u>
EXSC 475	3		12
PSYC 305	<u>3</u>		
	13		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

³Students must complete 180 hours of Internship.

CAREER OPPORTUNITIES HEALTH FITNESS CONCENTRATION

The Health Fitness Concentration prepares graduates seeking careers in the fitness related fields such as exercise specialist and/or personal trainer within the management of community health fitness programs, hospitals/wellness programs, sports medicine and the sports industry.

DEPARTMENTAL REQUIREMENTS

Students must complete a minimum of 128 credit hours of University courses. Included in the 120 hours are a minimum of 42 credit hours of General Education Requirements; 29 credit hours of support courses and 50 credit hours of major courses.

HEALTH FITNESS CONCENTRATION

Required Courses

GENERAL EDUCATION REQUIREMENTS

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. **MATH 101 does not meet the General Education Requirement and does not apply toward graduation requirements.**

Curriculum Area I - ARTS AND HUMANITIES

Credits 9

Discipline E: SPEECH ENGL 203¹ plus:

One course from two *different* disciplines:

Discipline A: ARTS

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

Discipline B: HISTORY

HIST 101/101H, HIST 102/102H, HIST 201, HIST 202, PHIL 201

Discipline C: LANGUAGE

FREN 101 or FREN 102, SPAN 101 or SPAN 102, ASLS 203 or ASLS 204

Discipline D: LITERATURE

ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II - SOCIAL AND BEHAVIORAL SCIENCES

Credits 6

One course in *each of the two* disciplines:

Discipline A: SOCIAL SCIENCES

SOCI 101 or SOCI 101H

Discipline B: BEHAVIORAL SCIENCES

PSYC 200

Curriculum Area III - BIOLOGICAL AND PHYSICAL SCIENCES

Credits 8

BIOL 111, BIOL 113 (lab)

CHEM 111, CHEM 113 (lab)

Curriculum Area IV – MATHEMATICS

Credits 3

MATH 109 (If a student needs MATH 101², he/she **must** take before Math 109.)

Curriculum Area V - ENGLISH COMPOSITION

Credits 9

ENGL 101 or ENGL 101H

ENGL 102 or ENGL 102H

ENGL 001/002/003

ENGL 305/H/Online or ENGL 310/H/Online

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

²MATH 101 does not satisfy the General Education Requirement or count towards graduation. Student must attain a grade of “C” or better to pass MATH 101.

Curriculum Area VI - EMERGING ISSUES	Credits 7
EXSC 100	First Year Experience Seminar
EXSC 111	Personal Health and Fitness
EXSC 365	Contemporary Issues in Exercise Science and Sports

Total Required for General Education **Credits 42**

SUPPORTING REQUIREMENTS **Credits 27**

ACCT 201	Introductory Financial Accounting/Hybrid	3
BIOL 231	Human Anatomy and Physiology I	3
BIOL 232	Human Anatomy and Physiology II	3
BIOL 233	Human Anatomy and Physiology Laboratory I	1
BIOL 234	Human Anatomy and Physiology Laboratory II	1
BUAD 132	Introduction to Business	3
BUAD 213	Business Software Applications/Hybrid/Online	3
BUAD 304	Small Business Management and Entrepreneurship/Hybrid	3
BUED 212	Computer-Concepts/Applications I/Hybrid/Online	3
PHYS 101	Theories and Applications of Physical Science/Online	3
PHYS 103	Physical Science Laboratory	1

MAJOR REQUIREMENTS **Credits 51**

EXSC 200	Introduction to Exercise Science	3
EXSC 202	Personal and Community Health	3
EXSC 301	Measurements in Exercise Science	3
EXSC 302	Sport Medicine and First Aid	3
EXSC 311	Kinesiology	4
EXSC 332	Exercise Physiology	3
EXSC 333	Exercise Physiology Laboratory	1
EXSC 352	Sport Psychology	3
EXSC 355	Exercise Testing and Prescription	3
EXSC 360	Exercise and Sport Nutrition	3
EXSC 382	Socio-Cultural Analysis of Sports	3
EXSC 445	Health Aspects of Aging	3
EXSC 455	Health Fitness Management	3
EXSC 464	Adult Health Fitness Programming	3
EXSC 475	Advanced Strength and Conditioning	3
EXSC 490	Internship in Exercise Science	6

**CURRICULUM GUIDE FOR EXERCISE SCIENCE
(HEALTH FITNESS CONCENTRATION)**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 111	3	BUAD 132	3
BIOL 113	1	ENGL 102	3
ENGL 101	3	ENGL 001/003 ¹	0
EXSC 100	1	EXSC 111 ²	3
MATH 109	3	EXSC 200	3
GEN ED CURR AREA I	3	GEN ED CURR AREA II	<u>3</u>
GEN ED CURR AREA II	<u>3</u>		15
	17		

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
ENGL 202	3	BUED 212	3
EXSC 203	3	EXSC 302	3
EXSC 382	3	EXSC 365	3
GEN ED CURR AREA I ³	<u>3</u>	EXSC 222	<u>1</u>
	16		14

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
CHEM 111	3	ACCT 201	3
CHEM 113	1	BUAD 213	3
EXSC 301	3	EXSC 332	3
EXSC 311	4	EXSC 333	1
EXSC 455	<u>3</u>	EXSC 352	3
	14	EXSC 445	<u>3</u>
			16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BUAD 304	3	EXSC 464	3
ENGL 305	3		
PHYS 101	3	EXSC 475	3
PHYS 103	1	EXSC 490 ³	<u>6</u>
EXSC 355	3		12
EXSC 360 Online	<u>3</u>		
	16		

Total Credit Hours: 120

¹The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

²EXSC 111 cannot be repeated for credit.

³Students must complete 180 hours of Internship.

COURSE DESCRIPTIONS IN EXERCISE SCIENCE

EXSC 100 First Year Experience Seminar

Credit 1

The 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 will assist students in developing cognitive skills and in adjusting personally and socially to the college environment. Additionally this course shall facilitate self-awareness and interpersonal communication. Required of all first year students. The course is taken by Exercise Science majors in lieu of GNST 100.

EXSC 103 Beginning Karate/Self-Defense

Credit 2

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.

EXSC 104 Women's Health

Credit 3

This course is designed to help students understand the changes that have occurred historically in society's attitude 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 learning how to prevent these diseases.

EXSC 105 Aerobic Dance and Conditioning

Credit 2

This course will stress accessing, developing, and maintaining physical fitness through aerobic exercise and dance.

EXSC 107 Human Sexuality

Credit 2

This course provides students with an overview of the many biological, psychological, sociological, and historical dimensions of sexuality in a nonjudgmental tone. The main emphasis will be helping students make responsible decisions that promote healthy sexual behaviors and well-being.

EXSC 111 Personal Health and Fitness

Credit 3

This course studies the principles and practices that affect human health. Emphasis is on physical fitness, stress management, nutrition, and weight control with specific personalized techniques for optimizing health. Students should select the course section they desire as indicated by the topic. Satisfies GEN ED CURR AREA VI.

EXSC 121 Beginning Swimming

Credit 2

Basic skills of swimming are taught in this class; including adjustment to the water, buoyancy, floating, propulsion through the water involving coordination of arms and legs in stroking, combined with breathing and safety.

