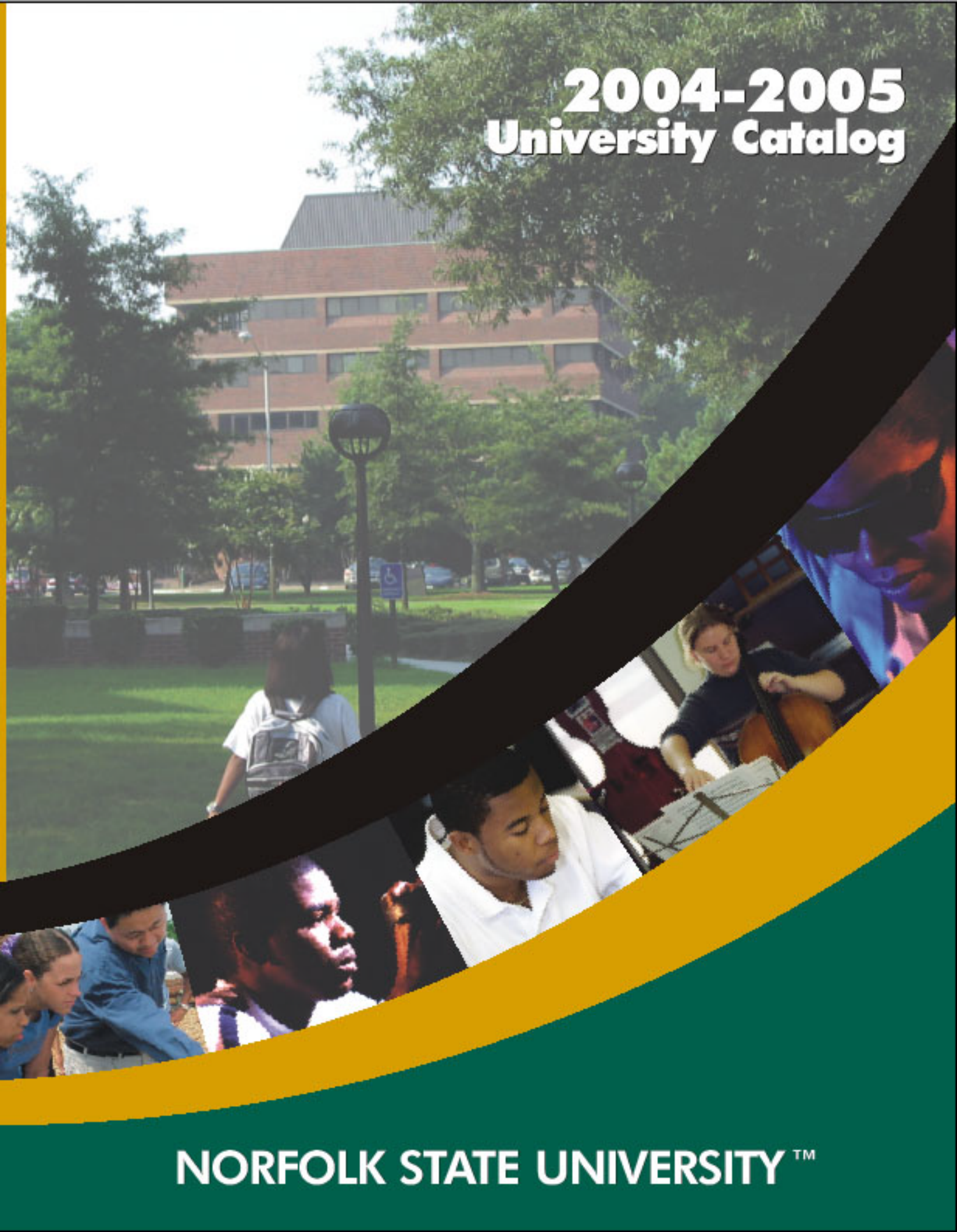


2004-2005 University Catalog



NORFOLK STATE UNIVERSITY™

NORFOLK STATE UNIVERSITY

2004 – 2005 UNIVERSITY CATALOG

700 PARK AVENUE
NORFOLK, VA 23504
(757) 823-8600
<http://www.nsu.edu>

Achieving with Excellence



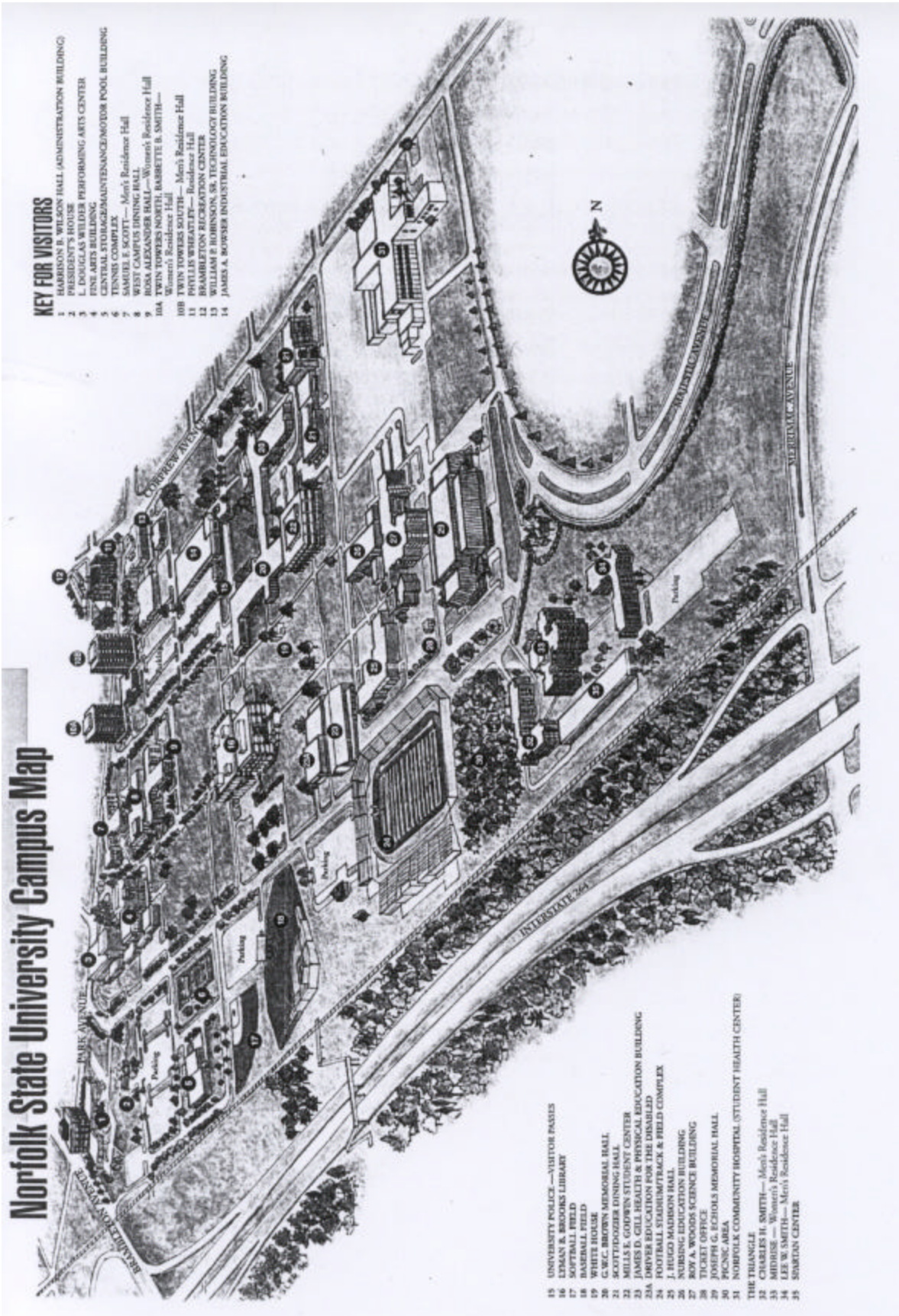
Marie V. McDemmond
President



**Mark R. Warner, Governor
Commonwealth of Virginia**

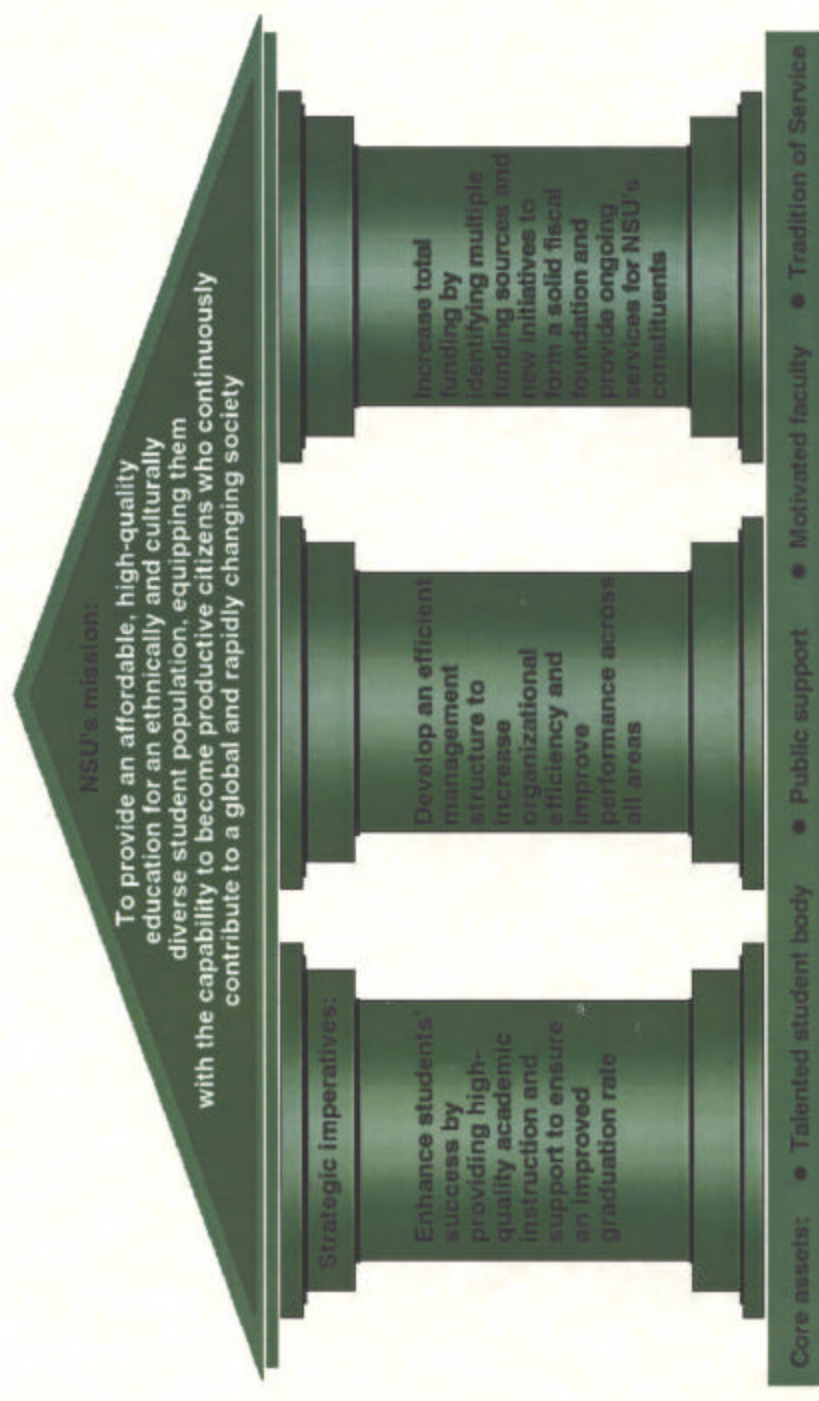
Norfolk State University Campus Map

- KEY FOR VISITORS**
- 1 HARRISON B. WILSON HALL (ADMINISTRATION BUILDING)
 - 2 PRESIDENT'S HOUSE
 - 3 L. DOUGLAS WILDER PERFORMING ARTS CENTER
 - 4 FINE ARTS BUILDING
 - 5 CENTRAL STORAGE/MAINTENANCE/MOTOR POOL BUILDING
 - 6 TENNIS COMPLEX
 - 7 SAMUEL E. SCOTT — Men's Residence Hall
 - 8 WEST CAMPUS CENTER
 - 9 ROY A. WOODS SCIENCE BUILDING
 - 10A ALEXANDER HALL — Women's Residence Hall
 - 10B TWIN TOWERS NORTH, BARBARETTE B. SMITH — Women's Residence Hall
 - 10B TWIN TOWERS SOUTH — Men's Residence Hall
 - 11 PHYLLIS WHEATLEY — Residence Hall
 - 12 BRAMBLETON RECREATION CENTER
 - 13 WILLIAM E. ROBINSON, SR. TECHNOLOGY BUILDING
 - 14 JAMES A. BOWSER INDUSTRIAL EDUCATION BUILDING



- 15 UNIVERSITY POLICE — VISITOR PARKS
- 16 LYMAN B. BRIDGES LIBRARY
- 17 SOFTBALL FIELD
- 18 BASEBALL FIELD
- 19 WHITE HOUSE
- 20 G.W.C. BROWN MEMORIAL HALL
- 21 SCOTT DOUGHER DINING HALL
- 22 MILES & GODWIN STUDENT CENTER
- 23 JAMES G. GILL HEALTH & PHYSIOLOGY BUILDING
- 24 JAMES G. GILL HEALTH & PHYSIOLOGY BUILDING
- 25 J. HUGO MADISON HALL
- 26 NURSING EDUCATION BUILDING
- 27 ROY A. WOODS SCIENCE BUILDING
- 28 TICKET OFFICE
- 29 JOSEPH G. ECHOLS MEMORIAL HALL
- 30 PINECAMP AREA
- 31 NORFOLK COMMUNITY HOSPITAL (STUDENT HEALTH CENTER)
- 32 CHARLES H. SMITH — Men's Residence Hall
- 33 MIDHOUSE — Women's Residence Hall
- 34 MER W. SMITH — Men's Residence Hall
- 35 SENATOR CENTER

Norfolk State's Leadership Vision



IMPORTANT INFORMATION REGARDING THE UNIVERSITY CATALOG

Policies regarding the enrollment of degree seeking (matriculated) students at Norfolk State University are listed below:

All students will follow the curriculum and the degree completion requirements specified in the University Catalog issued for the year of their initial enrollment as degree seeking students.

The University will honor degree completion requirements specific for students in the University Catalog for the year of initial enrollment, as long as such enrollment is continuous (summer semesters not included).

A student who does not maintain continuous enrollment (summer semesters not included) will follow the degree completion requirements specified in the University Catalog issued the year of re-enrollment.

Any student under any degree program who has re-enrolled in the University after interruptions of more than two semesters will be required to apply for readmission and meet the requirements of the current catalog.

A student who transfers to another degree program will follow the requirements specified in the University Catalog issued for the year of the transfer into the new degree program.

Students are held individually responsible for reading and complying with the University policies contained in the Catalog.

The Catalog is not an unchangeable contract but, instead, an announcement of present policies only. Implicit in each student's enrollment is an agreement to comply with University rules, policies, and regulations that the University may modify to exercise properly its educational responsibility.

AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY POLICY

It is the policy of Norfolk State University to provide equal educational opportunity, equal employment without regard to race, color, national origin, political affiliation, religion, sex, age, or disability. Any employee or student who feels discriminated against should be referred to the Ombudsperson.

STUDENT RIGHT-TO-KNOW ACT

Disclosure: Information pertaining to this Act is available in the Office of the Registrar and the Office of Institutional Research.

Academic Calendar Fall Semester 2004

Faculty/Staff/School/Department Meetings, Faculty Information Workshops	Monday, August 16
Departmental Counseling & Registration	Tuesday, August 17 - Friday, August 20
Classes Begin	Saturday, August 21
Late Registration Begins	Monday, August 23
Last Day to Drop a Course and Receive 100% Refund	Thursday, September 2
Fall Convocation	Thursday, September 9
Last Day for Late Registration/Adding Courses or Declaring Audit	Friday, September 3
Labor Day Holiday (No Classes)	Monday, September 6
Last Day to Drop a Course and Receive 50% Refund	Thursday, September 9
Mid-Semester Advisory Examination Period (Grades posted 48 hours after each exam)	Monday, October 11 - Saturday, October 16
Mini-Term 2 (classes begin)	Saturday, October 16
Last Day to Report Mid-Semester Advisory Grades	Tuesday, October 19
Last Day to Drop a Course	Friday, October 22
Exit Examination of Writing Competency	Saturday, October 23
Registration for Spring 2005 Semester	Monday, October 25 - Friday, January 7, 2005
Last Day to Apply for May 2005 Graduation	Friday, November 19
Reading Day	Wednesday, November 24
Thanksgiving Break	Thursday, November 25 - Sunday, November 28
Classes Resume	Monday, November 29
Final Examination for Candidates for December 2004 Graduation	Tuesday, November 30 - Monday, December 6
Classes End	Friday, December 3
(Last Day to Withdraw from the University)	
Final Examination Period (for Continuing Students)	Saturday, December 4 - Friday, December 10
Last Day to Report Final Grades for Candidates for December 2004 Graduation	Wednesday, December 8
Commencement	Saturday, December 11
Faculty Conference	Monday, December 13
Last Day to Report Final Grades (for Continuing Students)	Tuesday, December 14

Note: Academic Calendar dates are subject to change. Visit NSU's Website (www.nsu.edu) for the most recent updates.

Academic Calendar Spring Semester 2005

Faculty/Staff/School/Department Meetings, Faculty Information Workshops	Monday, January 3
Departmental Counseling & Registration	Tuesday, January 4 - Friday, January 7
Classes Begin	Saturday, January 8
Late Registration Begins	Monday, January 10
Martin L. King, Jr., Holiday (No Classes)	Monday, January 17
Last Day to Drop a Course and Receive 100% Refund	Thursday, January 20
Last Day for Late Registration/Changing Class Schedules or Declaring Audit	Friday, January 21
Last Day to Drop a Course and Receive 50% Refund	Thursday, January 27
Mid-Semester Advisory Examination Period (Grades posted 48 hours after each exam)	Monday, March 7 - Saturday, March 12
Mini-Term 2 (classes begin)	Saturday, March 5
SPRING VACATION	Monday, March 14 - Sunday, March 20
Last Day to Report Mid-Semester Advisory Grades	Tuesday, March 15
Last Day to Drop a Course	Friday, March 25
Registration for Summer and Fall 2005 Semester	Monday, March 28 - Friday, August 26
Last Day to Apply for December 2005 Graduation	Friday, April 1
Exit Examination of Writing Competency	Saturday, April 2
Final Examination for Candidates for May 2005 Graduation	Monday, April 25 - Saturday, April 30
Classes End (Last Day to Withdraw from the University)	Friday, April 29
Final Examination Period (for Continuing Students)	Saturday, April 30 - Friday, May 6
Last Day to Report Final Grades for Candidates for May 2005 Graduation	Tuesday, May 3
Alumni Banquet for Senior Class	Friday, May 6
Commencement	Saturday, May 7
Faculty Conference	Monday, May 9
Last Day to Report Final Grades (for Continuing Students)	Tuesday, May 10

Note: Academic Calendar dates are subject to change. Visit NSU's Website (www.nsu.edu) for the most recent updates.