EXSC 151 Beginning Golf

Credit 2

This course is designed to provide students with the skills, rules, techniques and terminology of golf.

EXSC 200 Introduction to Exercise Science

Credit 3

This course is an overview of the field of Exercise Science; its development, professional activities and sub-disciplines.

EXSC 202 Personal and Community Health

Credit 3

This course is designed to develop attitudes and practices which contribute to better individual and group health. Emphasis is placed upon major health problems of early adulthood.

- EXSC 222 Intermediate Swimming** **Credit 1**
 This course is a continuation of techniques of elementary swimming with emphasis on the development of skills in the basic or standard swimming strokes.
- EXSC 301 Measurements in Exercise Science** **Credit 3**
 This course studies the use and interpretation of basic statistical techniques in the application of Exercise Science. Including measures of central tendency, variability, graphic representation, large sample, error theory and simple correlation analysis as applied particularly in evaluation of test material.
- EXSC 302 Sport Medicine and First Aid** **Credit 3**
 Prevention, treatment and rehabilitation of athletic injuries and First Aid procedures are studied in the course
- EXSC 311 Kinesiology** **Credit 3**
 This course is an analysis of movement based on a knowledge of anatomy and physiology as applied to the function of body mechanics.
- EXSC 312 Kinesiology Laboratory** **Credit 1**
 This course is the laboratory component of EXSC 311--Kinesiology.
- EXSC 332 Exercise Physiology** **Credit 3**
 Basic human physiology with emphasis on the physiological changes and residues of exercise are studied in this course. It is to be concurrent with EXSC 333. Prerequisite: BIOL 232.
- EXSC 333 Exercise Physiology Laboratory**
Credit 1
 The Exercise Physiology laboratory experience provides students with an opportunity to measure and evaluate selected physiological parameters.
- EXSC 341 First Aid** **Credit 2**
 Lectures, discussions, and practical demonstrations of American Red Cross methods in First Aid are studied.
- EXSC 352 Sport Psychology** **Credit 3**
 This course is an in-depth study, comparison and analysis of human behavior while participating in sport and physical activity.
- EXSC 355 Exercise Testing and Prescription** **Credit 3**
 This course provides an understanding of individualized exercise prescription design in programs to develop and maintain physical fitness through testing and re-evaluation strategies. Prerequisite: EXSC 311.
- EXSC 360/Online Exercise and Sport Nutrition** **Credit 3**
 This course provides students with a key to understanding interactions between nutrition and exercise concepts as well as practical applications.
- EXSC 365 Contemporary Issues in Exercise Science and Sports** **Credit 3**
 Students will have opportunities to investigate and learn first-hand information about developing issues in Exercise Science including youth fitness, youth sports, sports for the aged, resistance training for prepubescent athletes, demographics of aging and physiology of aging.
- EXSC 382 Socio-Cultural Analysis of Sports** **Credit 3**
 This course is an analysis of sports and exercise in social-cultural contexts. Topics include professional sports, intercollegiate sports, youth sports, violence in sports, gender and sports, ethnicity and sports, and media and sports.

EXSC 445 Health Aspects of Aging

Credit 3

This course provides an understanding of the health aspects of aging as it pertains to the biological, physiological, psychological and sociological factors in mature adults.

EXSC 455 Health Fitness Management

Credit 3

This course is an in-depth study of Allied Health Facilities design and management. Practical experiences in operational procedures, marketing, analyst budgeting and public safety issues will be discussed.

EXSC 464 Adult Health Fitness Programming

Credit 3

This course is designed to instruct individuals in implementation of health fitness programs and management of the various facilities, which includes fitness management.

EXSC 475 Advanced Strength and Conditioning

Credit 3

Procedures to strengthen and condition individuals in aerobic and anaerobic activities will be discussed. Exercise models, performance evaluations, exercise equipment, training ethics, and professional development are discussed.

EXSC 490 Internship in Exercise Science

Credit 6

A structured off-campus learning experiences is designed to provide students with a terminal professional experience that permits first-hand, direct practical and professional experiences in Exercise Science. Prerequisite: Senior status with approval of Department Chair. Student may not exceed 12 semester hours during the semester in which they complete their professional internship experience.

EXSC 499 Independent Study in Exercise Science

Credit 1-3

This course will provide senior students with opportunities to engage in in-depth-study of any professional area or related areas germane to Exercise Science. Prerequisite: Senior or Junior academic standing and permission of the Department Chair.

DIRECTORY OF FACULTY

Hall, Kirkland, Instructor

B.S., University of Maryland Eastern Shore; M.A., Ohio State University; Ed., University of Maryland Eastern Shore

Heimdal, James, Associate Professor

B.S., Tulane University; M.Ed., University of New Orleans; Ph.D., University of Southern Mississippi

Nelson, Beatrice, Lecturer

B.S., St. Augustine College; M.A., Florida A&M University

Treuth, Margarita, Professor, Chairperson

B.S., University of Arizona; M.S., Pennsylvania State University; Ph.D., University of Maryland College Park

DEPARTMENT OF REHABILITATION

www.umes.edu/rehab/

Dr. William Talley, Chairperson

MISSION

The mission of the undergraduate programs in the Department of Rehabilitation 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 programs are also designed to prepare its graduates to enter master's level programs in rehabilitation, psychology, physical therapy, related allied health fields, and human services.

OBJECTIVES

The objectives of the Department of Rehabilitation undergraduate programs are to:

1. Offer instruction which reflects the philosophy and mission of the National Council on Rehabilitation Education or American Psychological Association;
2. Meet the academic requirements established by the University;
3. Meet the professional requirements and standards set by rehabilitation, psychological and related professional organizations;
4. Provide courses and learning experiences which prepare students for employment in rehabilitation and psychology, as well as the allied health and related human service professions;
5. Guide students in the development of leadership skills through participation in rehabilitation or psychology-related programs and student organizations;
6. Provide course offerings and professional programs to the University and the general community;
7. Provide an intellectual environment designed to facilitate academic growth and creative development; and
8. Prepare students for graduate school and continued professional development.

DEGREES OFFERED

Bachelor of Science - Rehabilitation Services

Bachelor of Science - Rehabilitation Psychology

Master of Science¹ - Rehabilitation Counseling

CERTIFICATION

Chemical Dependency Provisional Certification

GENERAL PROGRAM REQUIREMENTS

The admission of students to the undergraduate program in the Department of Rehabilitation is based upon the general admission requirements of the University.

¹Please consult the Graduate School Catalog for details.

DEPARTMENTAL REQUIREMENTS

Rehabilitation Services major--The Rehabilitation Services major must complete at least 120 credit hours of University courses. Included in the 120 credit hours are a minimum of 42 credit hours of Rehabilitation courses. A minimum grade of "C" must be achieved in these courses. For those students choosing a career in Allied Health, a minimum of 129 credit hours is recommended. These additional credits are courses that are normally prerequisites for graduate study in the Allied Health fields. To graduate with a degree in rehabilitation from either the American Sign Language Option or the Allied Health Option¹, 120 credit hours are required.

Rehabilitation Psychology major—The Rehabilitation Psychology major must complete at least 120 credits hours of University courses. Included in the 120 credit hours are a minimum of 48 credit hours of Rehabilitation and/or Rehabilitation Psychology courses. A minimum grade of “C” must be achieved in these courses.