Academic Calendar Fall Semester 2005

Faculty/Staff/School/Department Meetings, Faculty Information Workshops	Monday, August 15
Departmental Counseling & Registration	Tuesday, August 23 - Friday, August 19
Classes Begin	Saturday, August 20
Late Registration Begins	Monday, August 22
Last Day to Drop a Course and Receive 100% Refund	Friday, August 26
Last Day for Late Registration/Adding Courses or Declaring Audit	Friday, August 26
Labor Day Holiday (No Classes)	Monday, September 5
Last Day to Drop a Course and Receive 50% Refund	Thursday, September 1
Fall Convocation	Thursday, September 8
Mid-Semester Advisory Examination Period (Grades posted 48 hours after each exam)	Monday, October 3 - Saturday, October 8
Mini-Term 2 (classes begin)	Saturday, October 8
Last Day to Report Mid-Semester Advisory Grades	Tuesday, October 11
Last Day to Drop a Course	Friday, October 14
Exit Examination of Writing Competency	Saturday, October 29
Registration for Spring 2006 Semester	Monday, October 24 - Friday, January 6, 2006
Last Day to Apply for May 2006 Graduation	Friday, November 11
Reading Day	Wednesday, November 23
Thanksgiving Break	Thursday, November 24 - Sunday, November 27
Classes Resume	Monday, November 28
Final Examination for Candidates for December 2005 Graduation	Tuesday, November 29 - Monday, December 5
Classes End	Friday, December 2
(Last Day to Withdraw from the University)	
Final Examination Period (for Continuing Students)	Saturday, December 3 - Friday, December 9
Last Day to Report Final Grades for Candidates for December 2005 Graduation	Wednesday, December 7
Commencement	Saturday, December 10
Faculty Conference	Monday, December 12
Last Day to Report Final Grades (for Continuing Students)	Tuesday, December 13

Note: Academic Calendar dates are subject to change. Visit NSU's Website (www.nsu.edu) for the most recent updates.

Academic Calendar Spring Semester 2006

Faculty/Staff/School/Department Meetings, Faculty Information Workshops	Monday, January 2
Departmental Counseling & Registration	Tuesday, January 3 - Friday, January 6
Classes Begin	Saturday, January 7
Late Registration Begins.....	Monday, January 9
Martin L. King, Jr., Holiday (No Classes).....	Monday, January 16
Last Day to Drop a Course and Receive 100% Refund	Wednesday, January 18
Last Day for Late Registration/Changing Class Schedules or Declaring Audit	Friday, January 20
Last Day to Drop a Course and Receive 50% Refund	Wednesday, January 25
Mini-Term 2 (classes begin)	Saturday, March 4
Mid-Semester Advisory Examination Period (Grades posted 48 hours after each exam)	Monday, March 6 - Saturday, March 11
SPRING VACATION	Monday, March 13 - Sunday, March 19
Last Day to Report Mid-Semester Advisory Grades.....	Tuesday, March 14
Last Day to Drop a Course	Friday, March 24
Exit Examination of Writing Competency.....	Saturday, March 25
Registration for Summer and Fall 2006 Semester	Monday, March 27 - Friday, August 25
Last Day to Apply for December 2006 Graduation	Friday, March 31
Final Examination for Candidates for May 2006 Graduation	Monday, April 24 - Saturday, April 29
Classes End (Last Day to Withdraw from the University)	Friday, April 28
Final Examination Period (for Continuing Students).....	Saturday, April 29 - Friday, May 5
Last Day to Report Final Grades for Candidates for May 2006 Graduation	Tuesday, May 2
Alumni Banquet for Senior Class	Friday, May 5
Commencement	Saturday, May 6
Faculty Conference.....	Monday, May 8
Last Day to Report Final Grades (for Continuing Students).....	Tuesday, May 9

Note: Academic Calendar dates are subject to change. Visit NSU's Website (www.nsu.edu) for the most recent updates.

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GENERAL INFORMATION**HISTORY OF THE UNIVERSITY**

Norfolk State College was founded in 1935. The College, brought to life in the midst of the Great Depression, provided a setting in which the youth of the region could give expressions to their hopes and aspirations. At this founding, it was named the Norfolk Unit of Virginia Union University. In 1942, the College became the independent Norfolk Polytechnic College, and two years later an Act of the Virginia Legislature mandated that it become a part of Virginia State College.

The College was able to pursue an expanded mission with even greater emphasis in 1956 when another Act of the Legislature enabled the institution to offer its first Bachelor's degree. The College was separated from Virginia State College and became fully independent in 1969. Subsequent legislative acts designated the institution as a university and authorized the granting of graduate degrees. In 1979, university status was attained.

Today, the University is proud to be one of the largest predominantly black institutions in the nation. Furthermore, it is committed to pursuing its vital role of serving the people of the Hampton Roads area.

MISSION STATEMENT

Norfolk State University's Mission is to provide an affordable, high-quality education for an ethnically and culturally diverse student population, equipping them with the capability to become productive citizens, who continuously contribute to a global and rapidly changing society.

Strategic imperatives:

- Enhance students' success by providing high-quality academic instruction and support and ensure an improved graduation
- Develop an efficient management structure to increase organizational efficiency and improve performance across all areas
- Increase total funding by identifying multiple funding sources and new initiatives to form a solid fiscal foundation and provide ongoing services for NSU's constituents

Core assets:

- Talented student body
- Public support
- Motivated faculty
- Tradition of service

INSTITUTIONAL GOALS

Institutional goals are derived directly from the mission statement and represent the direction the University intends to pursue over the decade.

1. The University shall continue to define those areas in which it can make the most effective contributions to the total educational enterprise of the community, state, nation, and the world.
2. The University shall continue to utilize its assembled expertise in research and public service to develop programs specifically related to urban needs.
3. The University shall continue to develop its management capability in order to provide adequate, efficient, and timely services to its constituents.
4. The University shall continue to maintain an environment which encourages its graduates to assume leadership roles in the community, state, nation, and world.

ACCREDITATION AND AFFILIATIONS

Norfolk State University is accredited by the Commission of Colleges of the Southern Association of Colleges and Schools, (1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone number 404-679-4501) to award the associate, baccalaureate, masters' and doctoral degrees.

Undergraduate and graduate programs at Norfolk State University which are accredited and the accrediting agencies are listed on the following page:

SCHOOL'S ACCREDITING AGENCIES

School of Liberal Arts

Bachelor of Arts in Journalism

Accrediting Council on Education in Journalism and
Mass Communication

Bachelor of Science in Mass Communication

Accrediting Council on Education in Journalism and
Mass Communication

Bachelor of Music in Music

National Association of Schools of Music (NASM)

Master of Music in Music

National Association of Schools of Music (NASM)

Psy.D in Clinical Psychology

American Psychological Association

Bachelor of Science in Nursing

National League of Nursing

National League for Nursing Accrediting Commission

Bachelor of Science in Chemistry

American Chemical Society

Bachelor of Science in Computer Science

Computer Science Accreditation Commission of
the Computing Sciences Accreditation Board

Bachelor of Science in Food Science and Nutrition

American Dietetics Association

School of Business

All Programs (Except Tourism and Hospitality Management)

AACSB International—The Association to Advance
Collegiate Schools of Business

Bachelor of Science in Medical Technology

National Accrediting Agency for Clinical Laboratory
Sciences

School of Education - All Programs

National Council for Accreditation of Teacher Education
(NCATE)

Approved by State Board of Education, Commonwealth
of Virginia

Bachelor of Science in Exercise Science

American Kinesiotherapy Association

Bachelor of Science in Building Construction Technology

Bachelor of Science in Computer Integration Design

Bachelor of Science in Computer Technology

Bachelor of Science in Electronics Technology

National Association of Industrial Technology

Bachelor of Science in Technology Education

National Council of Accreditation of Teacher Education

School of Science and Technology

Associate of Science in Nursing

National League of Nursing

National League for Nursing Accrediting Commission

School of Social Work

Master of Social Work

Council on Social Work Education

Bachelor of Social Work

Council on Social Work Education

Other Affiliations

Other affiliations of the University include membership in the Administrative Management Society; American Alliance for Health Education, Recreation, Physical Education and Dance; American Association for Affirmative Action; American Association of Colleges of Nursing; American Association of Collegiate Registrars and Admissions Officers; American Association of State Colleges and Universities; American Council of Construction Education; American Public Health Association; American Society of Engineering Education; American Society of Manufacturing Engineering Association for Continuing Higher Education; Association of American Colleges; Association of Governing Boards of Universities and Colleges; Association of Information Systems Professionals; Association of Virginia Colleges; Central Intercollegiate Athletic Association; College Placement Council; Council for Advancement and Support of Education; Council of Social Work Education; Intercollegiate Music Association; and Mid Atlantic Association for School, College and University Staffing.

The University is also a member of the National Alliance of Business College/Industry Relations, Cluster Program, National Association for Equal Opportunity in Higher Education, National Association for Intercollegiate Athletics, National Association for the Health Professions, National Association of College Admissions Counselors, National Association of Student Personnel Administration, National Business Education Association, National Center for Allied Health Leadership, National Collegiate Athletic Association, National League of Nursing, Norfolk Chamber of Commerce, Southern Association of Collegiate Registrars and Admissions Officers, Southern College Placement Association, Inc., Southern Regional Education Board, Southern Region II, ALAW, Virginia Association of Allied Health, Virginia Association of College Nursing, and Virginia Public Health Association.

DIVISION OF STUDENT AFFAIRS

Larry Curtis, Vice President for Student Affairs
(757) 823-8141

CAREER SERVICES

Career Services, located in Room 306/311 Mills E. Godwin, Jr. Student Center, provides students with a comprehensive array of career services. Career Services is responsible for the overall planning, development, and implementation of the University's career services program for students and alumni.

Services include:

1. Identifying and developing employment opportunities.
2. Preparing students to conduct a successful job search. Job search assistance is provided in writing resumes, conducting job interviews, and developing a career network.
3. Directing/coordinating campus-wide career activities.
4. Serving as the University's principal point of contact with employers.

Students register with Career Services to receive all of the services available. Registration and maintenance of a credential file with the office is recommended for seniors seeking employment in career positions upon graduation.

COUNSELING CENTER

The Counseling Center provides a range of counseling services for Norfolk State University students. Counseling services are free of charge to students. The Center provides professional help that includes individual and group counseling, crisis intervention, and educational outreach programming. Further, counselors are available to consult with students, parents and staff about various student life issues.

Difficulties in adjusting to university life, depression, troubled relationships, and inability to manage stress are some of the reasons that students have used counseling services. When a crisis occurs, counselors meet with affected community members to provide support and counseling. Crisis counseling is available to students 24 hours a day.

The Counseling Center staff includes both male and female counselors. All staff are trained and experienced in dealing with issues facing University students. Graduate students working under close supervision also provide counseling services.

Appointments to meet with a counselor can be made by phone or in person. Individuals attending counseling are assured confidentiality. For further information, please visit the Counseling Center in the Mills E. Godwin Student Center, Room 309, or call (757) 823-8173.

SUBSTANCE ABUSE SERVICES

The Counseling Center coordinates Norfolk State University's substance abuse services. The staff is prepared to respond effectively in a caring manner to students affected by alcohol and other drug use, including their own use or that of their loved ones. Substance abuse education and prevention programs are also implemented by the Counseling Center, including National Alcohol Screening Day.

SUPPORTING STUDENTS THROUGH DISABILITY SERVICES (SSDS)

SSDS at Norfolk State University is committed to compliance to the law as designated in Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990.

The program provides services to currently enrolled students with documented disabilities, including physical, psychological, traumatic head injuries, learning disabilities and other health concerns.

Admission to Norfolk State University is based solely on the entrance requirements as described in the college catalog. Disclosure of a disability during the admissions process is not required. Neither the nature nor the severity of an individual's disability is used as a criterion for admission.

Students with disabilities who are planning to apply for admission to the University are encouraged to contact the SSDS office as soon as possible to determine if the University can accommodate a particular disability. Once accepted and enrolled, students requiring adjustments to buildings or classes, should contact the SSDS office at least forty-five (45) days prior to the beginning of class in order to allow time for adjustments to be made. SSDS cannot ensure that accommodations be made in a timely fashion with less notification.

Please note that services are also provided to persons with temporary disabilities acquired as a result of surgery, illness or injury. Written documentation of the disability (whether temporary or permanent) from a qualified professional is required before accommodations can be implemented.

For additional information, please contact the SSDS office located in the L. Beecher Brooks Library, Room 240, or call (757) 823-2014/2409.

INTERNATIONAL STUDENT AND SCHOLAR SERVICES

The Office of International Student and Scholar Services serves to assist international students and scholars with all matters related to immigration as well as to promote international education and intercultural understanding. The office disseminates information and acts as a referral source for students, staff, faculty, and the community. Services include advising students, scholars and faculty; processing immigration petitions; and serving as a liaison between the student or scholar and governmental agencies.

We are located within the Office of Student Affairs at 330 Harrison B. Wilson Hall. Hours of operation are 8 a.m. - 5 p.m., Monday – Friday.

SUGGESTED GUIDE FOR STUDENT ADJUSTMENT

Services and guidance in areas of student adjustment are afforded to assist students in developing priorities and sound bases for decision making. Certain latitudes of operation are provided to help students assume and demonstrate adult responsibility.

CLASS ATTENDANCE A student is expected to attend all classes. The student assumes full responsibility for losses incurred because of absences. Instructors may permit students to make up work missed. (See Class Attendance Policy on Page 30)

UNIVERSITY ASSEMBLY: University Assembly represents a series of programs planned for college wide concerns. These programs are restricted in frequency. Since these programs are designed to communicate major concerns of the University, students are urged to attend and participate. Some programs may require compulsory attendance.

PARKING SERVICES: Vehicle registration is required for all automobiles using established parking areas on campus. Shuttle bus service is also operated within Parking Services and is available free of charge to the campus community. Shuttle stop signs are located throughout the campus, and buses run every 10-15 minutes.

Decal fees, parking passes and all parking/transportation inquiries should be directed to the Office of Parking and Transportation Services at 823-2211/2212. The office is located in Suites 125-126, Spartan Station Mall.

WITHDRAWAL: Whenever it becomes necessary to discontinue enrollment, students are required to secure "withdrawal forms" from their advisor/department head. Official withdrawal is essential to ensure that one's academic record is not jeopardized and that financial matters are properly phased out. Failure to properly withdraw may hamper readmission or the possibility of transfer to another college or university.

GENERAL DECORUM: Students are encouraged and expected to conduct themselves in an acceptable and professional manner that reflects personal pride, dignity and respect. Care should be taken to demonstrate appropriate grooming habits and conduct that will bespeak a positive sense of direction and competitiveness.

DISCIPLINE: The Office of the Vice President for Student Affairs is responsible for the overall administration of the student judicial system. Students are expected to conform to all regulations and procedures published in the Student Disciplinary Policies and Procedures Handbook which may be secured from the Office of Student Services/Judicial Affairs, Room 325, Godwin Student Center. Students are responsible for respecting and complying with all laws and rights of good citizenship.

NOTE The University has an extensive program involving speakers and performers who are invited to the campus by various University organizations. Sponsorship of guest speakers and performers does not necessarily imply approval or endorsement of views expressed, either by the sponsoring group(s) or the University.

STUDENT CENTER

The Mills E. Godwin, Jr. Student Center is an integral part of the University community. It exists for all members of the University family - students, faculty, alumni, and their guests. The Center provides for the cultural, educational, recreational, and social needs of the University. We urge all persons using the facility to observe socially acceptable standards of conduct.

The Center is the focal point of student activity on campus. It serves primarily as a facility to be used by the University community in the furtherance of cultural, social, and recreational programs of various kinds.

The Center Policy Board, which meets monthly, is comprised of students, faculty, and staff. The Program Committee plans and coordinates cultural, social, and recreational programs and activities for the University family.

STUDENT HEALTH SERVICES

Student Health Services are provided by Campus Health Services, which is located in the Spartan Station.

The basic health services provided under the student health program include diagnosis and treatment of minor illnesses and injuries; certain over the counter medication; supervised care in designated observation beds; selected medical supplies; general and emergency medical services; health education counseling, maintenance of immunization/health history records, forums, and materials on preventive health and other health and mental health related areas; and injections of allergy serum provided to the students at their own expense. The Center is staffed with highly skilled health care professionals, specializing in medical, surgical, family practice, gynecology, and emergency care.

The costs for the health care services listed above are paid by the University for students who are enrolled full-time. Costs incurred for care which exceeds the services listed above must be paid by the student or by his or her private health insurance. The University offers supplemental health insurance for interested students. Students are encouraged to purchase health insurance to cover medical needs.

STUDENT SUPPORT SERVICES

Student Support Services is a federally-funded program, providing a variety of supportive services for eligible program participants enrolled at Norfolk State University.

Program participants are selected by meeting one or more of the following criteria:

1. Low-income
2. First generation
3. Academic deficiency
4. Physical disability

The program provides for its participants tutorial services, skills development, counseling, cultural and educational enrichment activities, and numerous other support services in order to increase student retention and graduation from Norfolk State University.

STUDENT ACTIVITIES

The Office of Student Activities is responsible for the coordination and implementation of a creative, responsive, and diverse co-curricular program at Norfolk State University.

It is the goal of Norfolk State University to develop an individual who not only has mastered the content of his/her academic courses, but also has wide interests and skills in interpersonal relations. To aid in the formation of these added skills, the University promotes a wide range of student organizations and activities. Students are encouraged to take an active interest in the various academic, social, dramatic, debating, and religious activities.

OFFICIALLY RECOGNIZED STUDENT ORGANIZATIONS

DEPARTMENTAL ORGANIZATIONS

Accounting Association
American Physics Society
Association of Concerned Sociologists
Biology Society
Chemistry Club
DNIMAS Student Association
Early Childhood Education Club
Economics Club
English & Foreign Language Majors Club
Entrepreneurship Club
Finance & Banking Club
Fine Arts Guild
Health Services Management Association
History Club

Hotel, Restaurant & Institutional Management Club
Mass Communications Student Association
Marketing Club
Mathematics Club
Health Information Management Student Association
Medical Technology Society
Physical Education/Exercise Science Club
Physics & Engineering Club
Political Science Association
Psychology Club
Sociology Club
Spanish Club
Technology Education Association
Whitney Young Social Work Club

PROFESSIONAL DEPARTMENTAL ORGANIZATIONS

American Production and Inventory Control Society
Association of Black Journalist
Associated General Contractors of America
Association of Information Technology Professional
ASM/TMS Student Chapter
International Technology Education Collegiate Association
National Broadcasting Society
Optical Society of America
National Student Speech, Language, Hearing Association

Pre-Medical Society
Public Relations Student Society of America
Society for the Advancement of Management
Society of Manufacturing Engineers
Student Affiliate of The American Chemical Society
Student In Free Enterprise
Student National Technical Association
Student Nurses Association
Student Virginia Education Association
Thurgood Marshall Pre-Law Club

FRATERNITIES, SORORITIES, AND SOCIAL CLUBS

*Alpha Phi Alpha Fraternity, Inc.
*Iota Phi Theta Fraternity, Inc.
*Kappa Alpha Psi Fraternity, Inc.
*Omega Psi Phi Fraternity, Inc.
*Phi Beta Sigma Fraternity, Inc.
*Alpha Kappa Alpha Sorority, Inc.
*Delta Sigma Theta Sorority, Inc.
*Sigma Gamma Rho Sorority, Inc.
*Zeta Phi Beta Sorority, Inc.
**Groove Phi Groove Fraternity, Inc.
**Kappa Kappa Psi Fraternity, Inc.

**Malik Sigma Psi Fraternity, Inc.
**Pershing Rifles Fraternity, Inc.
**Phi Delta Psi Fraternity, Inc.
**Pi Mu Alpha Sinfonia Fraternity, Inc.
**Pi Gamma Psi Fraternity, Inc.
**Chi Eta Phi Sorority, Inc.
**Gamma Psi Theta Sorority, Inc.
**Kappa Omicron Tau Sorority, Inc.
**Pershing Angels Sorority, Inc.
**Tau Beta Sigma Sorority, Inc.

*Member of Pan Hellenic Council

**Council of Independent Organizations

HONOR SOCIETIES

Alpha Kappa Delta (Sociology)
 Alpha Delta Mu (Social Work)
 Alpha Kappa Mu Honor Society
 Beta Gamma Sigma (Business)
 Beta Kappa Chi National Scientific
 Beta Phi
 DNIMAS
 Epsilon Tau Sigma
 Golden Key International Honor Society

Kappa Delta Epsilon (Education)
 Kappa Omicron Nu
 NSU Honors Program
 Psi Chi (Psychology)
 Phi Alpha Theta (History)
 Pi Sigma Alpha
 Sigma Tau Delta (English)
 Spartan Alpha Tau

LITERARY SOCIETIES/PUBLICATIONS

Lyman B. Brooks Debating Society
 Rhetorician

Spartan Echo (Newspaper)
 Spartan Reflections (Yearbook)

SPECIAL INTEREST CLUBS

AME Fellowship, Inc.
 American Chemical Society
 Association of Black Communicators
 Association of General Contractors of America
 Banking & Finance Club
 Baptist Student Union
 Caribbean Student Association
 Cheerleaders
 Chess Club
 Circle K International Club
 Collegiate Secretaries International
 Concert Choir
 Consumer Services & Family Studies
 Data Processing Management Club
 Food Science and Nutrition Club
 French Club
 Gospel Choir
 Graduate Student Association
 Honda All-Star Campus

International Students
 Music Educators National Conference
 National Association for the Advancement
 of Colored People (NAACP)
 National Council of Negro Women Association
 National Society of Black Student Engineers
 Pre-Alumni Club
 Residence Hall Student Association
 Spartan Legion Marching Band
 Student Ambassadors
 Student Standing 4 Sickle Cell & HIV-AIDS
 Taekwondo Club
 University Dance Theatre
 University Players
 Wesley Westminster
 World Changers
 Young Democrats
 Young Republicans

ATHLETIC PROGRAM**VARSITY**

The Department of Athletics is comprised of seventeen (17) varsity sports: baseball, women's softball, basketball (men and women), football, cross country (men and women), track and field (men and women), indoor track (men and women), volleyball (women), tennis (men and women), and bowling (women).

Athletics constitutes an integral part of the campus community. It is the goal of athletics to provide unifying activities, which will contribute to the morale and spirit of the larger community as well as to the institution itself.

The Department of Athletics is a member of the National Collegiate Athletic Association (NCAA) and the Mid-Eastern Athletic Conference (MEAC).

THE INTRAMURAL PROGRAM

The Intramural Program at Norfolk State University provides opportunities for students, both male and female, to participate in individual and team sports activities on a regular basis. More specifically, it is the aim of the program to provide students the opportunity to:

1. Promote better health through exercise,
2. Make social contacts and friendships which could not readily be developed in the classroom,
3. Develop sportsmanship of the highest order, and
4. Learn important values developed through team spirit and cooperation.

The program of competitive intramural activities includes tennis, coeducational volleyball, basketball, football, etc. Students who do not ordinarily take part in sports are encouraged to participate and enjoy some type of physical activity. Since education should lay the foundation for lifetime habits, the skills acquired in the intramural program should motivate sports participation for a lifetime.

STUDENT GOVERNMENT ASSOCIATION

Through membership in the Student Government Association, all enrolled students participate in the government of the University. The purposes of the Association are to develop a spirit of cooperation in the activities affecting the University; to afford development through self expression, self control, and leadership; to encourage student initiative, and to act as an intermediary between the administration and students in matters of general welfare.

Decisions rendered by the Student Government Association are subject to the approval of the Executive Council.

RESIDENTIAL LIFE

ON-CAMPUS HOUSING

The residence halls are located on the east and west sides of the campus. Currently, University housing is not available to married or graduate students. Rooms are furnished with beds, closets, desks, dressers, and chairs. Students must provide their own linen (sheets, pillows, pillow cases, blankets and mattress covers). Each residence hall is supervised by the residence hall staff. The Residence Hall Student Association, consists of elected student representatives from each residential hall who assist residence hall staff in meeting the needs of residential students.

The dining halls, which are conveniently located to the residence halls, provide meals for student residents as a part of the Residence Hall Contract. Under the terms of the contract, meals are provided during periods when the University calendar indicates that the institution is officially open.

Housing information, applications, and current schedules will be sent to all students upon acceptance for admission to the University.

RESIDENCE HALL PROGRAM

The residence halls are a vital part of student life at Norfolk State University. Programs are designed to meet the needs of the residents and to create a meaningful living and learning environment that both challenges and supports the personal, social, recreational, cultural, and academic development of all residents.

OFF-CAMPUS HOUSING

The University has an off-campus housing referral listing to aid students in finding privately owned accommodations. Referrals are available in the Housing Office. Information is available about rooms, houses, and apartments that are available to students. Contracts or agreements are private matters between the student and landlord and not Norfolk State University. Students are urged to make living arrangements well in advance of the date that classes begin.

VETERAN AFFAIRS

The Veteran Affairs Office provides registration for VA benefits, counseling, and general assistance in admission to the University to veterans, dependents, active duty, and reservists.

Students enrolling under the Educational Assistance Program in accordance with the laws administered by the Department of Veterans Affairs may enroll in the degree programs offered by the University.

Norfolk State receives tuition payments for veterans under the Veterans Vocational Rehabilitation Program. However, all other students must make payments according to the schedule of fees or apply for advance pay 120 days prior to the semester.

UNDERGRADUATE ADMISSIONS

GENERAL ADMISSIONS POLICIES AND REQUIREMENTS

Norfolk State University fulfills its mission to provide opportunities for higher education for all people regardless of their socioeconomic status, race, sex, age, religion, or national origin by identifying and accepting students with academic promise.

Norfolk State University seeks to admit in-state and out-of-state applicants whose education, preparation, aptitude, achievement, and motivation combine to indicate a reasonable probability of success in one or more of the University's schools.

The University makes an effort to maintain a diverse student population because of the benefits that accrue to all students and to the entire educational process. Further, the University reserves the right to base individual admission in any given year upon a variety of factors, including the number of applicants for available spaces. The standards in some programs may exceed the minimum University requirements because of space limitations, resources, and program design.

ADMISSIONS CRITERIA

1. The admissions criteria for Norfolk State University hereby stipulate that the applicant must have graduated from an accredited high school with a minimum grade point average of at least 2.0 on a four-point grading scale. Applicants must have a high school diploma or its equivalent. A "program completer" status is not equivalent to a high school diploma.
2. The applicant must submit minimum Scholastic Aptitude Test (SAT) scores or American College Testing (ACT) scores of 800 (17 ACT) when under 21 years of age.

3. The applicant should have a minimum total of 22 units distributed as follows:

English	4	Health & Physical Education	2
Mathematics*	3	Fine Arts or Practical Arts	1
Science	3	Electives	6
History and Social Sciences	3	TOTAL	22 Units

*Algebra I, Geometry, Algebra II recommended

- The applicant must submit a medical history form signed by the student and a physician prior to the end of the first semester of enrollment.
- Students with a high school equivalency diploma will be considered upon the successful completion of the General Education Development (GED) test with a minimum score of 250. GED graduates may be subject to the requirements outlined above. The University is interested in the quality of the applicant's academic preparation and the various indicators of overall promise as a student.
- The applicant must submit two letters of recommendation.

APPLYING AS A FIRST-TIME FRESHMAN

When applying for admission as a freshman, the applicant must provide the followings:

- An application completed in full and a \$25 non-refundable application fee payable by certified check or money order or an official fee waiver
- An official high school transcript forwarded by applicant's high school. It is the student's responsibility to ensure that final grades are sent immediately following graduation
- SAT/ACT scores when 21 years of age or under
- An official report of test results issued by the General Education Development (GED) testing center if applicable
- Two letters of recommendation
- \$100 non-refundable enrollment deposit following acceptance.

*Home schooled applicants are required to submit a transcript of units completed and grades earned, SAT/ACT scores, two letters of recommendation, an application completed in full, and a \$25 non-refundable fee.

REQUIREMENTS FOR ADMISSION TO SPECIFIC PROGRAMS

ADMISSION TO THE SCHOOL OF BUSINESS

First-time freshmen and transfer students who are classified as freshmen or sophomores are admitted into the lower division of the School of Business. Upon the completion of the freshman or sophomore level courses and a minimum grade point average of 2.0, students are admitted into the upper division of business course work. For other requirements contact the School of Business.

ADMISSION TO THE NURSING PROGRAM

Admission to the programs in the Department of Nursing is competitive and based on criteria which include completion of either high school or college prerequisites, demonstrated ability in mathematics and the natural sciences, minimal grade point average in previous academic work, and other requirements as specified in materials which can be obtained directly from the Department of Nursing.

PARTNERSHIP FOR ACADEMIC AND STUDENT SUCCESS (PASSport)

Norfolk State University and Tidewater Community College have created The Partnership for Academic and Student Success (PASSport) to help students who want to attend NSU to become more academically prepared for collegiate work prior to enrolling at NSU. The purpose of the program is to provide access and support to promising students who do not initially qualify for enrollment at NSU.

Please call the Office of Admissions (757-823-8396) for additional information regarding the selection process.

REQUIREMENTS FOR TRANSFER STUDENTS

- Official transcripts from all colleges attended must be submitted. Transfer students must be in good standing at the last school attended and must have a minimum cumulative grade point average of 2.0.
- The Office of Admissions makes the final determination concerning the acceptance of transfer credits from each college or university attended. Transfer credit may be accepted for course work with a grade of "C" or better from regionally accredited institutions of higher learning in accordance to established guidelines. Additional information about transfer credit is provided in the next section.
- Applicants must submit two copies of the advanced standing to their advisor for review and approval.
- High school transcripts are required if fewer than 15 semester hours are transferred.
- Medical history prior to the end of the first semester of enrollment.

TRANSFER CREDIT

The Office of Admissions makes the final determination concerning acceptance, after all transcripts from each college attended have been received and reviewed. Transfer credit is accepted for coursework with a grade of "C" or above from regionally accredited institutions of higher learning. Courses taken on a pass/fail basis may be considered for transfer credit if the official college or university transcript or official attachments, thereto, indicate that a passing grade is equivalent to a grade of "C" or better.

No more than 30 pass/fail semester credit hours may be considered for transfer credit. Academic departments will make the final determination of credits accepted toward the chosen curriculum.

OTHER SOURCES OF TRANSFER CREDIT

Additional transfer credits may be obtained in the following ways:

1. Advanced Placement Examinations

Students who attain scores of 3, 4, or 5 on the Advanced Placement Examinations administered by the College Entrance Examination Board are eligible to receive credit on the basis of these tests. Scores should be forwarded directly from the College Board to the University. Information concerning the College Board Advanced Placement Examinations may be obtained from the Educational Testing Service, Princeton, New Jersey, or from your high school counselors and teachers. All AP scores must be sent to the Office of Admissions prior to enrollment.

2. College Level Examination Program

Students who attain satisfactory scores on the Subject Examinations of the College Level Examination Program (CLEP) under the auspices of the College Entrance Examination Board are eligible to receive credit on the basis of such tests. However, the CLEP examination must be completed prior to or during enrollment at Norfolk State. Students should check with their advisor to ensure acceptability into the curriculum. Students applying for CLEP credit must have scores sent directly to the Office of the Registrar, Norfolk State University, 700 Park Ave., Norfolk, VA 23504. (Military service veterans who took CLEP, as part of the DANTES program, must have CLEP scores reported directly to the University from DANTES.)

Selected CLEP Subject Examinations are offered nationwide monthly at national test centers. CLEP registration materials may be obtained from national test centers, from the Educational Testing Service, Princeton, New Jersey, or from the Assessment Center, Norfolk State University.

3. American College Testing Proficiency Examination Program (ACT PEP)

Students seeking admission to the Baccalaureate Program in Nursing for Registered Nurses and who are not recent graduates of an articulating institution may receive 34 hours of lower level nursing credits through the use of ACT PEP. These examinations may be taken at centers throughout the nation. For more information contact the Department of Nursing.

4. Credit for Military Service

Honorably discharged veterans of the United States Armed Forces may be allowed credit for military science and certain courses in health and physical education upon presentation of the Report of Transfer or Discharges (DD 214) to the Admissions Office. These forms should be submitted prior to the first semester of enrollment.

5. Credit for Military Service Schools

Additional credit may be granted for service schools where equivalence in terms of college courses has been recommended for college credit in the Guide to the Evaluation of Educational Experience in the Armed Services, published by the American Council on Education. Appropriate documents must be submitted to the Office of Admissions or the Office of the Registrar for an evaluation of these credits.

6. Virginia Community College System Articulation Agreements

Students transferring from a Virginia community college to Norfolk State University having completed an associate's degree may be granted junior status. Please see the academic area for the listing of these agreements or the Transfer Brochure.

7. International Baccalaureate Exams

Students who attain scores of 4, 5, 6, or 7 on International Baccalaureate examinations (IB) are eligible to receive credit on the basis of these tests. All IB scores must be sent directly to the Office of Admissions prior to enrollment.

ENROLLMENT DEPOSIT FEE

A non-refundable enrollment deposit of \$100 is required of all entering students.

NON-DEGREE STUDENTS

Non-degree status is available to persons who are seeking teacher certification or who do not wish to pursue a degree program at Norfolk State University. Students on academic or disciplinary suspension are ineligible to apply as non-degree. Applicants should be prepared to present official credentials upon request. Financial aid and housing are not available except for students seeking teacher certification. Non-degree status does not guarantee future admission.

Non-degree students will not be considered as candidates for a degree or certificate until all admissions requirements are met and an application for enrollment is made and approved through the Office of Admissions. The University requires that a student apply for a degree program after completing 29 semester hours. Non-degree students are not required to have a letter of Advance Standing. A \$25 non-refundable application fee is required.

INTERNATIONAL STUDENT ADMISSION

International applicants should submit the following items to the Office of Undergraduate Admissions:

1. Completed application
2. \$25 Application Fee
3. Official or certified copies of all academic work and examination results
4. Two letters of recommendations
5. Proof of English proficiency for non-native English speakers

6. SATI or ACT scores for undergraduate applicants under the age of 21
 7. Financial documents, including notarized affidavit of support and student certification form
- Additional documents may be required

Due to the length of time required to obtain U.S. visas, applications for admissions must be received 34 months prior to the semester applicants wish to enroll. The Form I-20 or DS-2019 must be received in a timely manner as all documents must be submitted for review prior to an admission decision.

VIRGINIA IN-STATE TUITION GUIDELINES

ELIGIBILITY FOR IN-STATE TUITION

Listed are requirements for one to be eligible for in-state tuition rates in Virginia. The information is not intended to cover all situations, but to give an individual a basic understanding of the question of domicile.

DOMICILE

To be eligible for in-state tuition rates, students must be domiciled in Virginia for a minimum of one year before the first official day of classes. Domicile is defined as the student's "present, fixed home where the student returns following temporary absences and where he or she intends to stay indefinitely." In essence, domicile has two parts, and the student must meet both to qualify for in-state tuition. The student must reside in Virginia, and the student must intend to keep this as their home indefinitely.

As minors, students have the same domicile as their parents. Once the student becomes 24 years old, he or she can establish a domicile that is different from the parents. However, if a student is over 24 years old and is financially dependent on parents, normally the parents must be domiciled in Virginia before the student will be eligible for in-state tuition benefits.

FACTORS USED TO DETERMINE DOMICILE

The University reviews several factors when determining domicile, including:

1. Residence during the past year prior to the first official day of classes
2. State to which income taxes are filed or paid.
3. Driver's License
4. Motor vehicle registration
5. Voter registration
6. Employment
7. Property ownership
8. Sources of financial support
9. Location of checking or passbook savings account
10. Other social or economic ties with Virginia and other states.

The presence of any or all of these factors does not automatically result in Virginia domicile. The factors used to support a case for in-state tuition benefits must have existed for one year before the first official day of classes.