CAREER OPPORTUNITIES

While "rehabilitation" is a term used in many fields, for us it primarily 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. This four year course of study prepares students to become rehabilitation professionals, (e.g., 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.).

Those students interested in pursuing careers in the behavioral science orientation of rehabilitation, e.g. psychology, counseling, or vocational employment should follow the course sequence. Those students interested in pursuing careers in the allied health fields, e.g. occupational therapy or physical therapy should follow the Allied Health concentration.

A bachelor's degree in rehabilitation psychology can qualify a person for a variety of entry-level jobs for which the knowledge of human behavior and the use of "people skills" are critical. Those who complete the program may find themselves assisting psychologists, counselors, researchers or numerous other professionals in community mental health and independent living settings, addictions centers, rehabilitation facilities, vocational evaluation centers, and correctional programs just to name a few. The job titles are, however, likely to be something other than psychologist (which typically requires an advanced degree), such as case workers, counselors, therapy aides, social workers, probation officers, or rehabilitation assistants.

¹For students in the Allied Health Option who are considering graduate studies in Physical Therapy, Occupation Therapy or closely related field, nine additional credits are recommended. These "Electives" on the Allied Health Option are already predetermined and indicated with a Superscript number 6 (⁶) on the "Curriculum Guide for Rehabilitation Allied Health Option".

REHABILITATION SERVICES

Required and Recommended Courses Sequence

GENERAL EDUCATION REQUIREMENTS

TOTAL REQUIRED FOR GENERAL EDUCATION — 41 Credits Minimum

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

Curriculum Area I – (Arts and Humanities) 9 credits

Students must select ENGL 203 plus one course in each of two disciplines:

ARTS: ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109

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

LANGUAGE: ASL 203, FREN 101, FREN 102, SPAN 101, SPAN 102

LITERATURE: ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II – (Social and Behavioral Sciences) 6 credits

Students must select one course in each of two disciplines: **See Bolded**

SOCIAL SCIENCES: ECON 200 or ECON 200H, ECON 201 or ECON 201H,

GEOG 201 or GEOG 202, HIST 101 or HIST 101H, HIST 102 or HIST 102H,

POLI 200 or POLI 200H,

POLI 342, **SOCI 101*or SOCI 101H***

BEHAVIORAL SCIENCES: CRJS 101, HUEC 203, HUEC 220, HUEC 361, HUEC 380, SOWK 200 or SOWK 200H, **PSYC 200***

Curriculum Area III – (Biological and Physical Sciences) 7 Credits

Students must select two science courses which must include at least one laboratory: **See**

Bolded

ANPT 114, BIOL 101, BIOL 103 (lab), **BIOL 111***,

BIOL113*(lab), BIOL 112, BIOL 114 (lab), **CHEM 101***,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,

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.

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
MATH	109	College Algebra	3

Curriculum Area V – (English Composition) 9 credits

Students must complete three courses:

ENGL	101/H	Basic Composition I	3
ENGL	102/H	Basic Composition II	3
ENGL	305/H/O	Technical Writing or	
ENGL	310/H/W	Advanced Composition	3
ENGL	001/002/003	English Proficiency Exam	

Curriculum Area VI – (Emerging Issues)**7 credits**

Courses identified as being essential to a full program of general education for UMES students

REHA 100 or GNST 100, EXSC 111, SOCI 201***Required for the Rehabilitation Services Program.**

MATH 110 and CHEM 111 are authorized substitutes for MATH 109 and CHEM 101. Math 109 required for Allied Health Option

PROGRAM CORE REQUIREMENTS**36 credits**

A grade of "C" or better is required in each of the Program Core Requirements

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
RPSY	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 if pursuing the Allied Health Option. 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).

PROGRAM OPTIONS

The Rehabilitation Options require a minimum of six (6) hours from the following:

ASLS	402	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
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

SUPPORTIVE REQUIREMENTS**22 credits****Support I**

BIOL	231*	Human Anatomy and Physiology I	3
BIOL	233*	Human Anatomy and Physiology I Lab	1
BUED	212	Computer Concepts I	3
EDSP	200B	Introduction to Special Education	3
MATH	210	Elementary Statistics	3
PSYC	371	Abnormal Psychology	3

*If you are not pursuing Allied Health Options you may take REHA Option and 1 credit elective in place of BIOL 231 and BIOL 233

Support II

HUEC	203	Human Development: A Lifetime Perspective or	
PSYC	305	Developmental Psychology	3

Support III

SOCI	202	Social Deviance and Social Control or	
SOCI	250	Juvenile Delinquency or	
CRJS	101	Introduction to Criminal Justice or	
CRJS	350	Probation and Parole	3

Supportive Core Requirements (for the Allied Health Option)

BIOL	232	Human Anatomy and Physiology II	3
BIOL	234	Human Anatomy and Physiology II Lab	1
BIOL	301	Microbiology with Lab (BIOL 303) or	
BIOL	326	Cell Biology with Lab (BIOL 327) or	
BIOL	420	Animal Histology with Lab (BIOL 421)	4
BUED	212	Computer Concepts/Applications I	3
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
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

ELECTIVE COURSES

Students must take at least nine of the fifteen (15) 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.

Course	No.	Title	Credits
ASLS	402	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 and	3
BIOL	303	Microbiology Lab	1
BIOL	326	Cell Biology	3
BIOL	327	Cell Biology Lab and	1
BIOL	420	Animal Histology and	3
BIOL	421	Animal Histology Lab	1
CHEM	111	Principles of Chemistry I and	3
CHEM	113	Principles of Chemistry I Lab	1
CHEM	112	Principles of Chemistry II and	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 and	3
PHYS	123	General College Physics I Lab	1
PHYS	122	General College Physics II and	3
PHYS	124	General College Physics II Lab	1
PSYC	301	Child Psychology	3
PSYC	307	Educational Psychology	3
RECR	413	Therapeutic Recreation	3
RPSY	471	Group and Family	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
SOWK	455	Substance Abuse: Issues/Services	3

¹ Students can take BIOL 231/233 or another Rehab Option and one additional credit of Elective.

² REHA 201 is the prerequisite for all REHA courses.

³ Student must select two courses beginning with ASLS 307 and ending with REHA 499. Students not choosing to take BIOL 231/233 must take three courses beginning with ASLS 307 and ending with REHA 499 and one additional credit of Elective.

CURRICULUM GUIDE FOR REHABILITATION SERVICES

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 109	3	BIOL 113	1
SOCI 101	3	ENGL 102	3
REHA 100 ¹	1	ENGL 001/ENGL 003 ³	0
EXSC 111 ²	3	PSYC 200	3
CHEM 101	<u>3</u>	SOCI 201	3
	16	Elective	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231 ⁴	3	REHA 201 ⁵	3
BIOL 233 ⁴	1	EDSP 200B	3
ENGL 203	3	MATH 210	3
BUED 212	3	GEN ED CURR AREA I ⁶	3
SOCI 202 ⁷	3	Elective	<u>3</u>
GEN ED CURR AREA I ⁷	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305	3	REHA 302	3
REHA 306	3	REHA 305	3
REHA 301	3	PSYC 371	3
REHA 303	3	PSYC 305 ⁸	3
Elective	<u>3</u>	Elective	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
RPSY 304	3	REHA 401	6
REHA 402	3	REHA 406	3
REHA 403	3	REHA Option ⁹	<u>3</u>
REHA Option ⁹	3		12
Elective	<u>3</u>		
	15		

Total Credits Hours Required: 120

¹GNST 100 is an authorized substitution.

²EXSC 111 can only be taken **once** for credit.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Student may select either BIOL 231 and BIOL 233 or an additional Rehab Option and one 1-credit elective.

⁵REHA 201 is the prerequisite for all REHA courses.

⁶Student must select from GEN ED CURR AREA I: Humanities

⁷SOCI 250 or CRJS 101 are authorized substitutions.

⁸HUEC 203 is an authorized substitution.

⁹Student must select from Required Common Course section in Rehabilitation Services

AMERICAN SIGN LANGUAGE OPTION

DEPARTMENTAL REQUIREMENTS

If students are following the Rehabilitation course sequence, they must take at least fifteen (15) 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 American Sign Language Studies. Select 100, 200, 300, or 400 level courses parallel with the first, second, third or fourth year of college.

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. ASLS courses (ASLS 307 and higher) are authorized substitutions for the two required Rehabilitation Options.

REQUIRED MAJOR COURSES

ASLS 203
ASLS 204
ASLS 307
ASLS 308
ASLS 402
ASLS 421

CURRICULUM GUIDE FOR AMERICAN SIGN LANGUAGE

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 102	3	BIOL 113	1
SOCI 101	3	ENGL 102	3
REHA 100 ¹	1	ENGL 001/ENGL 003 ³	0
EXSC 111 ²	3	PSYC 200	3
CHEM 101	<u>3</u>	SOCI 201	3
	16	ASLS 402	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231 ⁴	3	REHA 201 ⁵	3
BIOL 233 ⁴	1	EDSP 200B	3
ENGL 203	3	MATH 210	3
BUED 212	3	GEN ED CURR AREA I	3
SOCI 202 ⁷	3	ASLS 204	<u>3</u>
ASLS 203	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305	3	REHA 302	3
REHA 306	3	REHA 305	3
REHA 301	3	PSYC 371	3
REHA 303	3	PSYC 305 ⁶	3
ASLS 307	<u>3</u>	ASLS 308	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
RPSY 304	3	REHA 401	6
REHA 402	3	REHA 406	3
REHA 403	3	REHA Option ⁷	<u>3</u>
REHA Option ⁷	3		12
ASLS 421	<u>3</u>		
	15		

Total Credits Hours Required: 120

¹ GNST 100 is an authorized substitution.

² Course cannot be repeated for credit.

³ The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴ REHA 201 is the prerequisite for all REHA courses.

⁵ Student may select either BIOL 231 and BIOL 233 or an additional Rehab Option and one 1-credit elective.

⁶ HUEC 203 is an authorized substitution.

⁷ Student must select from Required Common Course section.

CHEMICAL DEPENDENCY PROVISIONAL CERTIFICATION REQUIREMENTS

DEPARTMENTAL REQUIREMENTS

If students are following the Rehabilitation course sequence, they must take at least fifteen (15) 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. Select 100, 200, 300, or 400 level courses parallel with the first, second, third or fourth year of college. Courses in Rehabilitation, Psychology, Sociology, Social Work, or Criminal Justice are recommended.

REQUIRED MAJOR COURSES

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.

RECN 701¹ REHA 404
REHA 407

¹Program Approval Required

**CURRICULUM GUIDE FOR CHEMICAL DEPENDENCY
PROVISIONAL CERTIFICATION**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 102	3	BIOL 113	1
SOCI 101	3	ENGL 102	3
REHA 100 ¹	1	ENGL 001/ENGL 003 ³	0
EXSC 111 ²	3	PSYC 200	3
CHEM 101	<u>3</u>	SOCI 201	3
	16	Elective	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231 ⁴	3	REHA 201 ⁵	3
BIOL 233 ⁴	1	EDSP 200B	3
ENGL 203	3	MATH 210	3
BUED 212	3	GEN ED CURR AREA I	3
SOCI 202 ⁶	3	Elective	<u>3</u>
GEN ED CURR AREA I	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305	3	REHA 302	3
REHA 306	3	REHA 305	3
REHA 301	3	PSYC 371	3
REHA 303	3	PSYC 305 ⁷	3
Elective	<u>3</u>	Elective	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
RPSY 304	3	REHA 401	6
REHA 402	3	REHA 406	3
REHA 403	3	RECN 701	<u>3</u>
REHA 404	3		12
REHA 407	<u>3</u>		
	15		

Total Credits Hours Required: 120

¹GNST 100 is an authorized substitution

²Course cannot be repeated for credit.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Student may select either BIOL 231 and BIOL 233 or an additional Rehab Option and one 1-credit elective.

⁵REHA 201 is the prerequisite for all REHA courses.

⁶SOCI 250 or CRJS 101 are authorized substitutions.

⁷HUEC 203 is an authorized substitution.

ALLIED HEALTH OPTION¹

DEPARTMENTAL REQUIREMENTS

The Rehabilitation Services major must complete at least 120 credit hours of University courses. Included in the 120 credit hours are a minimum of 42 credit hours of Rehabilitation at the 200 level or above for the professional major. A minimum grade of "C" must be achieved in these courses. For those students choosing a career in Allied Health, a minimum of 129 credit hours is recommended. These additional credits are courses that are normally prerequisites for graduate study in the Allied Health fields. To graduate with a degree in rehabilitation from either the Behavioral Rehabilitation Option or the Allied Health Option, 120 credit hours are required.

¹* For students in the Allied Health Option who are considering graduate studies in Physical Therapy, Occupation Therapy or closely related field, nine additional credits are recommended.

CURRICULUM GUIDE FOR ALLIED HEALTH OPTION¹

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 109	3	BIOL 113	1
SOCI 101	3	ENGL 102	3
REHA 100 ²	1	ENGL 001/ENGL 003 ⁴	0
EXSC 111 ³	3	PSYC 200	3
CHEM 111	3	SOCI 201	3
CHEM 113	<u>1</u>	CHEM 112	3
	17	CHEM 114	<u>1</u>
			17

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	BIOL 232	3
BIOL 233	1	BIOL 234	1
ENGL 203	3	REHA 201 ⁵	3
BUED 212	3	EDSP 200B	3
SOCI 202 ⁶	3	MATH 210	3
GEN ED CURR AREA I	<u>3</u>	GEN ED CURR AREA I	<u>3</u>
	16		16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 305	3	REHA 302	3
REHA 306	3	REHA 305	3
REHA 301	3	PSYC 371	3
REHA 303	3	PSYC 305 ⁷	3
PHYS 121	3	PHYS 122	3
PHYS 123	<u>1</u>	PHYS 124	<u>1</u>
	16		16

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
RPSY 304	3	REHA 401	6
REHA 402	3	REHA 406	3
REHA 403	3	REHA Option ⁸	3
REHA Option ⁸	3	BIOL 301 ⁹	3
MATH 110	<u>3</u>	BIOL 303 ⁹	<u>1</u>
	15		16

Total Credit Hours: 129

¹For students in the Allied Health Option who are considering graduate studies in Physical Therapy, Occupation Therapy or closely related field, nine additional credits are recommended.