Residence or physical presence in Virginia primarily to attend a college or university does not entitle students to in-state tuition rates. If a student enters an institution classified as an out-of-state student, that student will be required to provide clear and convincing evidence to refute the presumption that he or she is in the state primarily to attend, and does not intend to stay indefinitely. Applications for change of domicile are available in the Office of Admissions.

All applications and supporting documents must be received in the Office of Admissions prior to the start of the semester in which a change of domicile is sought. Domicile review and appeal procedures may take up to six weeks. If a student's application is pending a decision, the student will be expected to pay out-of-state charges until written approval has been granted by the Domicile Committee.

Copies of the pertinent Virginia statute and guidelines issued by the State Council of Higher Education are on reserve in the University Library. For additional information, contact the Office of Admissions.

DIVISION OF FINANCE AND BUSINESS

Kevin Appleton, Vice President for Finance and Business
(757) 823-8011

The purpose of the Division of Finance and Business is to support the university's teaching and learning environment in the areas of auxiliary services, food services, physical plant, postal services, student accounts and financial aid.

BOOKSTORE

The bookstore is a service element owned by Norfolk State University and operated by Follett College Stores. It is located in the Mills E. Godwin, Jr. Student Center. The bookstore provides the University community with the widest possible selection of goods and services of high quality at competitive prices, with particular attention being paid to academic requirements.

FOOD SERVICES

NSU Dining Services prepares home-style cooked meals for meal plan participants and customers. Meals are served at Scott Dozier Dining Hall & West Dining Hall which are conveniently located for students. Traditional meals also are served in the Faculty Dining Hall located adjacent to Scott Dozier Hall.

NSU Dining Services offers branded retail outlets such as Pizza Hut, Star Bucks Coffee and Sub-Connection. These retail dining areas are conveniently located on campus. The Spartan Station Food Court located at the Student Service Center provides specialty fast food and beverages for staff & students. Also located on the first floor of the Mills E. Godwin Center is the Sub-Connection Grill that prepares fresh sandwiches, and subs daily. NSU Dining Services also sponsors two Campus C-Stores to meet the needs of staff and students. The Starbucks Coffee cart is located in Wilson Hall Administration Building.

Catering services also are provided by NSU Dining Services. It is our commitment to accommodate customers and students with quality products and display incomparable service.

OPERATIONS - PHYSICAL PLANT

The Physical Plant Department provides all services needed to operate and maintain the University's facilities. These services are provided by carpenters, painters, plumber/steam fitters, electricians, A/C mechanics, metal workers, locksmiths, housekeeping workers, grounds persons, laborers, engineers, administrative, and supervisory personnel.

In addition to operating and maintaining the physical plant, this department provides all labor services such as moving and hauling for the entire university community and services for the planning and executing of capital outlay projects and minor renovations and alterations to existing facilities.

POLICE DEPARTMENT

Norfolk State University Police Department has primary responsibility for security on campus. Norfolk State University Police Department's mission is "to promote and maintain personal safety, and physical and environmental security." The department's efforts include preventive measures through education and enforcement, to promote awareness of individual responsibility in safety and crime prevention. Norfolk State University Police Officers are sworn officers empowered and mandated to enforce federal, state and local laws.

Norfolk State University Police Department's security policies and procedures comply with law enforcement regulations as established by the Commonwealth of Virginia and the Department of Criminal Justice Services.

POSTAL SERVICES

The Postal Service provides University faculty, staff and students with quality services when processing official campus and off-campus mail, as well as to provide postage meter service for the University community at the prevailing governmental rates for all classes of mail. Proper mail handling instructions and assistance to University faculty, staff and students is also provided.

INCLEMENT WEATHER

Decisions to close the University due to inclement weather will be made by the Vice President for Finance and Business in consultation with the President and other Vice Presidents. The decision to close Norfolk State University will be communicated by the Director of News & Media Relations via the area's media outlets.

During times of inclement weather (i.e. hurricane, tornadoes, etc.), employees and students can get information on NSU closings and cancellations from the following:

Radio Stations:	Television Stations:
WNSB FM 91.1	WTKR CH 3
WOWI FM 103	WAVY CH 10
WJCD FM 105.3	WVEC CH 13
WHRV FM 89.5 and	WVBT TV 43

For more information on this policy, please call the office of News & Media Relations at (757) 823-8373, the office of Finance and Business at (757) 823-8011 or the office of Risk Management at (757) 823-9142.

FINANCIAL INFORMATION AND SERVICES

OFFICE OF STUDENT FINANCIAL SERVICES

Student Financial Services offers services to students in the following areas:

- Cashier's Office is located in Room 150, Harrison B. Wilson Administration Building. The hours of operation are Monday through Friday from 8:00 a.m. to 4:30 p.m. The Cashiers Office phone number is (757) 823-8381.
- Student Financial Aid Services is located in Harrison B. Wilson Administration Building, Room 130. The hours of operation are Monday through Friday from 8:00 a.m. to 5:00 p.m. The telephone number is (757) 823-8381.
- Student Accounts is located in Harrison B. Wilson Administration Building, Room 140. The hours of operation are Monday through Friday from 8:00 a.m. to 5:00 p.m. The telephone number is (757) 823-8381.

The University recommends that students use one of the local banks for banking needs. An automatic teller machine is located on campus.

Questions pertaining to payment plans, billing, and delinquent accounts should be directed to the Office of Student Accounts.

TUITION AND FEES

Tuition and fees are established annually by the University's governing board, the Board of Visitors. Considerable effort is made to keep increases at a minimum. For fee information, students should obtain a current "Schedule of Tuition and Fees" and "Registration Information and Schedule of Classes" booklet from the Registrar's or Admissions Office located in H. B. Wilson

Administration Building. These documents will include the current tuition, mandatory fees, room, board, and any special instructional fees.

Students who register during late registration will be assessed a late registration fee of \$75.

Books, uniforms, supplies, professional dues, and examination expenses are paid separately from University charges. Students should consult their academic department for an estimate of these costs.

MATRICULATION/ENROLLMENT FEE

All first-time freshmen and transfer students must pay a one-time matriculation fee of \$35.

All first-time and transfer students must pay a \$100 non-refundable enrollment fee once accepted at Norfolk State University. For additional information about the enrollment fee, contact the Office of Admissions at (757) 823-8378.

REGISTRATION PAYMENT DUE DATES

All students are expected to pay prior balances and satisfy current tuition, fee, room and meal costs at the time of registration unless payment arrangements are made and/or awarded financial aid and other scholarships are sufficient to cover the costs.

In the event a student does not satisfy a semester's charges per agreed upon terms, the student will be prevented from registering for future semesters.

DEREGISTRATION

If satisfactory payment arrangements are not made by established due dates, classes will be cancelled. If satisfactory financial arrangements are made before the registration period ends, students must re-register and are subject to late registration fees.

Note: Students run the risk of not being able to re-register for the same class schedule because the class(es) may be closed.

PAYMENT OF TUITION AND FEES

Students should be prepared to satisfy current tuition, fees, room and meal costs through either direct payment, financial aid, or one of the approved payment plans. Financial aid is the amount indicated on an award letter from the Financial Aid Office.

Current academic year Title IV financial aid funds will not be used to cover a prior academic year balance.

Non-University scholarships and work-study are not credited toward tuition and fees until funds are received; however, these awards may be used to establish a payment plan.

Students who register during late registration are expected to pay a late registration fee of \$75. Payment may be made by cash, certified check, cashier's check, personal check, money order, MasterCard, Visa or Discover Card. Checks and money orders should be payable to Norfolk State University and must include student's name or student ID number.

PAYMENT OPTIONS

The University offers several options for paying tuition, fee, room and meal cost.

OPTION 1 Pay tuition cost in full with cash, check, money order, VISA, MasterCard or Discover Card. If mailing payments, please allow for delivery time.

Mail payment to: Cashier's Office
Norfolk State University
700 Park Avenue
Norfolk, Virginia 23504

OPTION 2 Pay with a combination of financial aid grants and Ford Direct Loans, Parent Plus Loan, private loans and cash.

Note: Parent Plus and private loans must be approved by the lender before credit can be given for the loan amount. Apply for financial aid dollars early. The Free Application for Federal Student Aid (FAFSA) can be completed on-line at www.fafsa.ed.gov.

OPTION 3 Pay monthly through the Academic Management Services (AMS) annual or semester monthly payment plans.

Benefits of this plan include:

- * Manageable, interest-free installment payments
- * Reduced need to borrow
- * Tuition Insurance at no extra cost
- * Combine plan with Financial Aid

There are two easy ways to enroll in the AMS Plan.* By Mail: Obtain and complete an AMS Enrollment Form. Forms can be obtained from AMS or Office of Student Accounts.

*By Phone: Call an AMS Education Payment Counselor at (800) 635-0120.

OPTION 4 Pay by selecting the NSU 50% Spartan Payment Plan. The Spartan Plan is a semester only plan and there is a \$50 processing fee. This plan may be selected if the remaining balance, after subtracting awarded financial aid, other scholarships, private loans, work study and deposits are 50% or less of total expenses. Students interested in the NSU Spartan Payment Plan should contact the Office of Student Financial Services at (757) 823-8381.

For balances greater than 50% total expenses, the AMS payment plan may be selected.

Note: The AMS Payment Plan is available to all students.

FINANCIAL AID FOR STUDENTS

The purpose of Norfolk State University's financial aid program is to provide assistance to eligible students who, without such aid, would be unable to attend a university. Aid is awarded on the basis of need. Types of aid include scholarships and grants, loans and employment. Applications and additional information may be obtained at the Office of Student Financial Services.

The University offers a number of awards each year to eligible returning students and to students who have been accepted for admission. Some of these awards are available only to Virginia residents while others are awarded without regard to state residency.

A student must be enrolled at least half time, matriculating in a degree-seeking program or certification, and be in good academic standing in order to be eligible for financial assistance. However, certain programs require a student to maintain a full-time status.

Financial aid is awarded on an annual basis. Students are requested to reapply for financial aid each year and must continue to meet eligibility criteria. The priority deadline for applying for Norfolk State University's administrated financial aid is April 15 for the ensuing academic year.

An entering student must be accepted for admission before receiving a financial aid award offer. Award notifications for on time applicants are normally mailed by June 1.

The information on financial aid contained in this catalog is subject to change or deletion as circumstances warrant.

FINANCIAL AID APPLICATION REQUIREMENTS

To be considered for financial aid, a student must complete and submit all information no later than April 15 preceding the academic year for which application is made. Applications and information received after this date will be reviewed as funds are available. The following information is required:

1. Free Application for Federal Student Aid (FAFSA)

Students are required to complete the FAFSA in order to be considered for a financial aid award. The FAFSA may be obtained at any public library, high school, college, university or any financial aid office, including NSU. The Department of Education has made the FAFSA available on-line at www.fafsa.ed.gov. The FAFSA cannot be signed or mailed until January 1 of the academic year.

2. Verification of Taxable and Non-Taxable Income

Upon request, students and parents may be required to submit a copy of their tax return and W-2 form(s). Non taxable income such as social security, veteran's benefits, Aid to Dependent Children, etc., must be verified by submitting a written statement from the agency of certification. Students and parents with zero incomes must submit a notarized statement indicating such.

3. Graduate and Professional School Financial Aid Services

Graduate students are required to complete the FAFSA.

4. Student Aid Report (SAR)

Once the FAFSA is received and processed, the Federal Pell Grant processor will mail the applicant a report titled Student Aid Report (SAR). The applicant may submit all pages to the NSU Office of Financial Aid

5. Federal PLUS Applications

Financial aid funds are limited and cannot meet the demonstrated needs of all students applying for financial aid. Because of this, parents may apply for a Parent Plus Loan. To apply for a Parent Plus Loan, parents must complete an application. The loan applications are available at banks, credit unions, savings and loan associations, and the NSU Office of Financial Aid. The application must be completed and submitted to the Financial Aid Office for processing.

MINIMUM ACADEMIC PROGRAM STANDARDS FOR FINANCIAL AID ELIGIBILITY

1. General Qualifications

In order to receive grant, loan or work assistance, a student must maintain satisfactory academic progress in the course of study the student is pursuing at the University. Students who fail to maintain satisfactory progress may not receive any institutional, federal, or state grants, scholarships, or work-study assistance.

Neither incompletes (I) nor course withdrawals (W) will count toward hours earned but will count toward hours attempted. Repeated courses will count toward hours earned if:

- a. a passing grade was received, and
- b. the course had not been counted previously toward hours earned.

2. Undergraduate Students

- a. The minimum academic standards required of all full-time undergraduate students to maintain eligibility for continued financial aid is indicated in Paragraph I, above.
- b. To be considered full-time an undergraduate student must be enrolled for a minimum of 12 credit hours per semester.

3. Part-time Undergraduate Students

- a. A student enrolled in fewer than twelve (12) semester hours is considered a part-time student. A student with a classload of nine to eleven (9 - 11) semester hours is classified as three quarter (3/4) time; a student with a

class load of six to eight (6 - 8) semester hours is classified as half time. The classification is based upon the number of semester hours for which the student is officially enrolled on the last day for adding classes as published in the Norfolk State University Registration Information and Schedule of Classes booklet for the appropriate semester.

b. Financial aid eligibility for students who are enrolled less than full-time will be calculated on a prorated basis using the Academic Classification table shown below for full-time students. Part-time students also must meet and maintain all requirements as established by University, federal, and state guidelines.

STANDARDS OF SATISFACTORY ACADEMIC PROGRESS FOR FULL-TIME UNDERGRADUATES

Norfolk State University is required by federal regulations to adhere to minimum standards of satisfactory academic progress (SAP) that relate to a student's eligibility for federally funded financial aid programs, including state, federal and institutional grant(s), scholarships, employment, and loan programs. Students must meet minimum satisfactory academic progress standards in order to receive and maintain eligibility for Title IV funds. The satisfactory academic progress standards apply to all students in degree seeking programs of study who wish to be considered for financial assistance. SAP is a qualitative as well as a quantitative measurement of courses attempted and courses completed. Completed hours must equal 66% of hours attempted to meet SAP standards.

Students must attain at least the minimum cumulative grade point average required for the number of credits earned for the academic classification level and must make satisfactory progress towards degree completion by advancing to the next academic classification level. Failure to maintain or exceed the minimum cumulative grade point average will result in the cancellation or denial of financial assistance. The minimum grade point average for each classification level is indicated below:

Academic Classification for Full-Time Students

Level	Total Credit Hours Earned	Cumulative Grade Point Average
Freshman	Fewer than 30	1.7 or higher
Sophomore	30 - 59 credit hours	1.8 or higher
Junior	60 - 89 credit hours	2.0 or higher
Senior	90 or more credit hours	2.0 or higher
Graduate	XXXXXXXXXX	3.0 or higher

These minimum standards must be met in order to be considered for any state, federal, or institutional financial assistance. Aid will be terminated for any student who does not maintain the minimum standard or qualitative measurements.

ENROLLMENT STATUS

For financial aid purposes, enrollment status is based on the following listed information:

No. of Credit Hours	Undergraduate	Graduate
Twelve (12) or more hours	Full time	Full time
Nine (9) to eleven (11) hours	Three-Quarter time	Full time
Six (6) to Eight (8) hours	Half time	Half time
Three (3) to Five (5) hours	Less Than Half Time	Less than Half Time

Enrollment status is based on the number of credit hours for which students enroll for each academic term. Undergraduate and graduate students may be considered for financial assistance based on the number of credit hours enrolled for each term. If enrolled less than full-time, aid may be pro-rated based on reduced cost of attendance. If enrolled less than half time, only undergraduate students with Pell eligibility may be considered for assistance.

TO REINSTATE ASSISTANCE

In order to regain financial aid eligibility, students must enroll in classes at their expense in order to advance their cumulative grade point average to the minimum satisfactory academic standard. After successfully obtaining the minimum satisfactory academic standards in accordance with their classification level, students may be reinstated or considered for financial assistance for upcoming terms. It is the students' responsibility to notify the Financial Aid Office when they have attained a cumulative grade point average that meets the minimum satisfactory academic progress requirement in the allotted time frame for awarding aid for the upcoming term.

RIGHT OF APPEAL

In order to appeal the decision of denial by the Financial Aid Office, students may submit a letter of appeal, along with all supporting documentation, to the Financial Aid Appeals Committee in the Office of the Vice President of Financial and Business, 310 Harrison B. Wilson Hall or mail letter of appeal, along with all supporting documentation, to Financial Aid Appeals Committee, Norfolk State University, 700 Park Avenue, Norfolk, VA 23504. Letters of appeal along with all supporting documentation may be faxed to (757) 823-8084.

Note: The letter of appeal must be submitted in writing and must include the student's name, social security number, signature, address, and a detailed explanation addressing the extenuating circumstances leading to satisfactory academic progress standards not being met.

Supporting documentation of circumstances or explanation may be required for reinstatement. It is strongly recommended that students submit with the letter of appeal any supporting documentation. The Financial Aid Appeals Committee meets on the first and third Friday of each month to make decisions regarding satisfactory academic progress appeals.

A response to the student's appeal will be forwarded to him or her and a copy of the response will be forwarded to the Financial Aid Office. The letter of appeal and supporting documentation will be retained in the student's financial aid file.

TYPES OF AID, GRANTS AND SCHOLARSHIPS

1. Federal Pell Grant

Federal Pell Grants are available to undergraduate students only and is administered by the Federal Pell Grant Office. Eligibility indices are determined by the Pell Grants Office based on data submitted by the applicant and/or family. Norfolk State University will permit a student to receive a Federal Pell Grant no more than the equivalent of 12 semesters. The student must be enrolled for at least 3 semester hours.

2. Federal Supplemental Educational Opportunity Grant (FSEOG)

Federal Supplemental Educational Opportunity Grants are awarded to students who have financial need and are available to undergraduate students only with a maximum award of \$4,000 per academic year. FSEOG is awarded to students with the highest need levels. Priority is given to students who are enrolled full-time and are Pell eligible.

3. College Scholarship Assistance Program (CSAP)

Student must be enrolled the academic year for which the award is to be received, as at least a half time undergraduate in a degree program; student must also be a bona fide domiciliary resident of Virginia; student must demonstrate sufficient financial need; student's course of study shall not be in religious training or theological education; student must be maintaining satisfactory progress; student must advance to next classification in order to be considered for CSAP.