²GNST 100 is an authorized substitution.

³Course cannot be repeated for credit.

⁴The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁵REHA 201 is the prerequisite for all REHA courses.

⁶SOCI 250 or CRJS 101 are authorized substitutions.

⁷HUEC 203 is an authorized substitution.

⁸Student must select from Required Common Course section.

⁹BIOL 326/327 or BIOL 420/421 are authorized substitutions.

REHABILITATION PSYCHOLOGY

The Rehabilitation Psychology Program was designed is to provide the Eastern Shore, the State of Maryland and the nation with a diverse group of well-trained individuals who possess an undergraduate degree in rehabilitation psychology. These individuals will be well prepared to fill entry level positions in human services and to pursue admission to graduate programs in psychology, rehabilitation, guidance and counseling, and a variety of related human service and allied health fields. Specifically, the proposers intend to: allow students who successfully complete the program to pursue entry level positions in human services and allied health and/or to pursue admission to a variety of graduate programs in human services or allied health; create new opportunities and training for students to develop their skills and abilities in rehabilitation, psychology, critical thinking, problem solving, research and communication; improve community access to entry level health care professionals; and, improve community access to health care services provided by qualified professionals.

DEPARTMENTAL REQUIREMENTS

The Rehabilitation Psychology program will require 120 credit hours for completion. Of the 120 credit hours, 41 are General Education requirements. Students will add to this 48 hours of core courses, 22 hours of supportive core courses, and three (3) hours of electives.

¹Student must select either HUEC 203 or PSYC 305.

²REHA 201 is the prerequisite for all REHA and RPSY courses.

REHABILITATION PSYCHOLOGY

Required and Recommended Courses Sequence

GENERAL EDUCATION REQUIREMENTS

TOTAL REQUIRED FOR GENERAL EDUCATION — 41 Credits Minimum

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

Curriculum Area I – (Arts and Humanities) 9 credits

Students must select ENGL 203¹ plus one course in each of two disciplines:

ARTS: ARTS 101, ARTS 310, MUSI 100, MUSI 101, MUSI 109

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

LANGUAGE: ASL 203, FREN 101, FREN 102, SPAN 101, SPAN 102

LITERATURE: ENGL 204, ENGL 205, ENGL 206, ENGL 207

Curriculum Area II – (Social and Behavioral Sciences) 6 credits

Students must select one course in each of two disciplines: **See Bolded**

SOCIAL SCIENCES: ECON 200 or ECON 200H, ECON 201 or ECON 201H,

GEOG 201 or GEOG 202, HIST 101 or HIST 101H, HIST 102 or HIST 102H,

POLI 200 or POLI 200H, POLI 342, **SOCI 101* or SOCI 101H***

BEHAVIORAL SCIENCES: CRJS 101, HUEC 203, HUEC 220, HUEC

361, HUEC 380, SOWK 200 or SOWK 200H, **PSYC 200***

Curriculum Area III – (Biological and Physical Sciences) 7 Credits

Students must select two science courses which must include at least one laboratory:

See Bolded

ANPT 114, BIOL 101, BIOL 103 (lab), **BIOL 111***, **BIOL113*(lab)** BIOL 112,

BIOL 114 (lab), **CHEM 101***, 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,

Curriculum Area IV – (Mathematics) 3 credits

One course at or above the level of MATH 109. Students must select one course as required by their major department and/or results of their Mathematics Placement Exam.

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
MATH	109	College Algebra	3

Curriculum Area V – (English Composition) 9 credits

Students must complete three courses:

ENGL	101/H*	Basic Composition I	3
ENGL	102/H*	Basic Composition II	3
ENGL	305/H/O	Technical Writing (Honors) or	
ENGL	310/H/O	Advanced Composition (Honors)	3
ENGL	001/002/003	Proficiency Exam	

¹Students must pass ENGL 101 and ENGL 102 with grade of “C” or above before taking ENGL 203

Curriculum Area VI – (Emerging Issues)**7 credits**

Courses identified as being essential to a full program of general education for UMES students

REHA 100 or GNST 100, EXSC 111, SOCI 201**PROGRAM CORE REQUIREMENTS****48 credits**

A grade of "C" or better is required in each of the Program Core Requirements

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
RPSY	304	Assessment in Rehabilitation	3
REHA	305	Vocational, Development, Counseling & Employment	3
REHA	306	Counseling Skills & Techniques	3
RPSY	331	Research Methods I	3
RPSY	341	Research Methods II	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
RPSY	418	Physiological Psychology	3
RPSY	471	Group and Family	3

*** REHA 201 is a prerequisite for all other REHA courses.**

**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).

PROGRAM OPTIONS**6 credits**

The Rehabilitation Psychology Options require a minimum of six (6) hours from the following:

ASLS	402	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
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

SUPPORTIVE REQUIREMENTS**22 credits****Support**

BIOL	231	Human Anatomy and Physiology I	3
BIOL	233	Human Anatomy and Physiology I Lab	1
EDSP	200B	Introduction to Special Education	3
MATH	210	Elementary Statistics	3

PSYC	301	Health and Medical Information	3
PSYC	305	Vocational Counseling Development	3
PSYC	371	Abnormal Psychology	3
PSYC	401	Introduction to Personality	3

ELECTIVE COURSES

Students must take three (3) 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.

ASLS	402	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 and	3
BIOL	303	Microbiology Lab	1
BIOL	326	Cell Biology	3
BIOL	327	Cell Biology Lab and	1
BIOL	420	Animal Histology and	3
BIOL	421	Animal Histology Lab	1
CHEM	111	Principles of Chemistry I and	3
CHEM	113	Principles of Chemistry I Lab	1
CHEM	112	Principles of Chemistry II and	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 and	3
PHYS	123	General College Physics I Lab	1
PHYS	122	General College Physics II and	3
PHYS	124	General College Physics II Lab	1
PSYC	301	Child Psychology	3
PSYC	307	Educational Psychology	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

CURRICULUM GUIDE FOR REHABILITATION PSYCHOLOGY

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
ENGL 101	3	BIOL 111	3
MATH 102	3	BIOL 113	1
SOCI 101	3	ENGL 102	3
REHA 100 ¹	1	ENGL 001/ENGL 003 ³	0
EXSC 111 ²	3	PSYC 200	3
CHEM 101	<u>3</u>	GEN CURR AREA I ⁴	3
	16	SOCI 201	<u>3</u>
			16

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
BIOL 231	3	RPSY 341	3
BIOL 233	1	EDSP 200B	3
ENGL 203	3	REHA 303	3
MATH 210	3	PSYC 305	3
RPSY 231	3	PSYC 301	<u>3</u>
REHA 201 ⁵	<u>3</u>		15
	16		

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
GEN CURR AREA I ⁴	3	REHA 302	3
REHA 306	3	REHA 305	3
REHA 301	3	RPSY 304	3
ENGL 305	3	RPSY 418	3
PSYC 371	<u>3</u>	REHA/RPSY Option ⁶	<u>3</u>
	15		15

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
REHA 402	3	REHA 401	6
REHA 403	3	REHA 406	3
PSYC 401	3	RPSY 471	<u>3</u>
REHA/RPSY Option ⁶	3		12
Elective	<u>3</u>		
	15		

Total Credits Hours Required: 120

¹GNST 100 is an authorized substitution.