4. College Departmental Activities Scholarships

College Departmental Activities Scholarships are administered by certain college departments. However, all students applying for and receiving financial aid can receive financial aid only in an amount representative of the difference between the scholarships and the derived need of the student.

5. Commonwealth Award

Commonwealth awards are available to Virginia students who have an overall average of "C" or better and evidence of need. Awards are renewable for three subsequent years as long as the student advances to the next classification and funds are available. Student must be enrolled at least half-time and awards may not exceed the cost of tuition.

6. Graduate Fellowship (GF)

Graduate fellowships are limited fellowship awards to graduate full-time students on the basis of merit (B or better GPA) and/or financial need. Interested graduate students should contact their department or the Office of the Dean for Graduate Studies. The scholarships may not exceed the cost of tuition.

7. NSU Foundation Scholarship Program

The purpose of the NSU Foundation Scholarship Program is to attract and retain students who have distinguished themselves by their scholarly achievements and their personal qualities. The program will make provisions for the awarding of scholarships valued at \$2,000 each. Students nominated for the scholarship must be enrolled full-time. For additional information about the program, call or write the Office of Academic Affairs, Norfolk State University, (757) 823 8408.

8. Army ROTC Scholarship Program

The ROTC Program provides financial assistance for the undergraduate education and training of highly qualified and motivated young men and women who desire to pursue careers as commissioned officers in the United States Army after graduation from college. For additional information about the program, call or write the Army ROTC Department, Norfolk State University, (804) 623 8541.

9. Navy ROTC Scholarship Program

The Naval Reserve Officers Training Corps (NROTC) Program provides opportunities for young men and women to qualify for commissions in the United States Naval Reserve while attending college. The NROTC Scholarship Program provides tuition and other financial benefits. It is a highly competitive program maintained for one purpose – to educate and train qualified young men and women for service as commissioned officers of the regular Navy and Marine Corps. For additional information, students should call or write the Navy ROTC Department, Norfolk State University, (757) 823 8895

10. Virginia Guaranteed Assistance Program (VGAP)

The Virginia Guaranteed Assistance Program is available to Virginia students. This scholarship is renewable for three years; the student must have a 2.5 high school grade point average and be enrolled full-time as a needy, dependent student. The student must also complete at least 12 hours per semester, with at least a 2.0 grade point average to renew the award.

LOANS

1. Federal Direct Loans

These loans do not involve private lenders. Students borrow directly from the federal government. They automatically apply when they complete the FASFA.

The interest rate is calculated as the bond equivalent rate of the 90-day treasury bills auctioned at the final auction before June 1, plus 3.10 percent. The interest rate may not exceed 8.25 percent. The interest rate is specified in the disclosure statement when a loan is disbursed. The variable interest rate is recalculated annually, effective July 1 of each year. An undergraduate student may borrow a maximum of \$2,625 for the first year, \$3,500 for the second year, and \$5,500 for the junior and senior years of undergraduate study. Graduate students are permitted to borrow up to \$8,500 a year.

If a student has a Subsidized Federal Direct Loan (need-based), the federal government pays the interest on the loan while he or she is in school. If a student has an Unsubsidized Federal Direct Loan you will be responsible for the interest during in-school and deferment periods.

2. Carl D. Perkins Loans NDSL (Federal Perkins Loan)

A long term, low interest loan program for needy students who may borrow up to a total of (a) \$4,500 for the first two years; (b) \$5,000 for the total undergraduate program; (c) \$18,000 for graduate/professional students, including undergraduate amount. Students accepting NDSL assistance should be aware of their repayment responsibilities. Repayment of principal begins nine months after the student graduates or leaves school for other reasons. Funding of the Perkins loan is contingent upon past borrowers repaying the loan.

3. Virginia State Student Loan (VSSL)

The General Assembly has allocated funds to the University for loans to eligible students who are Virginia residents and enrolled full-time. Awards may not exceed the cost of tuition and fees per academic semester. Repayment begins six months following graduation, withdrawal, or when the student ceases to carry at least a half time academic work load.

Prior to graduation or withdrawal, each student must make arrangements for repayment of his or her outstanding loan within the maximum repayment period of five years. A minimum monthly repayment of \$30.00 is required.

4. Federal PLUS Loans

Annual Loan limits: Cost of attendance minus other aid.

EMPLOYMENT**1. Federal Work-Study Program (FWS):**

The College Work-Study Program provides jobs for students who must earn a part of their educational expenses. Priority is given students enrolled on at least a half-time basis. Students will be expected to perform the work that is agreed upon when accepting the FWS award. Students may not earn more than the amount in their award letter, and can work a maximum of 20 hours per week while classes are in session, and not more than 40 hours per week during other periods of time. The Office of Financial Aid will notify work-study recipients of their agency of employment by the start of the academic year or semester. It is the student's responsibility to ensure that a properly completed work-study time record sheet is submitted to the Office of Financial Aid by noon of the last working day of each month unless otherwise directed.

2. Norfolk State Work-Study Program (NSWP):

The Norfolk State Work-Study Program provides jobs for students who must earn a part of their educational expenses. Need becomes a criterion for eligibility if the student is receiving funds from federal or state resources. Students must be enrolled at least on a half-time basis; however, priority is given students enrolled full-time. Students will be expected to perform the work that is agreed upon when accepting the NSWP award. Students may not earn more than the amount in their award letter, and can work a maximum of 20 hours per week while classes are in session, and not more than 40 hours per week during other periods of time. The Office of Financial Aid will notify work-study recipients of their agency of employment by the start of the academic year or semester. It is the student's responsibility to ensure that a properly completed work-study time record sheet is submitted to the Financial Aid Office by noon of the last working day of each month unless otherwise directed.

OTHER SOURCES**1. Social Security Benefits**

Students eligible to receive social security benefits should contact their local Social Security Office for more information.

2. Veterans Benefits

Students may apply for educational benefits through the VA Vocational Rehabilitation Program. Dependents of some disabled or deceased veterans may qualify for educational benefits. For more information contact the Veterans Affairs Office on the campus.

3. State Vocational Rehabilitation

Disabled or handicapped persons may qualify for educational assistance through the Virginia Department of Vocational Rehabilitation. These persons are required by the Department to apply for financial assistance through Norfolk State University.

4. Active Duty Personnel

Active duty military personnel may qualify for either VA Assistance or the Tuition Aid Program of the Armed Forces which provide partial payment of tuition costs. For information about the VA Assistance, contact the Veterans Affairs Office on campus. For information about the Armed Forces Tuition Aid Program, contact your Educational Services Office.

5. Virginia War Orphans Education Program

The Virginia War Orphans Education Program provides educational assistance for children, or surviving children of certain veterans or service personnel. To be eligible for assistance under this program, an applicant must meet the following basic eligibility requirements:

- a) The applicant must be no less than sixteen (16) years of age, or no more than twenty-five (25) years of age.
- b) One of the applicant's parents must have served in the armed forces of the United States; and must be permanent and totally disabled due to an injury or disease incurred in a time of war or other period of armed conflict; or
- c) One of the applicant's parents must have died as a result of injury or disease incurred in a time of war or other period of armed conflict; or
- d) One of the applicant's parents must be listed as a prisoner of war or missing in action
- e) The applicant's parent, on which eligibility is based, must have been a resident of the Commonwealth of Virginia at the time of entry into active military duty; or
- f) The applicant's parent, on whom eligibility is based, must have been a resident of the Commonwealth of Virginia for at least 10 consecutive years immediately prior to the date of application.
- g) The applicant must provide written verification attesting to his or her acceptance as a student in either a state-supported secondary or post secondary educational institution.

Eligible individuals are entitled to a maximum of forty eight (48) months of tuition free education at state-supported educational or training institutions. Individuals entitled to this benefit may utilize it to pursue any vocational, technical, undergraduate, or graduate program of instruction. Generally, programs listed in the academic catalogs of state supported institutions are acceptable provided they have a clearly defined educational objective, i.e., certificate, diploma or degree.

Requests for applications should be directed to the Director, Division of War Veterans' Claims, Commonwealth of Virginia, 210 Franklin Road, S.W., Roanoke, VA 24011. If possible, applications should be submitted at least four (4) months before the expected date of matriculation.

6. Part-Time Employment:

The University keeps in close contact with local business concerns through which many students are placed in positions which offer remuneration for work experience.

VETERANS

Veterans enrolling under the Veterans Readjustment Benefits Act of 1966 or under other federal programs may enroll in special college and terminal curricula. Special counseling and guidance are available in the Office of Veterans Affairs.

Since the University receives no funds from the government for tuition and fees for veterans studying under the Readjustment Benefits Act of 1966, students registered under such authorization must make payments according to the schedule of fees.

ADDITIONAL INFORMATION ABOUT FINANCIAL AID PROGRAMS CAN BE SECURED FROM THE FINANCIAL AID OFFICE AT NORFOLK STATE UNIVERSITY, BY VISITING NSU'S WEBSITE AT WWW.NSU.EDU, AND BY CHECKING THE FEDERAL WEBSITE AT WWW.FAFSA.ED.GOV.

STUDENT REFUNDS

Students who present a certified check or money order for an amount in excess of his or her obligation to the University should expect to receive the difference in the form of a University check mailed within seven working days.

Refunds are given ONLY after all University obligations are paid in full. Financial aid awarded but not received by the University is not considered in the refund calculation.

Refunds due as a result of direct overpayment or reduction in course load will be processed upon receipt of a refund request in the Office of Student Financial Services. The refund process begins after the add period ends and requires seven working days.

All refund checks will be mailed. If a local or campus address is not provided, the refund check will be mailed to the permanent address on file with the University.

The financial aid disbursement process occurs each week. Refunds generated as a result of financial aid posting are mailed at the end of each week.

PRO-RATA REFUND POLICY

Tuition charges are adjusted on a pro-rata basis for students who withdraw from NSU during the first nine weeks of the fall and spring semesters and the first three weeks of the summer session.

Students who fail to adhere to the published deadlines when withdrawing from the University or dropping classes will be charged the appropriate tuition charge and receive a failing grade (F). Non-attendance does not constitute an official withdrawal from the University.

Withdrawing from the University or dropping classes below full-time or part-time status may result in a reduction or cancellation of financial aid awards.

See Course Schedule booklet for Pro-Rata Refund Schedule.

BILLINGS

The University sends multiple statements each semester to students who have an outstanding balance or have had activity in their accounts during the statement period. The statement will show the balance brought forward and detail the activity of the period covered.

Questions pertaining to bills or financial aid should be directed to the Office of Student Financial Services, Room 140 H. B. Wilson Hall, (757) 823 8381.

Questions pertaining to financial aid awards should be directed to the Financial Aid Office, Room 131, H. B. Wilson Hall, (757) 823 8381.

DELINQUENT ACCOUNTS

Students who fail to honor payment arrangements or have balances resulting from incomplete or canceled financial aid will be charged a late payment fee of \$30. Grades, transcripts, diplomas, certifications, and non-mandatory verifications will be withheld. Payment in full will be required.

Delinquent accounts are referred to collection agencies and/or attorneys and are reported to the credit bureau. The University is permitted under Virginia Law to attach Virginia State income tax refunds and lottery winnings in repayment of any debt, which is owed to the University. In the event an account becomes delinquent, the student is responsible for all reasonable administrative costs, collection fees, and attorneys' fees incurred in the collection of funds owed to the University.

RESIDENCE HALL FINANCIAL INFORMATION

DAMAGE DEPOSIT

Students who desire to live in the residence facilities will be required to pay a non-refundable residential room deposit of \$300. Students living on campus for the first time pay a \$200 room deposit, which is used to reserve their room, and a one-time \$100 residential damage deposit.

FINANCIAL ARRANGEMENTS

Students must confirm housing arrangements before arrival by completing a Residential Life application and paying the \$300 deposit.

Students must make satisfactory payment arrangements before room key is issued.

FINANCIAL OBLIGATIONS AND REGISTRATION

Students are required to fulfill their financial obligations for tuition, fees, room and meals for each semester of enrollment. Prior balances must be paid before students will be allowed to register for classes in subsequent semesters. Payment arrangements for the current semester must be in place to complete the registration process, and prevent the deletion of class schedules. Returning students will not be allowed to obtain a key to residence halls until payment arrangements are in place and financial clearance is given.

All prior balances must be paid before being allowed to register for a future semester.

If Residential Life room and meal charges do not appear on the Registration or Account Statement, contact the Office of Residential Life at (757) 823-8407.

The \$100 deposit does not apply to room and board charges or other fees. It is retained in a damage account as long as the student resides in the University's residence halls and there are no damages.

Refunds for room reservation deposits will be made for the following reasons:

1. Space is not available to accommodate the student;
2. The student is called for active duty prior to the first day of class;
3. The student is deceased; or
4. The prospective student is not admitted to the University.

Unclaimed deposits will be reported to the Commonwealth of Virginia Department of Treasury's Division of Unclaimed Property.

SPECIAL NOTICE: Should conditions warrant, the administration reserves the right to adjust fees and charges without advance notice.

STUDENT ACCIDENT INSURANCE PLAN

All full-time undergraduate domestic students (U.S. citizens and permanent residents) and all international students (full and part-time) will be required to have some form of accident insurance in order to attend classes. Students will automatically be enrolled in the accident only portion of the Student Accident and Insurance Plan sponsored by the University.

The annual premium of \$100 will be assessed to each qualifying student in two equal installments of \$50 each semester.

During the first semester of each academic year, students will have the option of waiving enrollment in the accident insurance plan if they are covered by another insurance company. An Insurance Enrollment Waiver Form is available in the Office of Student Financial Services.

The insurance Enrollment Waiver Form, along with the required documentation, must be returned to the Office of Student Financial Services by the deadline date.

The charge can be waived only during the first semester of enrollment for the academic year.

STUDENT ADDRESS INFORMATION

Students are responsible for advising the University of a change of address or corrections. Students may change address information at the Office of Student Financial Services or the Office of the Registrar.

BOOKSTORE AUTHORIZATION

Students receiving financial aid may be eligible to receive a bookstore authorization to purchase books and supplies.

If awarded grants and Ford Direct Loans exceed the total tuition, fees, room and meal cost, funds may be put on the Spartan Card (debit card) for books and supplies. Students must be registered and have a current Spartan Card.

To obtain a book authorization, student should go to the Office of Student Financial Services in H.B. Wilson Administration Building, Room 140.

BOOKS/SUPPLIES

Books and supplies are not included in the cost of tuition and fees. Students should be prepared for this expense on the first day of class. Textbooks and supplies may be purchased in the University Bookstore located in the Mills E. Godwin (Student Union) Building.

DIVISION OF RESEARCH AND TECHNOLOGY

Adebisi Oladipupo, Vice President for Research and Technology
(757) 823-2144

The mission of the Division of Research and Technology is to be a responsive and responsible customer-centered organization that enables and empowers its client (the Norfolk State University community) to effectively accomplish its business unit goals.

OVERVIEW

The Division of Research and Technology is primarily responsible for the planning, implementation, and utilization of technology for an effective and efficient discharge of the University's business. The Division is also responsible for acquiring external funding support for sponsored program activities, encouraging and sustaining faculty and staff interests in these endeavors.

The Research and Innovation to Support Empowerment (RISE) project is intricately linked to the Division of Research and Technology in that RISE is underpinned by technology and research. Also, the Division is the primary interface between NSU and the Enterprise and Empowerment Foundation (E2F) that oversees the RISE project.

The Division of Research and Technology consists of the following units: Office of Information Technology (OIT), Enterprise Information Systems (EIS), Office of Sponsored Programs (OSP), Media Services, Telecommunications, and the Educational Technology Services (ETS) group, which is currently under OIT.

COMPUTER SERVICES (OIT and EIS)

(757) 823-8678 – Helpdesk

Computer Services at Norfolk State University are handled by two departments, OIT and EIS. OIT handles primarily all networking issues (infrastructure development, deployment, and maintenance) while EIS handles the administrative computing needs (all Enterprise Resource Planning systems).

EDUCATIONAL TECHNOLOGY SERVICES (ETS)

This unit handles the management of all web-based and web-enabled online courses. It also manages the BlackBoard course management system and trains end-users in its effective utilization. This unit is poised to handle niche areas in distance learning initiatives at Norfolk State University.

SPONSORED PROGRAMS (OSP)

This is the unit with administrative oversight for Norfolk State University grant, contract, and other sponsored program activities.

Sponsored Programs is the primary interface for all departments and units within the University for all local, state, federal, and quasi-governmental funding agencies, corporations and other entities that provide research projects and other sponsored programs. This excludes programs for charitable gifts, endowments, and all other forms of private giving, all of which are managed by the Division of University Advancement.

The mission of Sponsored Programs is to shepherd programs and funds into and through the University and to assist in developing and maintaining the intellectual base required to competitively seek external funding. This office seeks, pursues, solicits and manages funding opportunities for all research and other sponsored program activities university-wide.

MEDIA SERVICES

Media Services is responsible for maintenance and programming of the WNSU-TV Radio, maintaining the Satellite Uplink and Downlink, developing and updating "smart" electronic classrooms on campus, supporting the Department of Mass Communications and Journalism, providing adequate media records of important University events, and supporting the University in its marketing efforts.

TELECOMMUNICATIONS

This unit is responsible for all telecommunication service on campus, including cell phones and desk phones. It also supervises the acquisition and utilization of these devices.

DIVISION OF UNIVERSITY ADVANCEMENT

Paul Shelton, Vice President for University Advancement
(757) 823-8323

The purpose of the Division of University Advancement is to advance the University's mission by:

- Involving constituents and stakeholders in the life of the University;
- Informing constituents of University achievements, priorities, opportunities and challenges;
- Researching, identifying, cultivating and securing support and financial investments in the University;
- Being good stewards of our relationships and resources; and
- Promoting and enhancing the University's stature and image.

The above mission is accomplished through the planning and execution of various programs that promote voluntary support for the University and ongoing liaisons with governmental agencies, foundations, business and industry, alumni and others that provide funds and resources to the University. Specific initiatives to actualize the division's goals are coordinated through the functional areas of alumni relations, development, event planning, marketing services, and news and media relations. The NSU Foundation, Inc. is a separate entity that exists to solicit, receive, invest and administer gift resources for the University.

OFFICE OF PLANNING AND BUDGET**Earlie Horsey, Executive Director****(757) 823-8679**

In support of the NSU mission, the Office of Planning and Budget provides unbiased, accurate, concise, timely data, and analysis to the campus community, policy makers, and the general public to assist strategic development and decision making, promote sound fiscal management, facilitate enrollment management activities and present a clear perspective of NSU.