²EXSC 111 cannot be repeated for credit.

³The English Proficiency Examination is given at the end of the semester. A student must enroll in ENGL 001 prior to enrolling in ENGL 102. (ENGL 003 is for students enrolling in 102H.)

⁴Student must select course from GEN ED CURR AREA I

⁵REHA 201 is the prerequisite for all REHA courses.

⁶Student must select from REHA Option courses.

COURSE DESCRIPTIONS

AMERICAN SIGN LANGUAGE STUDIES

ASLS 203 American Sign Language I

Credit 3

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.

ASLS 204 American Sign Language II

Credit 3

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 203, or proficiency evaluation.

ASLS 307 American Sign Language III

Credit 3

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 203 and ASLS 204 or proficiency evaluation.

ASLS 308 American Sign Language IV

Credit 3

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 203, ASLS 204, ASLS 307 and ASLS 308 or proficiency evaluation.

ASLS 402 Orientation to Deafness

Credit 3

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 421 Practicum in American Sign Language

Credit 3

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 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 100 First Year Experience Seminar

Credit 1

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 will assist students in developing cognitive skills and adjusting personally and socially to the college environment. Additionally, this course shall facilitate self-awareness and interpersonal communication. Requirement for all Freshmen. This course is taken by Rehabilitation Services majors in lieu of GNST 100.

REHA 201¹ Introduction to Rehabilitation

Credit 3

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.

¹REHA 201 is the prerequisite for all Rehabilitation Courses.

REHA 301 Health/Medical Information**Credit 3**

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: REHA 201.

REHA 302 Theories of Counseling**Credit 3**

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**Credit 3**

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 305/Online Vocational Development Counseling and Employment**Credit 3**

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 Techniques**Credit 3**

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**Credit 3**

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. Prerequisite: REHA 201.

REHA 401 Field Work in Rehabilitation Services**Credit 6**

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, RPSY 304, REHA 305 and REHA 306 and permission of the Clinical Coordinator.

REHA 402/Online Introduction to Development Disabilities**Credit 3**

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. Prerequisite: REHA 201.

REHA 403 Psychiatric Rehabilitation**Credit 3**

This course is a study of the history and current practices; programs, personnel, and facilities; community organizations; and trends of the psychiatrically impaired. Prerequisite: REHA 201.

REHA 404 Rehabilitation Services for the Addict/Hybrid**Credit 3**

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. Prerequisite: REHA 201.

- REHA 405 Multicultural Issues in Behavioral and Allied Health** **Credit 3**
This course is designed to assist students to develop an awareness of multicultural issues and related concerns. The student should be able to develop an awareness, knowledge and understanding of persons from various cultural backgrounds. Emphasis will be placed on identifying behavioral, social, barriers that persons from different cultural groups (particularly those persons with disabilities) are likely to encounter. Prerequisites: PSYC 200, REHA 201.
- REHA 406 Seminar in Rehabilitation** **Credit 3**
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. Prerequisite: REHA 201.
- REHA 407 Pharmacology of Chemical Dependency Rehabilitation** **Credit 3**
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. Prerequisite: REHA 201.
- REHA 408 Technology in Rehabilitation** **Credit 3**
This course provides an overview of technology focused on adaptive and assistive rehabilitation technology, including aids for daily living. Prerequisite: REHA 201.
- REHA 409 Traumatic Brain Injury Rehabilitation** **Credit 3**
People with traumatic brain injury (TBI) represent a large group who are receiving vocational rehabilitation. This course will provide the needed knowledge and skills to work effectively with people with TBI. Prerequisite: REHA 201.
- REHA 411 Field Work in Rehabilitation Services II** **Credit 1-6**
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/Online Special Topics in Rehabilitation** **Credit 3**
This course prepares students to understand current issues and policies regarding disabilities and how those policies influence the rehabilitation process. Prerequisite: REHA 201.
- REHA 421 Practicum in Rehabilitation** **Credit 1-6**
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. Prerequisite: REHA 201.
- REHA 499 Independent Study/Online** **Credit 1-6**
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. Prerequisite: REHA 201.

REHABILITATION PSYCHOLOGY

RPSY 304 Test and Measurements

Credit 3

This course covers the aspects of conducting a survey of psychological, social and vocational tests. The nature and use of tests in counseling, test and test interpretation are explained. Prerequisite: REHA 201. Students cannot receive credit for RPSY 304 and REHA 304.

RPSY 331 Research Methods I: Introduction to Research

Credit 3

This course serves as a general introduction to the principles of research in behavioral sciences and promotes an inquiry orientation to becoming critical consumers of behavioral research. Students who complete this course will be able to identify, read, interpret, synthesize, and evaluate qualitative and quantitative research reports and recognize legitimate uses for that information. Topics covered in the course include understanding basic behavioral research, procedures used in qualitative and quantitative data collection and analysis, as well as the analysis, synthesis, and evaluation of research reports. Prerequisites: PSYC 200 and REHA 201.

RPSY 341 Research Methods II: Experimental Research Methods

Credit 3

This course provides an introduction to research methods commonly used in the field of behavioral sciences and is intended to help students develop research-related knowledge and skills that are relevant to both the undergraduate program, the workplace and graduate school. The objectives in this course are in accordance with national standards for the undergraduate psychology major as recommended by the APA's Board of Educational Affairs. Prerequisites: PSYC 200, REHA 201, MATH 210 and RPSY 331.

RPSY 418 Physiological/Psychology: The Biological/Physiological Mechanism of Behavior

Credit 3

Physiological Psychology is a senior level course designed to allow students to explore the neurological mechanisms which serve as the underpinning for sensation, movement, sleep, memory, perception and communication. Much of the subject matter is concerned with basic neuroscience and the principles associated with neurophysiology, neurochemistry and neuroanatomy. Prerequisites: PSYC 200, REHA 201, REHA 301.

RPSY 471 Group and Family Counseling Skills and Practices

Credit 3

This course is designed to introduce students to selected processes, theories, practices and methods of group and family counseling. This course exposes students to various clinical and organizational issues involved in working in group and family settings. Students are encouraged to examine the various elements that contribute to the nature of group and family counseling. Emphasis is placed on exploring best practices and current developments in the field as well as selected models and approaches which are widely used. Prerequisites: PSYC 200, REHA 201.

DIRECTORY OF FACULTY

Blackmon, Jonathan, Lecturer/Sign Language Interpreter

B.A., Lenoir-Rhyne College

Faubion, Clayton, Associate Professor

B.A., University of Texas; M.Ed., Southwest Texas State; Ph.D., University of Arkansas;
Certified Rehabilitation Counselor (C.R.C.)

Harris, LaKeisha, Assistant Professor

B.S., Bowie State University; M.R.C., Bowling Green State University; Ph.D., University of Iowa; Certified Rehabilitation Counselor (C.R.C.)

Lankford, Gail, Clinical Coordinator

B.A.S.W, Salisbury State University; M.Ed., University of Maryland Eastern Shore; Certified Rehabilitation Counselor (C.R.C.); Certified Alcohol Counselor (C.A.C.); Certified Chemical Dependence Counselor (C.C.D.C.); Licensed Clinical Drug Alcohol Counselor (LCDAC)

Rahimi, Maryam, Associate Professor

B.S. Jundishapour University, Iran; M.S., Ph.D., Florida State University; Licensed Clinical Professional Counselor (L.C.P.C.); Certified Rehabilitation Counselor (C.R.C.)