The office houses the functions of Budget, Institutional Research and the Presidential Institute for Administrative Leadership Development.

DIVISION OF ACADEMIC AFFAIRS**Elsie Barnes, Vice President for Academic Affairs****(757) 823-8408**

The Division of Academic Affairs at Norfolk State University bears leadership responsibility for the academic focus of the institution. The Division plays a central role in the articulation, development, initiation and continuing support of the educational philosophy of Norfolk State University which is articulated in our mission: "To provide an affordable, high quality education for an ethnically and culturally diverse student population, equipping them with the capability to become productive citizens who continuously contribute to a global and rapidly changing society."

The Division is made up of five schools, two satellite centers, and other academic programs. The schools are the School of Business, the School of Education, the Ethelyn R. Strong School of Social Work, the School of Liberal Arts and the School of Science and Technology. Thirty-three bachelor's degree programs, fifteen master's degree programs, and two doctoral degrees are offered through these schools. Additionally, in keeping with the effort to respond to the exigencies of a rapidly changing technological society, the institution has established five Centers of Excellence: The Center for Applied Social Science Research and Public Service, the Center for Entrepreneurship, the Institute for Service Learning and Literacy, the Bringing Education and Science Together (BEST) Laboratory, and the Center for Materials Research.

Continuing Norfolk State University's tradition of service, the Division of Academic Affairs promotes and encourages community involvement. The Division of Academic Affairs provides a variety of programs and opportunities in which the students, faculty and staff may demonstrate their altruistic spirit.

The goal of student success guides all academic policies and processes. The Division of Academic Affairs is committed to student mastery of subject matter, the acquisition of liberal knowledge and the development of competence in students' career fields. The leadership of the Division of Academic Affairs works in concert with the faculty to ensure that the curriculum supports the university's mission and strategic imperatives.

To that end, the Division has developed a strategic plan that includes the following goals:

1. To ensure faculty competence.
2. To ensure student mastery of subject matter.
3. To ensure an optimum learning environment.
4. To ensure on-going faculty development.
5. To provide a stimulating learning environment.
6. To ensure a sound learning environment.
7. To encourage faculty and student research, scholarship and grantsmanship.
8. To expand current course offerings.

The implementation plan for these goals, including targeted initiatives, idea descriptions, action steps and resource needs, are outlined in the full body of the Division of Academic Affairs Strategic Plan. A copy of this plan is located in the administrative offices of the Division of Academic Affairs, Suite 460, Harrison B. Wilson Hall (757) 823-8408.

AUDITING COURSES

Students who desire to attend classes but do not plan to receive credit may audit courses. Grades are not recorded for these students, and they must have the permission of the instructor. An audited course is counted as part of a student's total class load, and he or she must pay tuition the same as if receiving credit. To audit a course the student must complete the Course Registration Worksheet and place an "AU" in the "TUITION HOURS" column of the worksheet. The instructor's signature should be placed in the "Comments" column on the same line as the audited course. The auditing student is expected to attend classes regularly but is not required to submit assignments or take examinations. Changing from audit to credit or from credit to audit is permitted only during the scheduled "Add" period. Audited courses may be dropped during the scheduled "Drop" period.

CHANGES IN CLASS SCHEDULE (ADD/DROP)

Changes in class schedules (Add/Drop) may be made only with the written consent of the course instructor and the advisor or department head. Students who have not declared a major may contact ACCESS for advising and schedule changes. Non-matriculating students should contact the Dean's Office in the School of Liberal Arts to process schedule changes. A student must complete the Administrative Change form, obtain the appropriate signatures, and report to the offices of the Registrar and Cashier to complete the transactions. No changes in class schedules may be made after the dates stipulated in the academic calendar for making changes without incurring the penalty of failure, "F", for the course(s) involved.

WITHDRAWAL FROM THE UNIVERSITY

University policy requires a student to complete an Application for Withdrawal when enrollment is terminated before the end of a semester or summer session. The Application for Withdrawal may be obtained from the department head/advisor and must be submitted to the Office of the Registrar no later than two weeks before the last day of classes. The student should discuss the matter with the department head/advisor before processing the Application for Withdrawal. The last day to officially withdraw from all classes is on the last published date for all classes.

If the student is ill or otherwise incapacitated and cannot complete the withdrawal (or drop) process, the student must contact, or have someone else contact, the Office of the Vice President for Student Affairs immediately.

A student who fails to adhere to the published deadlines for withdrawing from (dropping) classes or withdrawing from the University will be charged the appropriate tuition and will receive a failing grade (F).

NOTE: UNDER NO CIRCUMSTANCE DOES NON-ATTENDANCE CONSTITUTE AN OFFICIAL WITHDRAWAL FROM THE UNIVERSITY.

PRO-RATA REFUND POLICY

Tuition and room and board charges are adjusted on a pro-rata basis for students who withdraw during the first nine weeks of the fall and spring semesters, and the first three weeks of the summer session. Tuition charges are adjusted based upon the following schedule:

Withdrawal Date	University Retains
Before Classes	\$50 Administrative Fee
First Week	10% + \$50
Second Week	20% + \$50
Third Week	30% + \$50
Fourth Week	40% + \$50
Fifth Week	50% + \$50
Sixth Week	60% + \$50
Seventh Week	70% + \$50
Eighth Week	80% + \$50
Ninth Week	90% + \$50
Tenth Week	No Refund

Funds must be returned to the federal financial aid program, etc.

Required Order for Allocating Refunds and Repayments

*Federal Family Education Loan Program (FFELP)

*Federal Direct Student Loan Program (FDSL)

*Federal Perkins Loan Program

*Federal Pell Grant Program

*Federal SEOG Program

*Other Title IV Programs

Withdrawal from the University may result in a reduction or cancellation of financial aid awards. Students receiving financial aid should contact the Financial Aid Office for complete information about their individual situations.

TUITION APPEAL

POLICY STATEMENT: Norfolk State University will promptly refund tuition and/or cancel a financial charge from a student's account provided the student meets the requirements of the University's policy on tuition appeals and submits supporting documentation. Appeals that do not represent a sound basis for reimbursement will be denied.

SUBMITTING AN APPEAL: Appeals are accepted in the Office of the Registrar, Room 110 Harrison B. Wilson Hall, 700 Park Avenue, Norfolk, Virginia 23504. For information on the tuition appeal process or on obtaining an appeal form, please contact the Office of the Registrar at (804) 823-8229.

ADDITIONAL CHARGES

Students enrolled in certain music, physical education, nursing or other such courses may be assessed an additional fee to cover the cost of materials, individual instruction, clothing and equipment required for the course. The amount of the supplementary fee for a specific course is listed in the class schedule booklet.

SENIOR CITIZENS' TUITION AND FEES

Persons 60 years of age or older who are residents of Virginia and whose taxable income is less than \$10,000 may enroll in courses for academic credit at a reduced charge.

According to the Code of Virginia (chapter cited as the "Senior Citizens Higher Education Act of 1974"), "Senior Citizen" shall mean any person who, before the beginning of any term, semester or quarter in which such person claims entitlement to the benefits of this chapter, (1) has reached sixty years of age and (2) has had his legal domicile in this state for one year.

"Course" shall mean any course of study offered in any state institution of higher education including the regular curriculum of any department, school, or subdivision of any such institution or any special course given for any purpose, including, but not limited to, adult education.

Nothing in this section shall be construed to exclude any other rules and requirements now or hereafter made applicable for all other persons with respect to residency in this state by a state institution of higher learning.

READMISSION

Any former undergraduate who has not attended Norfolk State University for one or more spring or fall terms must complete an undergraduate readmission application form. If the student has taken any college level coursework since attending NSU, he or she must have an official transcript of this work sent directly to the Office of the Registrar. Readmission applications and necessary transcripts must be on file at least two weeks prior to the term for which the students are applying.

Students who re-enter the University after an absence of two regular terms must meet the requirements of the current catalog unless they receive written permission from the dean of the school in which they are enrolled to continue under an earlier catalog. This written permission must be on file in the Office of the Registrar prior to the submission of a graduation application. A student may not receive permission to graduate under a catalog which predates re-enrollment by more than three years.

FAMILY EDUCATIONAL RIGHTS PRIVACY ACT OF 1974 (THE BUCKLEY AMENDMENT)

Annually, Norfolk State University informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This Act, with which the institution intends to comply fully, was designated to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with The Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the Act.

Local policy explains in detail the procedures to be used by the institution for compliance with the provision of the Act. Copies of the policy can be found in the Office of the Registrar.

THE HONORS PROGRAM

The Honors Program is designed to provide an enriched and challenging program of study for students who manifest exceptional academic potential, to improve the University's ability to attract such scholars, and to enrich the academic community.

Students may enter the Honors Program upon admission as freshmen having achieved at least a high school grade-point average of 3.0 and a combined score of 900 on the SAT. These students are expected to complete an entire Honors sequence of courses. Sophomores, juniors, or seniors having achieved a 3.5 or above grade-point average for all courses completed in the curriculum may enter the Honors Program.

Students in the NSU Honors Program are eligible for scholarships of \$500 per academic year. Students receiving Presidential Scholarships or Board of Visitors Scholarships are required to take Honors Courses.

The NSU Honors Program is not an honor society but a regular facet of the University's academic offerings. Honors Program students are encouraged to participate in honor societies in their respective fields. Honors Program courses are open to all full-time undergraduates, including participants in other special programs such as the Dozoretz National Institute for Minorities in Applied Sciences (DNIMAS) and ROTC.

For additional information, please contact the director of the Honors Program.

COOPERATIVE EDUCATION/INTERNSHIP PROGRAM

Cooperative Education at Norfolk State University is part of a nationwide college/university program that integrates academic course work with career-related, paid work experience. Cooperative Education (co-op) provides students with an answer to the question most commonly asked of recruiters of graduating seniors, "WHAT EXPERIENCE HAVE YOU HAD? Co-op students will have worked in a professional environment and will have performed work assignments in chosen career fields that supplement their academic studies, leading to the educational degree. The cooperative plan of education, which combines theory with practice, offers the ultimate in a completely rounded and integrated educational experience.

Cooperative Education is available to undergraduates and graduate students in most academic areas. Participation in the program is open to students who have completed 30 semester hours, are in good academic standing with the University and have a minimum 2.0 grade point average. Approval of the program director is required.

Participation in the program may earn academic credit for students enrolling in the following courses:

CED 250	3 cr hrs	CED 350	3 cr hrs	CED 450	3 cr hrs
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Interested students may request information from the following address:

Norfolk State University
Career Services
Cooperative Education Program
Mills E. Godwin Student Center, Suite 306
Norfolk, Virginia 23504
(757) 823-8919

INTERNSHIP/SUMMER POSITIONS

Students participate in full-time work assignments during the summer with no requirement to return for a second work period, although the option to do so may be available. Assignment must be major/career related. Also, an assignment can be paid or unpaid.

RESERVE OFFICERS TRAINING CORPS PROGRAMS**AROTC**

The Reserve Officers Training Corps (ROTC) was established at Norfolk State University on July 1, 1948, in the Military Science Department. The purpose of the Military Science Department is to develop selected university-educated men and women for positions as Army officers in the active Army, Army Reserve, and National Guard.

NROTC

The Naval Reserve Officers Training Corps (NROTC) was established at Norfolk State University in July 1982, in the Naval Science Department. The mission of the Naval Science Department is to develop selected university educated men and women morally, mentally, and physically and to imbue them with the highest ideals of duty, honor, and loyalty in order to commission them as officers who possess a basic professional background. Also, these men and women are motivated towards careers in the Naval service and have the potential for further development in mind and character to assure the highest responsibilities of command, citizenship, and government.

See School of Health Related Professions and Natural Sciences for program details.

OFF-CAMPUS CENTERS**BRAMBLETON COMMUNITY OUTREACH CENTER**

(757) 823-8743

The Brambleton Community Outreach Center is a Center devoted to the provision of recreational, social, health and educational needs of communities adjacent to the University's campus. It is the administrative center for the University's Community Outreach Program. It utilizes University resources to supplement, improve and increase the effectiveness of services normally provided by political subdivisions and community organizations. The Community Outreach Program is a coordinated effort of the five schools of the University and provides programs and activities for children, adults and senior citizens. Programs include technology training, recreation, family management and counseling, health maintenance programs, educational support, opportunities for volunteer service, internships and community services. The Center houses and is utilized by numerous organizations to meet and provide services.

TRI-CITIES CENTER

4300 George Washington Highway
Portsmouth, Virginia, 23702
(757) 396-6801

The Tri-Cities Center primarily offers graduate level courses in education and urban affairs. Additionally, it offers a number of contract courses to meet community needs. Courses offered at the Center are listed with section number 75.

VIRGINIA BEACH HIGHER EDUCATION CENTER

1881 University Drive
Virginia Beach, Virginia, 23456
(757) 368-4150

The Virginia Beach Higher Education Center, which is operated cooperatively by Norfolk State University and Old Dominion University, primarily offers graduate-level courses for Norfolk State University in secondary education, urban affairs, and social work. Junior and senior-level undergraduate courses and a number of continuing education offerings are also available. This Center offers administrative services, including academic counseling and course registration. Courses offered at the ODU/NSU Higher Education Center are listed with section number 85.

The mission of the NSU/VBHEC is to provide educational opportunities and outreach services for traditional and non-traditional students with special emphasis placed upon the adult lifelong learner. Additionally NSU/VBHEC strives to develop and disseminate educational programming, training programs, and selected technological information to its adult constituents outside the traditional credit delivery formats.

NSU/VBHEC is strengthening the skills of the adult learner through educational opportunities in workforce development, leadership, competitive education programs, continuing education and business and community partnerships.

RECLAMATION PROJECT

The Reclamation Project began in the fall of 1999 as an effort to reclaim former Norfolk State University students. Students who have been away from the University for more than five (5) years and who are over the age of 24 qualify for participation in this project. For more information, please contact Dr. Dennis Montgomery, Program Advisor, at (757) 368-4154 (email: dlmontgomery@nsu.edu).

The Reclamation Project was created to facilitate the continuing education and subsequent graduation of former Norfolk State University students. Former students who have left the University without a degree and who meet specific eligibility requirements may apply to the program.

The program is designed to take full advantage of technology while maintaining the integrity and intellectual rigor of the University. Methodologies for degree completion are varied and include web-based instruction, web enhanced instruction, independent study, video courses, TV courses and courses from institutions that have a consortial or collaborative partnership with Norfolk State University.

The Interdisciplinary Studies Degree Program is the primary academic model for this endeavor. The Bachelor of Science in Interdisciplinary Studies is a multi-disciplinary approach to learning that allows students to create an individualized area of concentration based on their unique needs, experiences and interests. The flexibility of this degree program gives students the opportunity to pursue various fields of study in cross-disciplinary patterns.

All students in the Reclamation Project will be charged the most recent in-state tuition rates plus an additional administrative fee and technology related expenses. Students will be treated as other Norfolk State University students and may apply for financial aid.

The overall management of the Reclamation Project is the responsibility of the Virginia Beach Higher Education Center-Division of Continuing Education. For additional information on the Reclamation Project, contact the reclamation advisor at (757) 368-4154.

RECLAMATION PROJECT READMISSION

In order to be readmitted as a part of the Reclamation Project, former Norfolk State University students:

- Must be 24 years of age or older,
- Must not have been enrolled at NSU within the last five years, and
- Must have taken a minimum of 6 credit hours of academic work at an accredited college or university, earning a grade point average of 2.0 or better for the courses taken (applies if the student's GPA upon leaving the University was less than 2.0).

Prior to readmission, the student's intended major (i.e., degree track) must be approved by the program advisor of the Reclamation Project and the department head for the intended degree.

All applications for readmission, as a part of the Reclamation Project, must be forwarded to the Office of the Reclamation Project.

RECLAMATION FORGIVENESS

1. The Reclamation Forgiveness Policy applies only to students in the Reclamation Project. This policy is different from, and should not be confused with, the forgiveness policy that applies to regular students seeking to be readmitted.
2. Any student readmitted as a part of the Reclamation Project with a GPA less than 2.0 may receive forgiveness (as set forth below) for all courses with a grade of "C-" through "F" earned at Norfolk State University prior to the student's readmission.
3. Representatives of the Office of the Registrar will recalculate the student's GPA for the purpose of forgiveness.
4. All grades earned at the university will be shown on the student's transcript. Forgiven courses will be preceded with a "#" sign.
5. A student with a recalculated GPA, who has not exhausted his/her eligibility, may apply for financial assistance through the Office of Student Financial Services at the NSU main campus. Although students may be granted academic forgiveness, eligibility for financial assistance is not guaranteed.
6. Should a student whose grades have been forgiven choose to transfer prior to degree completion, all "forgiven" grades will revert to their prior status and will be reflected as same on the student's transcript.
7. The recalculated GPA may result in the student's losing some semester hours and, in so doing, increase the number of hours remaining that will be needed to graduate.
8. Any student who intends to seek forgiveness must submit the appropriate forms (the Reclamation Readmission Application and the Application for Forgiveness) to the program advisor of the Reclamation Project by August 1 (for the following spring semester) or March 1 (for admission for the following fall semester).
9. Academic forgiveness cannot be granted if a student has earned a post-secondary degree following his/her initial NSU attendance and has applied NSU credits toward that degree.

RECLAMATION READMISSION FORMS ARE AVAILABLE IN THE OFFICE OF THE RECLAMATION PROJECT AT THE VIRGINIA BEACH HIGHER EDUCATION CENTER

FUNERAL SERVICE CERTIFICATE PROGRAM

The Funeral Service Certificate Program offered by Norfolk State University's Continuing Education Department in conjunction with the School of Science and Technology is designed to offer the Funeral Service Program in an effort to provide educational opportunities to those interested in funeral service as a career.

Additional information about the program is provided in the Department of Allied Health section of the academic program offerings of the School of Science and Technology.

WORKFORCE DEVELOPMENT AND NON-CREDIT COURSES

Workforce Development and non-credit course offerings at the Virginia Beach Higher Education Center provide a collaborative process through which individuals and organizations optimize their capabilities to be productive and competitive in order to produce products or provide services. For more information, please contact Richard Lodge at (757) 368-4157 (email: rrlodge@nsu.edu).

MILITARY PROGRAMS

Norfolk State University provides comprehensive counseling and advising services to active duty military, their family members, retired and reserve military, and Department of Defense civilian personnel. A current partnership exists with the Navy College Network.

INTERNATIONAL LONGSHOREMEN'S ASSOCIATION

Norfolk State University has entered into an agreement establishing a partnership with the Hampton Roads Shipping Association-International Longshoremen's Association (ILA). NSU provides educational training, credit, and non-credit academic services to members of the ILA in the Greater Hampton Roads Area. For more information, please contact Gerald Tyler at (757) 368-4156 (email: gtyler@nsu.edu).

CONFERENCES AND SEMINARS

Conferences and training seminars are available in the areas of: leadership, food safety, financial planning, and through the Women's Enrichment Series. The center is also available to rent for conferences, worship services, seminars, and other community-related events. For more information on upcoming conferences and training seminars and on how to secure the VBHEC for an event, please call (757) 368-4150.

LIBRARY SERVICES AND SPECIAL COLLECTIONS**Lyman Beecher Brooks Library
(757) 823-8873**

The Lyman Beecher Brooks Library provides services and resources to meet the informational and scholarly needs of the Norfolk State University community. Library users can access resources via the automated system, which facilitates use of the online catalog. The Reference Research area contains computer workstations that students can use to search for a vast array of information.

The Lyman Beecher Brooks Library is a member of the Virtual Library of Virginia. This cooperative effort of the libraries of colleges and universities in the state of Virginia provides cost effective access to online resources and enhances interlibrary lending. The Library has extensive journal subscriptions, including e-journals and many issues in micro format.

The Library is an open stack facility with space for approximately 2,000 readers and a book capacity of 500,000 volumes.

Harrison B. Wilson Archives

The Harrison B. Wilson Archives is the repository for the historical records of the University, its faculty, alumni, and students. The Archives also has the mission of collecting and preserving the historical records of African-Americans in Virginia and making them available to researchers.

Lois E. Woods Museum

In a 10,000 square foot exhibit area, the Lois E. Woods Museum houses a collection of African arts from 14 countries representing 40 groups and cultures. Included in the museum is a reference library with over 400 books on African art, folklore and history.

Art Library

The Art Library, located in Room 314 of the Earl Hamm Fine Arts Building, houses reference materials applicable to art education and such related fields as business education, elementary and secondary education, health, industrial arts, language arts, mathematics education, music education, physical education and social sciences education as well as graphics and the fine arts.

IMPORTANT INFORMATION REGARDING MATRICULATION

Policies regarding the enrollment of degree seeking (matriculating) students at Norfolk State University are listed below:

All students will follow the curriculum and the degree completion requirements specified in the University Catalog issued for the year of their initial enrollment as degree seeking students.

The University will honor degree completion requirements specific for students in the University Catalog for the year of initial enrollment as long as such enrollment is continuous (summer semesters not included).

A student who does not maintain continuous enrollment (summer semesters not included) will follow the degree completion requirements specified in the University Catalog issued the year of re-enrollment.

Any student under any degree program who has re-enrolled in the University after interruptions of more than two semesters will be required to apply for readmission and meet the requirements of the current catalog.

A student who transfers to another degree program will follow the requirements specified in the University Catalog issued for the year of the transfer into the new degree program.

Students are held individually responsible for reading and complying with the University policies contained in the Catalog.

The Catalog is not an unchangeable contract but, instead, an announcement of present policies only. Implicit in each student's enrollment is an agreement to comply with University rules, policies, and regulations that the University may modify to exercise properly its educational responsibility.

ACADEMIC POLICIES, REGULATIONS AND GENERAL DEGREE REQUIREMENTS

THE ACADEMIC YEAR

The academic year is divided into two semesters and summer session. The first semester begins in late August and ends before the Christmas holidays; the second semester begins in January and ends in May. The summer session begins one week after the conclusion of the second semester.

There is a short Thanksgiving recess that begins at the end of classes on the Tuesday before Thanksgiving and ends on the Monday immediately after Thanksgiving. There will be approximately three weeks between the end of the first semester and the beginning of the second semester. There is a spring vacation period of one week beginning on Monday of the week following mid-semester examinations. Classes resume the following Monday. Instruction is also suspended on legal holidays, i.e., Labor Day; Lee, Jackson, King Day; and Independence Day.

THE SUMMER SESSION

The annual summer session includes two mini terms; a six week term and a three week term. It offers significant opportunities for entering freshmen and to other students who wish to accelerate their studies and satisfy degree requirements. Various short workshops and institutes on topics of current interest are part of the summer offerings. The maximum load for the summer session is nine semester hours for undergraduates.

UNIT OF INSTRUCTION

The semester hour is the unit of instruction used for computing the amount of work required for graduation. One semester hour is equivalent to one 50 70 minute period of instruction or lecture per week for 15 weeks. Two or three 50-minute periods of laboratory sessions are equal to one period of instruction or lecture.

THE CURRICULUM

Developing, implementing, and updating curricula are the responsibilities of the faculty and academic administrators. The curriculum is the vehicle through which the University seeks to make its most significant impact upon the lives of students. The curricular offerings of each department and major are clearly and accurately described in this catalog.

Major Courses

Courses taken are organized around the major, the subject or area around which students center their studies according to talents, interests, and future plans. Usually, a student has confirmed a choice of a major by the end of the sophomore year, by which time he or she might have taken some beginning courses in the major field. The student will then take advanced courses in the major in the junior and senior years.

The major consists of a minimum of 27 semester hours in a subject or discipline. In addition to courses in the major, the student also gains general knowledge and determines interest in various fields of study in general education courses and electives.

ELECTIVE COURSES

Courses not taken to fulfill general education or major requirements may be chosen as electives to complete the minimum of 120 semester hours required for graduation. In the choice of electives, students should be guided by their prospective work and interest.

EXPLANATION OF COURSE NUMBERING

The three digit number will convey the course level and certain specific information as outlined:

100-199	Freshman Level Courses
200-299	Sophomore Level Courses
300-399	Junior Level Courses
400-499	Senior Level Courses
500-599	First Year Graduate Courses
600-699	Graduate Courses

Seniors who meet the qualifications outlined in the Graduate Catalog may, with the approval of the graduate program director, enroll in 500 level courses.

GUIDE TO COURSE DESCRIPTIONS

207 Three Credits
INTRODUCTION TO WORLD LITERATURE
PREREQUISITES: ENG 101, 102

Close attention to works selected from world literature for their exemplary literary qualities and their bearing upon our cultural heritage.

Explanations

207 - course number

Three Credits - number of credits, which will be earned upon successful completion of the course.

PREREQUISITES: ENG 101, 102. Prerequisites are courses or conditions that must be successfully completed or met prior to enrollment in the course described. Prerequisites separated by a comma indicate a series of prerequisites and all must be completed prior to enrollment in the described course. Parallel enrollment means that concurrent enrollment in the course designated is required.

STUDENT ACADEMIC LOAD/OVERLOAD

The normal course load for a full-time undergraduate student is 15 and no more than 19 semester hours. Students with a 3.00 average or above may carry additional hours ONLY with appropriate approval (academic advisor/department chairpersons). The registrar has been authorized to approve up to 21 semester hours. A course load in excess of 21 semester hours must be approved by the Dean of the School in which the student's major is housed.

Recommendation for Course Overload Form must be completed and signed by the department head/advisor before submission to the Dean's Office. The normal course load for a full-time graduate student is 9 and no more than 13 semester hours. The registrar may approve up to 15 semester hours. A course load in excess of 15 semester hours must be approved by the dean of the school.

CLASSIFICATION OF UNDERGRADUATE STUDENTS

Freshmen	Students meeting all entrance requirements who have completed 0-29 semester hours.
Sophomores	Students who have completed 30-59 semester hours.
Juniors	Students who have completed 60-89 semester hours.
Seniors	Students who have completed at least 90 semester hours.
Full-Time	A full-time student is one who is registered for a minimum of 12 credit hours during a given semester.
Part-Time	A part-time student is one who is registered for fewer than 12 credit hours during a given semester.
Non-Degree	A non-degree student is one who is not enrolled in a degree program (non-matriculating).

ACADEMIC STANDARDS

Students are expected to study and perform to the best of their abilities. In order to assure that students take maximum advantage of educational opportunities, the University sets academic standards, that students must meet to remain in school.

Students receiving financial aid from federal, state, or institutional funds administered by the Office of Financial Aid must meet the academic standards required of all students as well as the standards required by specific financial aid programs. Continued eligibility for financial aid is contingent upon good academic standing in the University and satisfactory progress toward the completion of a degree.

Academic standards of the University are outlined in the undergraduate and graduate catalogs, student handbook, financial aid publications, and publications of the academic schools and departments of the University. It is each student's responsibility to know the standards required for remaining in the University and to understand that continued financial aid is dependent upon meeting these standards.

UNDERGRADUATE ACADEMIC STANDARDS

Academic progress toward a degree of a student is determined by the student's academic standing as measured by the number of semester hours graded, with grades of "A" through "F" and the number of grade points earned. A minimum of 240 grade points and 120 graded semester hours (a 2.0 or "C" average) is required for graduation. All departmental and school requirements must also be met.

Minimum standards for satisfactory progress are:

<u>Resident Hours Graded</u>	<u>Minimum Resident GPA</u>
1-29	1.7
30-59	1.8
60- and over	2

Failure to achieve the academic standards listed above will result in academic probation, triggering the following academic probation reinstatement process:

Warning Status	Academic Reinstatement Requirement
1st Warning	<p>Upon receipt of First Warning Probation Letter student must schedule an appointment with ACCESS and meet with an ACCESS advisor to:</p> <ul style="list-style-type: none"> • Develop and sign an Academic Performance Contract • Review registration schedule for the upcoming semester. See Advisors for schedule revision if pre-registered or completed early registration (Students who did not pre-register for the semester must see advisors to assist with course selection and registration) • Enroll in and complete the Study Skills Seminar conducted by the ACCESS Department.
2nd Warning	<p>Upon receipt of Second Warning Probation Letter Student must:</p> <ul style="list-style-type: none"> • Complete an Academic Performance Contract • See advisor to revise course schedule or assist with course selection and registration • Enroll in required Study Skills Seminar with the ACCESS Department.
Suspension	Issuance of Suspension Letter

- Students who do not achieve the required grade point average after two semesters are subject to suspension from the University.

Policy and Procedures for Appealing Academic Suspension

If a student wishes to appeal the decision to suspend, a written letter of appeal must be filed with the vice president for academic affairs. Please note that the vice president for academic affairs reserves the right to confer with the vice president for student affairs, student's department head/academic advisor, the ACCESS Office, and the registrar prior to making a decision regarding appeal.

Students will not be considered for appeal if they did not comply with the reinstatement requirements.

Re-Admission after Academic Suspension

Restoration of Academic Eligibility/Readmission

Students suspended from the University for academic reasons may apply for re-admission if they:

- take courses (minimum: 6 credit hours) during the university's summer session and maintain a GPA of 2.0 or better.
- have been absent from NSU for one or more semesters (which may include one summer) and have completed a minimum of 6 credit hours of academic work at another college or university, and has earned a grade-point average of 2.0 or better each semester.

Study Skills Seminar

The Study Skills Seminar is a non-credit, four-week seminar designed for students who are on academic probation. The seminar will introduce and promote development of skills necessary to enhance academic success in college. Emphasis is placed on the development of sound study habits.

COMPLETION OF COURSE REQUIREMENTS

Students are expected to complete all course requirements, including mid-term and final examinations, on the dates and times specified by the institution. Failure to do so may result in a failing grade.

Grades of "C-" and below earned at other institutions will not be credited to satisfy course requirements. Students taking courses through cross registration and students who transfer grades to NSU will only receive credit for grades of "C" or better to satisfy requirements in the major.

CLASS ATTENDANCE POLICY

The University expects students to attend all classes. While unnecessary absences are discouraged, the University recognizes that, on occasion, students may have legitimate reasons for being absent. Thus, a student will be permitted one "unexcused" absence per semester hour credit or the number of times a given class meets per week. Once a student exceeds the number of allowed unexcused absences, an instructor may require an official university excuse. Not more than 20% of class meetings (excused and/or unexcused) may be missed by a student during a given semester. At the discretion of the instructor, a student whose absences exceed 20% of scheduled class meetings for the semester may receive a grade of "F" for the course.

Students have the responsibility to confer with their instructors regarding all absences or intended absences. If sudden departure from the campus (for an emergency or extraordinary reason) prevents a student from communicating with each of his or her instructors, the student is expected to notify the Office of Student Services/Judicial Affairs within 48 hours.

Class excuses are issued for legitimate reasons (medical, funerals—immediate family members only, official university business/activities, etc.) by the Office of Student Services/Judicial Affairs. Official written documentation may be required. Notes from relatives, friends, etc., are not accepted as "official" documentation for absences. The Office of Student Services/Judicial Affairs will determine if an absence is legitimate and if an excuse will be issued.

Students who become ill are encouraged to report to the Student Health Center, located in Spartan Station, for "minor" medical treatment. A current NSU ID card must be presented prior to treatment. Written verification of illness issued by the Health Center should be carried to the Office of Student Services/Judicial Affairs, and an official University excuse should be obtained.

Students residing in on-campus housing facilities are governed by the same policies and procedures as non-residential students insofar as class attendance and class excuses are concerned.

ABSENCE FROM FINAL EXAMINATIONS

If a student misses a final examination because of an emergency, he or she should notify the instructor within 48 hours after the examination was scheduled. Excuses for missing a final examination are issued by the Office of Student Services/Judicial Affairs only with the consent of the instructor. Such excuses are given only in EXTREME EMERGENCIES, and official, written documentation MUST be presented before an excuse is issued.

Failure to follow the procedure outlined for absence from final examinations will result in a grade of "F" for the examination, and a final grade will be computed and given for the course.

LEAVE OF ABSENCE FROM THE UNIVERSITY

A leave-of-absence is granted to full-time students who need to interrupt studies at the end of a semester due to urgent circumstances. Leaves are granted for one or two full semesters, but not less than one full semester, to students who intend to return to the University.

Applications for a leave-of-absence are obtained from and returned to the Office of the Registrar. Students must specify the semester in which they expect to return. A dismissal from the University supersedes a leave-of-absence. A leave of absence is recorded on the student's official transcript. Students are not eligible for more than two (2) leaves-of-absence.

Students on leave must contact the registrar to receive an appointment to register for the semester of their planned return. Failure to register for the approved return semester will result in withdrawal from the University.

A student wishing to return after the approved return date must apply for readmission.

CONTINUOUS ENROLLMENT

Students who withdraw from all courses after the third week of the semester are considered to have been enrolled for the semester. Degree-seeking students who drop out for one semester, excluding summer sessions, may enroll in the subsequent semester provided they have not attended another college of university since last attending NSU, have not been suspended from NSU, and otherwise are eligible to return. A student who does not attend Norfolk State University for two or more consecutive semesters, excluding summer sessions, must submit an application for readmission. Readmission applications are available in the Office of the Registrar.

OFF-CAMPUS TRIPS

When a class is taken off campus, signatures of approval should be obtained from the department head and school dean prior to the trip. Written requests must include the destination, date and time of departure/return, mode of transportation, itinerary, a list indicating the student travelers, and the names of chaperones. A copy of approved requests should be forwarded to the Office of the Vice President for Academic Affairs and the Office of Student Services/Judicial Affairs. Students should be directed to the Office of Judicial Affairs/Student Services to obtain official class excuses.

The faculty/staff member in charge of any off-campus trip to be taken by an authorized University group (such as athletic teams, student organizations, musical or drama groups, etc.) should submit the same information in the preceding paragraph to the Office of the Vice President for Student Affairs prior to the trip. A copy of the same should also be forwarded to the Office of Student Services/Judicial Affairs so that students may obtain official class excuses.

THE GRADING SYSTEM, GRADE POINTS, AND GRADE POINT AVERAGE

The grade (quality) point system based upon all hours graded at Norfolk State University is used to calculate student scholarship as follows:

<u>Grade</u>	<u>Grade Points</u>	<u>Grade</u>	<u>Grade Points</u>
A	4.00	C	2.00
A-	3.70	C-	1.70
B+	3.30	D+	1.30
B	3.00	D	1.00
B-	2.70	D-	0.70
C+	2.30	F	0.00

*P None

**AU None Audit

I None Incomplete

W None Official Withdrawal

* Pass/fail grades are not available to graduate students, except in those courses designated for pass/fail credit.

** Entered by the registrar

The grade point average is obtained by dividing the total number of grade points earned by the total number of semester hours graded. Example:

<u>Course</u>	<u>Grade</u>	<u>Semester Hour</u>	<u>Grade Point</u>
HIE 264	C	1	2
HIE 264L	C+	2	4.6
HIE 149L	B-	2	5.4
HFD 340	B+	3	9.9
FIA 180	A-	3	11.1
MUS 301	D-	3	2.1
		14	35.1

(35.10 divided by 14 = 2.5071)

REMOVAL OF INCOMPLETE (I) GRADES

The "I" (Incomplete) symbol is used by the instructor when the course requirements have not been met because of illness or some other reason accepted by the instructor. It is the responsibility of the individual receiving the "I" to make arrangements with the instructor for the removal of the "I" grade. The instructor will set a time limit, usually no later than mid-term of the next semester, for the removal of the "I." Students have a time limit of one year to remove the "I" or it will change to "F" (failure). No student will be allowed to graduate with an "I" on the record.

GRADE APPEAL

The instructor has the responsibility for evaluating course work and determining grades; however, the student has the right to appeal a grade that he/she believes to be in error. The appeal process may involve the following steps (the issue may be resolved at any level):

1. The student confers with the instructor involved.
2. The student and instructor (preferably together) confer with the chairperson of the department offering the course.
3. The student and instructor (preferably together) confer with the dean of the school in which the department is housed.
4. When the above steps do not resolve the issue, the student may initiate a formal written appeal through the Vice President for Academic Affairs to the Faculty/Student Grievance Committee for its review and recommendation. Appeals should not be taken lightly by either the student or the instructor.
5. The student is responsible for verifying the accuracy of his/her academic records. Grade appeals should be made immediately after the grade in question is received. No appeals will be considered after one year has elapsed or after graduation, whichever is earlier.

GRADE REPORTS

Grade reports are made available to students each mid semester and at the end of each term. A copy of the grade report is mailed to: (1) the student at the home address of record; (2) the parent or guardian, if requested in writing by the student; student's major department. If no grade report is received, the student should contact the Office of the Registrar immediately.