Talley, William, Professor, Chair and Acting Assistant Dean

B.A., South Carolina State University; M.A., South Carolina State University; Rh.D., Southern Illinois University at Carbondale; Certified Rehabilitation Counselor (C.R.C.)

Zheng, Lisa, Assistant Professor

B.A, Hwa Nan Women's College, China; M.A., Fuzhou University, China; Ph.D., University of Wisconsin-Madison

LIBRARY SERVICES

The course indicated below is offered by Library Services at UMES. For further details regarding Library Services, please go to page 21.

COURSE DESCRIPTIONS FOR LIBRARY SERVICES

LIBR 100Online Information Literacy

Credit 1

This on-line course provides a framework to identify, retrieve, evaluate, and use information effectively and efficiently. It includes social, legal and economic issues surrounding the use of information. Students will acquire the information skills necessary to succeed in academic and professional arenas; thus building a framework for life-long learning.

LIBR 100Hybrid The hybrid course provides a framework to identify, retrieve, evaluate, and use information effectively and efficiently. It includes social, legal and economic issues surrounding the use of information. Students will acquire the information skills necessary to succeed in academic and professional arenas; thus building a framework for life-long learning.

DIRECTORY OF FACULTY

Bree, Joseph D., Librarian I

B.S., Weber State University (Utah); MLIS University of North Texas

Brooks, Sharon, Librarian IV

B.S., North Carolina Central University; M.A., North Carolina Central University

Dadson, Theresa, Librarian IV

B.A., University of Ghana; MLS McGill University (Canada)

Johnson, Renise M., Librarian I

B. A., University of the Virgin Islands; MLIS University of Pittsburgh

Neumyer, Jennifer A., Librarian II

B.A., Pennsylvania State University, University Park; MSLS, Clarion University of Pennsylvania

Nyirenda, Cynthia, Librarian III

B.S., Davenport University; B.A., University of Malawi; M.A., University of London (UK),

Reed, Ann C., Librarian I

B.A., Salisbury University, MLIS, University of Hawaii, Manoa

Rounds, Marvella, Librarian IV

B.S., University of Maryland Eastern Shore; MLS, University of Maryland, College Park.

APPENDICES

APPENDIX 1

MARYLAND HIGHER EDUCATION COMMISSION (MHEC)

**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, and 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.

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.

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.

Appeal to Sending Institution.

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.

A student shall make an appeal to the sending institution within 10 working days of having received the decision of the receiving institution.

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.

.11 Exemption from Payment of Nonresident Tuition for Certain Armed Forces Personnel, Spouses, Dependents and Veterans. (Approved by the Maryland Higher Education Commission, September 29, 2004, to implement House Bill 172, which was signed into law as Chapter 325, Laws of Maryland 2004).

- A. An individual who is an active duty member of the United States Armed Forces, the spouse of an active duty member of the United States Armed Forces or a financially dependent child of an active duty member of the United States Armed Forces who registers as an entering student in a public institution of higher education in the State is exempt from paying nonresident tuition at the institution if the active duty member of the United States Armed Forces is stationed in this State, resides in this State or is domiciled in this State.
- B. A spouse or financially dependent child of an active duty member of the United States Armed forces who enrolls as an entering student in a public institution of higher education in the State and is exempt from paying nonresident tuition under section A. of this regulation shall continue to be exempt from paying nonresident tuition if the active duty member of the United States Armed Forces no longer meets the requirements of section A. of this regulation and the spouse or financially dependent child remains continuously enrolled at the institution.
- C. An honorably discharged veteran of the United States Armed Forces who registers as an entering student in a public institution of higher education in the State is exempt from paying nonresident tuition at the institution if, within one year after the veteran's discharge, the veteran presents the institution with documentation evidencing that the veteran attended a public or private secondary school in this State for at least three years and that the veteran graduated from a public or private secondary school in this State or received the equivalent of a high school diploma in this State.

Administrative History

Effective date: December 4, 1995 (22:24 Md. R. 1901)

Regulation .02B amended effective July 1, 1996 (23:13 Md. R. 946)

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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

UNIVERSITY OF MARYLAND EASTERN SHORE COMPLIANCE WITH SECTION 495 OF THE HIGHER EDUCATION OPPORTUNITY ACT (HEOA) DISTANCE EDUCATION AND CORRESPONDENCE EDUCATION POLICY

To ensure that the University is in compliance with HEOA with respect to distanced education and correspondence courses, the following measures are in place.

1. A student must first go through the admissions application process and be admitted to the University. That application approval status is entered into the PeopleSoft system (a educational software program used by University System of Maryland institutions). A unique 7- digit student ID number is generated for each enrolled student.
2. Access to any computer system or online function of the University Intranet requires a logon account on the UMES domain server. Students request an account online at www.umes.edu/newaccount. This online form requires them to supply their last name, birth date, and the 7-digit student ID number generated by the PeopleSoft system. The student must agree to all University acceptable use of computer policies. If acceptable, a logon username and initial password is generated. Student can change their password, but not their logon username.
3. When the logon account is created, PeopleSoft student roles are generated and the 7-digit student ID number is mapped to the username.
4. A student must enroll in courses via PeopleSoft which is available at the 'My UMES' portal located on the UMES website at www.umes.edu.
5. Registrar's office needs to fill in details on how they approve a student to enroll in a particular semester.
6. As part of a scheduled program run, any updates to PeopleSoft's enrollment data are extracted to files that are imported into Blackboard, the Universities authoring tool for distance education classes. This process would update any adds, drops, or changes from PeopleSoft into Blackboard, ensuring only currently enrolled students have access to the course in Blackboard.
7. A student does not have access to Blackboard until his/her first import takes place. If he/she drops the class in Peoplesoft, the account still exists in Blackboard, but the student would be denied access to the course.
8. Inside Blackboard individual passwords for tests can be set.
9. With Blackboard, the University has access to use 2500 Acxiom verifications per year and can purchase more access as demand requires.
10. Wimba Live Classroom gives us the capability to visually identify students.

INDEX

A

Academic Affairs, 18
Schools, Departments, Centers and Programs, 18
Academic Clemency, 62
Academic Dismissal and Reinstatement, 66
Academic Information and Procedures, 62
Academic Probation and Dismissal, 67
Academic Standing, 67
Accreditation and Professional Memberships, 18
Administrative Affairs, 32
Full-Time Tuition and Fees, 32
Part-time Tuition and Fees, 33
Tuition, Fees and Expenses, 32
Admissions, 46
Alleged Arbitrary and Capricious Grading, 68
Appendices
Appendix 1, 626, 639
Articulated Programs
Child Development - Chesapeake College and UMES, 142
Child Development - Wor Wic & UMES, 137, 138, 143
Auditing, 70
Auxiliary Enterprises, 39
Hawk Center, 39

C

Career Services/Cooperative Education, 49
Categories of Undergraduate Admission, 48
Center for Instructional Technology, 26
Center for International Education, 51
Certification
Career and Technology Education, 577
Certifications
Chemical Dependency Provisional, 610
Change of Grades, 73
Child and Family Development Center, 26
Class Attendance, 71
Cooperative Education Program, 50
Counseling Services, 52, 75
Credit By Examination, 73
Credit Unit and Load, 75

D

Degree Programs
Rehabilitation Psychology, 614
Accounting, 422
African American Studies, 388
Agribusiness, 92
Agricultural Studies, 99

Aviation Sciences, 474
Biology, 195
Biology Non-Teaching Honors, 201
Business Administration, 431
Business Administration - Marketing Option, 444, 449
Business Education, 440
Chemistry Education - Teaching, 241
Chemistry Non-Teaching, 236
Chemistry Non-Teaching - ACS Certification, 225
Child Development, 132
Computer Science, 537
Computer Science with Business Focus, 541
Construction Management Technology, 560, 561
Dietetics, 146, 147
Electrical/Electronics Engineering Technology, 564
Environmental Science, 247
Family and Consumer Sciences, 150
Family and Consumer Sciences Education Program, 153
Fashion Merchandising, 156
Fashion Merchandising FIT Advertising, 21, 164, 165
Fashion Merchandising Honors, 160, 161
General Agriculture, 96
History, 392
Mathematics Education, 534
Mathematics Non-Teaching, 530
Mechanical Engineering Technology, 568
Music, 365
Nutrition Program, 168, 169
Plant and Soil Science, 108
School of Agricultural and Natural Sciences, 21, 23, 24, 25
Social Studies Teacher Education, 396
Sociology, 399
Technology Education, 572
Departmental Requirements
Accounting, 422
African American Studies, 388
Agriculture, Food and Resource Sciences, 91
American Sign Language, 608, 614
Applied Design, 353
Art Education, 347
Biology Non-Teaching, 195
Biology Non-Teaching Honors, 201
Business Administration, 431
Business, Management and Accounting, 421
Chemical Allied Health Option, 612
Chemical Dependency Provisional Certification, 610
Chemistry - Non-Teaching - ACS Certification, 225

Child Development, 133
 Child Development Articulated Programs -
 Chesapeake College and UMES, 142
 Computer Science, 537
 Computer Science with Business Focus, 541
 Construction Management Technology, 560
 Criminal Justice, 296
 Dietetics, 146
 Dual Degree Program
 Environmental Science
 Chemistry Option, 258
 Education & Teacher Education, 308
 Electrical/Electronics Engineering
 Technology, 564
 English and Modern Languages, 328
 English Non-Teaching, 324
 Environmental Sciences, 247
 Exercise Science, 590
 Exercise Science - Clinical Option, 591
 Exercise Science - Health/Fitness Option, 594
 Family and Consumer Sciences, 150
 Family and Consumer Sciences Education
 Program, 153
 Fashion Merchandising, 156
 Fashion Merchandising FIT Advertising, 164
 Fashion Merchandising Honors, 160
 History, 392
 Hotel and Restaurant Management, 502
 Human Ecology, 132
 Mathematics and Computer Science, 529
 Mathematics Education, 534
 Mathematics Non-Teaching, 530
 Mechanical Engineering Technology, 568
 Music, 365
 Natural Sciences, 185
 Nutrition Program, 168
 Pre-Medicine/Pre-Dentistry Track, 207
 Pre-Pharmacy, 272
 Professional Golf Management, 515
 Rehabilitation Psychology, 614
 Rehabilitation Services, 602
 Social Sciences, 386
 Sociology/Social Work, 403
 Technology Education, 572
 Urban Forestry, 112
 Departments
 Agriculture, Food and Resource Sciences, 90
 Business, Management and Accounting, 418
 Criminal Justice, 296
 Education, 307
 Engineering and Aviation Sciences, 467
 English and Modern Languages, 323
 Exercise Science, 590
 Fine Arts, 346
 Hotel and Restaurant Management, 501
 Human Ecology, 132
 Mathematics and Computer Science, 528
 Natural Sciences, 184
 PGA Golf Management, 515

Rehabilitation Services, 601
 Social Sciences, 386
 Technology, 558
 Dual Degree Programs
 Environmental Science
 Marine Science Option, 265
 Environmental Sciences
 Chemistry Option, 258
 Marine Science Option, 257
 Sociology/Social Work, 403

E

Employment
 Students, 42
 English Proficiency, 78
 Enrollment 101, 49
 Examinations
 Credit By, 86
 Final Exams, 78

F

Facilities, 14
 Financial Aid, 41
 Fraternities and Sororities, 57

G

General Information, 5
 Golden Identification Card, 57
 Grade and Quality Points, 78

H

Health Center, 53
 Honors Convocation, 20

I

Important University Regulations Which Apply
 To Students, 55
 Incomplete Grades, 78
 Information and Procedures, 57
 Dress Code, 58
 Policy on Off-Campus Disorderly and
 Disruptive Behavior, 57
 In-State Status, 35
 Institutional Advancement, 43

J

Judicial System and Student Code of Conduct,
 53

L

Library Services, 624

M

Majors

Selecting A, 83

Minor Programs

Agriculture, Food and Resource Sciences, 116

Business, Management and Accounting, 454

Criminal Justice, 300

Hotel and Restaurant Management, 507

Human Ecology, 172

Mathematics and Computer Science, 545

Natural Sciences, 273

Technology, 576

N

Nondiscrimination Policy, 9

Non-Traditional Learning, 79

O

Office of Communications, 43

Office of the President, 16

Department of Intercollegiate Athletics, 16

Institutional Research, Planning and

Assessment, 16

International Development Programs, 27

Title III Programs, 17

Office of the Registrar, 27

Application for Degree, 28

Commencement, 27

Degree Requirements, 27

Graduation With Honors, 30

Participation in Commencement, 28

Second and Double Baccalaureate Degree

Requirements, 30

The Collaborative Programs with Salisbury

University, 27

Organization of the University, 10

Academic Affairs, 12

Administrative Affairs, 12

Board of Regents, 10

Governancer of USM, 10

Institutional Advancement, 13

Officers of Administration, 12

Student Life and Enrollment Management, 13

Technology and Commercialization, 13

UMES Board of Visitors, 11

USM Officers of Administration, 10

Outreach Programs, 30

P

Policies

Academic Honesty, 62

Procedures for Reviewing Charges of

Plagiarism, 63

Student Residency, 36

Public Safety, 41

Campus Parking, 42

Emergency Services, 42

Motor Vehicle Registration, 42

Prevention Education, 42

R

Readmission After Voluntary Withdrawal, 82

Registration, 79

At Other Institutions, 82

Repeating of Classes, 83

Requirements

General Education Requirements, 87

Major Core, 87

Majors and Minors, 87, 440

Supporting Area, 87

Research, 31

Residence Life, 59

Housing Communities, 60

Housing Options, 59

S

Scholarships, 60

Student Activities, 56

Student Government Association, 57

Student Handbook, 57

Student Life and Enrollment Management, 46

Student Organizations, 56

Student Services Center, 46

T

The Center for Access and Academic Success,
51

The Honors Program, 19

Transfer Credit, 84

U

University Scholars Program, 84

V

Voluntary Withdrawal, 82

W

Winter Session and Summer School, 84

Withdrawal Refund Policy, 86

Withdrawal and Refund of Fees, 80

Withdrawals, 80