REPEATING COURSES

A student who has received a final grade of "C-" through "F" in a course may repeat the course. The course to be repeated must be taken at Norfolk State University and taken prior to completion of the degree at Norfolk State University. The normal registration procedure must be followed when registering for repeat courses and the grade earned will be posted to the student's record. The credit and quality points for the highest grade earned (one grade only) will be used to calculate the student's GPA. All courses attempted (the original course attempted and the grade for that course) will remain on the student's permanent record and will appear on the transcript.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

As part of Norfolk State University's Program of flexibility to meet student needs and aspirations, a student may earn up to 60 credit hours through the CLEP General and Subject Examinations.

Any student or prospective student who has not received credit for or is not currently enrolled in a college level course in the particular field covered by the examination may take the test for CLEP credit.

CLEP is a nation-wide program of credit-by-examination that offers the opportunity to obtain recognition for college level achievement; personal reading, on-the-job experience or volunteer activities that may have prepared one to earn college credit. Each school determines which CLEP tests it will accept for credit and the amount of credit it will award.

ACADEMIC HONESTY

In keeping with its mission, the University seeks to prepare its students to be knowledgeable, forthright, and honest. It expects and requires academic honesty from all members of the University community. Academic honesty includes adherence to guidelines established by the University for the use of its libraries computers, other facilities.

"Academic or academically related misconduct" includes, but is not limited to, unauthorized collaboration or use of external information during examinations, plagiarizing or representing another's ideas as one's own, furnishing false academic information to the University, falsely obtaining, distributing, using, or receiving test materials; obtaining or gaining unauthorized access to examinations or academic research materials, soliciting or offering unauthorized academic information or materials, improperly altering or inducing another to alter improperly any academic record, or engaging in any conduct which is intended or reasonably likely to confer upon one's self or another an unfair advantage or unfair benefit respecting an academic matter.

Further information regarding academic or academically related misconduct, and disciplinary procedures and sanctions regarding such misconduct, may be obtained by consulting the current edition of the Norfolk State University Student Handbook.

COURSE SUBSTITUTIONS

A course substitution requires approval by the student's advisor, the department head and the school dean. A transfer student, upon selecting a major, must file with the Registrar a course substitution form, approved as above, no later than the end of the first semester in which he/she is enrolled in the University.

Substitution is not to be confused with waiver. Substitution is an option to meeting a requirement, while waiver implies exemption. Waivers are not granted.

Use of Military Science and Naval Science courses as substitutions requires approval of the advisor, the department head and the school dean and is limited to:

General Education Core - 6 hours

MIS and NCS 111, 112, 211, 212 for PED 100, HED 100

HIS 380 for HIS 100, 101, 102, 103

Free Electives - 6 hours

Upper-level (300, 400) MIS and NSC courses may be used provided the student is enrolled in the appropriate Military Science or Naval Science Program when substitutions are requested.

CHANGE OF MAJOR

Students who find it necessary to change majors should confer with the assigned University departmental advisor concerning the proposed change. An entrance interview should be scheduled and conducted with the department head or program director of the major to which the student is changing. The Petition to Change Major Form, available in each academic department, must be completed and signed by the department head of the relinquishing department and presented during the entrance interview. No student may change major without approval of the department from which and to which a transfer is made. A minimum grade of "C" is required in all courses in the major.

MINORS

Norfolk State University provides an opportunity for undergraduate, degree-seeking students to pursue studies in a minor. The minor may be chosen to complement the major, to provide recognition of study in a second academic area, to meet an area of interest by the student, or to increase job opportunities upon graduation. Completion of a minor is optional and is not required for degree completion. Minors are offered in Accounting, Astronomy, Biology, Chemistry, Computer Science, English, Fine Arts, History, Interdisciplinary Studies, Military Science, Mass Communications/Journalism, Music, Physics, Political Science, and Sociology.

Students who wish to pursue a minor must consult with their academic advisor at any time but no later than the time to submit an application for graduation and must declare a minor by completing a Change of Major/Minor Form. In order for the minor to appear on the transcript, the minor must be listed on the application for graduation. The minor will not appear on the diploma. All applicable University, school and departmental (major and minor) policies and procedures must be followed. Appropriate paperwork must be completed in a timely manner and must meet applicable deadlines.

REQUIREMENTS FOR THE ASSOCIATE DEGREE

The University awards the associate degree to those who successfully complete requirements as set forth for the program desired. Candidates for the associate degree must complete an application for graduation through their departments and pay the required fee. At least 20 hours of general education is required of students pursuing an associate degree. At least 25% of the coursework leading to an associate degree must be completed in residence (at Norfolk State University). Associate degree candidates must meet core competencies required of all NSU undergraduates.

The minimum requirements for the associate degree are 60 semester hours with a cumulative grade point average of 2.00. A grade of "C" or better is required in major courses and ENG 101 and ENG 102.

REQUIREMENTS FOR THE BACHELOR'S DEGREE

Requirements for the bachelor's degree are both quantitative and qualitative. The department head and advisor make the initial check for fulfillment of departmental requirements. The Office of the Registrar makes the final check for compliance with University-wide requirements.

To receive the bachelor's degree, a student must:

1. Complete the General Education Core requirements.
2. Have a minimum cumulative grade point average of 2.0.
3. Have a minimum of 120 semester hours of credit
4. Meet all requirements of the curriculum leading to the degree for which he/she is a candidate
5. Have spent a minimum of two semesters in residence at Norfolk State University and have earned a minimum of 30 semester hours of credit during this period, including all of the courses required by the senior year curriculum. Exceptions to this may be made only with PRIOR written approval of the Vice President for Academic Affairs upon recommendation of the Department Head and School Dean. Exceptions may not exceed six semester hours.
6. Meet core competency requirements.

GENERAL EDUCATION AT NORFOLK STATE UNIVERSITY

The general education core at Norfolk State University provides the foundation for the university's mission to develop in students the knowledge, qualities and attitudes necessary to become productive citizens who contribute to a globally and rapidly changing society. Such citizens are educated persons. They are life-long learners who communicate effectively and appreciate diverse manifestations of different cultures, recognize and exercise their responsibility to contribute to the growth of society, use technology

appropriately to enhance their personal and professional lives, and possess a rational open-mindedness that leads to analytical and critical patterns of thought.

The breadth of knowledge and skills imparted by the general education core complements the depth of knowledge that students acquire in their specialized fields, thus enhancing their ability to contribute to their local, national, and global communities."

Students entering Norfolk State University who complete the general education core will be able to:

1. Write and speak logically, clearly, and precisely;
2. Read and comprehend written and graphic information;
3. Locate, compile, organize, and document information from print and digital sources;
4. Understand mathematical and technological thought, conceptualize appropriate logic in problem solving;
5. Understand and apply key concepts, principles and processes in the natural and social sciences;
6. Demonstrate technological proficiency appropriate to their professional and personal needs;
7. Examine, evaluate and appreciate history's influences on economic, political and social events;
8. Understand and appreciate diverse cultures and perspectives;
9. Examine and understand the role of personal and responsible citizenship in a democratic society; and;
10. Appreciate aesthetics.

GENERAL EDUCATION REQUIREMENTS FOR THE BACCALAUREATE DEGREE

Students entering Norfolk State University seeking the baccalaureate degree are required to take forty semester hours from the general education core curriculum consisting of the following subject areas: Digital, Computer and Telecommunications (3); Communications (9); Humanities (6); Social Sciences (6); Mathematics (3); Natural Sciences (7); Health and Physical Education (3); and Cultural Electives (3). Departments may require specific courses for their majors.

Communications (9 Semester Hours)

ENG 101	Communication Skills I
ENG 102	Communication Skills II
SCM 285	Principles of Speech

Digital, Computer and Telecommunications (3 Semester Hours)

BAD 184	Intro to Data Processing & Business Applications
CLM 165	Computer Literacy for Musicians
CSC 150	Computer Literacy
FIA 180	Computer Literacy for the Arts
TED 170	Introduction to Technology

Health and Physical Education (3 Semester Hours)

PED 100	Fundamentals of Fitness for Life
HED 100	Personal and Community Health

Humanities (6 Semester Hours)

HUM 210	Humanities I
HUM 211	Humanities II
ENG 207	Literature of the Western World
FIA 201	Basic Art Appreciation
MUS 301	Music Appreciation
*ENG 383	African-American Literature
*FIA 370	African and African-American Art
*MUS 234	African-American Music

Mathematics (3 Semester Hours)

MTH 103	Contemporary Mathematics
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Natural Sciences (7 Semester Hours)

BIO 100	Biological Science
BIO 100L	Biological Science Lab
BIO 110	General Biology
CHM 100	Chemistry: Man and Environment
CHM 100L	Chemistry Lab
CHM 110	Basic Concepts in Chemistry
PHY 100	Physical Science
PHY 100L	Physical Science Lab
SCI 100	Life in the Universe

Social Sciences (6 Semester Hours)

SOC 101	Introduction to Social Sciences
HIS 100	History of World Civilization
HIS 101	History of World Civilization
HIS 102	United States History to 1877
HIS 103	United States History Since 1877
*HIS 335	African-American History to 1865
*HIS 336	African-American History Since 1865
*HIS 370	African History and Culture (Part 1)
*HIS 371	African History and Culture (Part 2)
*SOC 237	Cultural and Racial Minorities
*POS 315	Blacks in the American Political Process
*PSY 340	Psychology of African Americans

Cultural Elective (3 Semester Hours)

*Courses marked with an asterisk satisfy the University's cultural elective requirement.

UNIVERSITY CORE COMPETENCIES

The administration and faculty of Norfolk State University are committed to providing a high-quality education for students. Among other things, this commitment requires providing documented evidence that students are competent in six areas: writing, technology, oral communication, quantitative reasoning, scientific reasoning, and critical thinking. As a result, with advance notice, students will be required to demonstrate competency in one or more of these areas before graduating from the University. For example, all new students entering Norfolk State University in Fall 2001 and thereafter will be required to demonstrate competency in writing before graduating (See Writing Competency Assessment for additional information). Assessment of the remaining competencies is embedded in the related general education core courses. For example, assessment of scientific reasoning is embedded in courses meeting the Natural Sciences core.

WRITING COMPETENCY ASSESSMENT

Students who matriculate in Fall 2001 and thereafter will be required to take entry and exit examinations to assess their writing competency. After completing ENG 102, students must register for ENG 299 (no credit, no charge) until they have passed the Exit Examination of Writing Competency. The exit examination is a three-hour writing examination. Students will select a topic and respond to it with an essay of at least 500 words, using an expository form suitable for the topic. A satisfactory essay reflects the author's awareness of purpose and audience in its form, organization, content (development), and usage and style (syntax, vocabulary, grammatical and mechanical correctness). Students are required to take the exit writing examination before completing

90 semester hours. This will allow time for students who do not meet the minimum passing standard to develop a course of action for improvement to pass the examination before graduation.

STUDENT LEARNING OUTCOMES ASSESSMENT REQUIREMENT

As part of Norfolk State University's mission and commitment to provide the environment and resources needed for success, students may be required to participate in a number of assessment activities at various points throughout their matriculation. The activities may include entry or exit examinations, surveys, focus groups and exit interviews, portfolio reviews, and evaluations of competence or mastery of specific skills. The assessment activities are designed to measure student outcomes in general education and in the major prior to graduation. The primary purpose of the assessment activities is to determine the extent to which the university's academic programs and services maintain a high level of quality and meet the needs of the students. Group results will be reported. Individual student results will never be reported and will remain confidential. Information from the assessment activities will be used by faculty and administrators to improve programs and services.

DUAL DEGREE POLICY

Dual degrees are awarded to students who concurrently fulfill the requirements for two majors and two degrees. A dual degree is earned when the student completes University and departmental requirements in both majors. Students must complete the minimum requirement for institutional credits and meet the graduation requirement for grade point average (GPA).

A minimum of 25% (30 additional semester credit hours) above the minimum hour requirement of the major requiring the most credits is required to obtain a dual degree. All coursework for the second degree must be predefined and pre-approved by the department housing the second degree. The student will receive two diplomas and both degrees will appear on the student's permanent academic record.

SECOND BACCALAUREATE DEGREE

A student desiring to earn a second baccalaureate degree must complete application procedures with the Office of Admissions as with the first degree. Applicable credits from the previous degree may be applied (treated as transfer work) to the second degree; however, a minimum of 30 new resident credits will be required for the second degree. The usual departmental and University requirements must be met as with the first matriculation.

GRADUATION POLICY

Commencement exercises are held two times each year in May and December. Candidates must complete all requirements no later than the desired graduation date.

The Office of the Registrar processes all applications for graduation. Any student expecting to complete academic requirements at the end of a semester must complete and file an application for graduation through the academic department head's office by the designated due date for the applicable semester. It is the responsibility of the department head to submit the necessary forms and documentation to the Registrar's Office in compliance with established deadlines. A graduation application fee will be assessed in accordance with the University Fee Schedule.

The registrar will acknowledge in writing the receipt of all applications. Deficiencies and/or discrepancies must be resolved by department heads within prescribed guidelines. Failure to do so will subject the candidate to a future graduation status.

Each candidate/applicant is assessed a commencement fee in accordance with the fee schedule established for the desired graduation date to help defray certain related expenses, i.e., academic attire, announcements, diploma, etc.

COMMENCEMENT PARTICIPATION

Candidates for graduation must complete all degree requirements or be currently enrolled in all remaining credits that will complete degree requirements and satisfy all financial obligations in order to participate in commencement ceremonies. Academic and financial clearances must be obtained before academic attire is issued to the student. Participation in the commencement ceremonies does not mean the student has been awarded a degree. The degree is awarded in the semester when all degree requirements and conditions have been met, including the completion of all required paperwork.

The roster of candidates listed in the Commencement Program is a compilation of those eligible to participate. It should not be construed either as a complete or official list of those who will receive a university degree. Due to printing deadlines, names of some degree candidates may not appear. Honors distinctions are based on the candidate's academic record at the time of publication.

Diplomas will be mailed approximately eight weeks after Commencement to students who have completed requirements, completed an Application for Graduation and have no University encumbrances.

RECOGNITION FOR EXCELLENCE IN SCHOLARSHIP

Dean's List and an Honor Roll are compiled at the end of each fall and spring term and apply only to full-time (12-hour minimum) students. Eligibility for the Dean's List requires a minimum 3.50 term GPA with no "I" (incomplete) or missing grades and no grade less than a "C." Eligibility for the Honor Roll requires a term GPA of 3.00 -3.49 with no "I" or missing grades.

HONORS AT GRADUATION

The following honors categories for baccalaureate graduates are reflected in the printed Commencement Program and on official records (transcripts) produced by the University:

Summa Cum Laude: cumulative resident GPA 3.7500 - 4.0000.

Magna Cum Laude: cumulative resident GPA 3.500 - 3.7499

Cum Laude: cumulative resident GPA 3.0000 - 3.4999

CRITERIA FOR PARSONS VICE PRESIDENTIAL AND PARSONS PRESIDENTIAL SCHOLARSHIP DIPLOMAS

In order to graduate as a PARSONS VICE-PRESIDENTIAL SCHOLAR (a designation that will appear on the student's diploma), a student must meet the following criteria:

- Active participation in the NSU Honors Program (see page 32).
- Successful completion of at least 15 credit hours of Honors courses, including at least one of the Honors seminars (GST 345H/346H or GST 445H/446H), with a grade of C or above for each Honors course and a GPA of at least 3.0 for all Honors courses.
- A cumulative GPA of 3.0 or above for all work completed at Norfolk State University.

Transfer Honors credits from an accredited college or university with an honors program of its own may be substituted for no more than 9 hours of the above 15. No substitution credit can be accepted for the Honors Seminar requirement.

Classes designated exclusively for DNIMAS or CMR scholars within the NSU curriculum may be substituted for up to 9 credit hours of the above, excluding the Honors Seminar requirement for which there is no substitution.

Because the Honors seminars (GST 345H/346H and GST 445H/446H) may only be taken by juniors and seniors, students who have matriculated for an Associate Degree only cannot graduate as Parsons Vice-Presidential Scholars.

In order to graduate as a PARSONS PRESIDENTIAL SCHOLAR (a designation that will appear on the student's diploma), students must meet the following criteria:

- Successful completion of at least 30 credit hours of Honors courses, including at least one of the Honors seminars (GST 345H/346H or GST 445H/446H) and the community service course (SPE 497 H), with a grade of C or above for each Honors course and a GPA of at least 3.0 for all Honors courses. Students are strongly encouraged to take two or more of the aforementioned Honors seminars; however, the minimum of one will be mandatory. The community service course is also mandatory for all students.
- A cumulative GPA of 3.0 or above for all work completed at Norfolk State University.

Transfer Honors credits or DNIMAS/CMR credits may be substituted for up to 15 hours of the 30-hour total, but this does not include the Honors Seminar or SPE 497H requirements for which no substitutions can be made.

INTER-INSTITUTIONAL EXCHANGE PROGRAM WITH OLD DOMINION UNIVERSITY

Norfolk State University students have the opportunity to take courses at Old Dominion University through a student exchange program agreed to by the two institutions.

The registrar at each institution will register a student for courses at the other institution if the student presents a form properly signed by the appropriate university officials. The student exchange will be honored both in regular sessions and in the summer session. The Exchange Program applies to both graduate and undergraduate students. For degree purposes, credits earned by students will be considered as resident credits at the home institution. Courses taken at ODU under this Program will be considered the same as Norfolk State University courses; all other courses taken at ODU are subject to Transfer Credit Policy limitations. Registration under this Program is limited to students with cumulative grade point averages of 2.00 or better; the approval of the school's dean is required.

Regular bus service between campuses is provided during the regular session but is not available for evening classes or the summer session.

TIDEWATER CONSORTIUM EXCHANGE PROGRAM CROSS REGISTRATION

Norfolk State University students may also take undergraduate courses at any of the following Tidewater institutions: Christopher Newport University (Newport News), Hampton University (Hampton), Regent University, Tidewater Community College (all campuses), and Virginia Wesleyan College.

The following regulations apply to cross registration:

- Cross registration is limited to declared majors with cumulative grade point averages of 2.00 or better.
- Cross registration is limited to 30 semester hours.
- Cross registration is limited to courses not available to students at the home institution during the current semester.

For further information, contact the Office of the Registrar.

**OFFICE OF THE REGISTRAR
(757) 823-8229**

The Registrar is the official custodian of academic records and is responsible for the process of enrolling students in courses, assessing tuition charges and related fees, and collecting and maintaining academic information in accordance with University policy. The Registrar certifies students for graduation and is the keeper of the University seal. The Registrar is responsible for calculating and recording student grades and notifying students of their enrollment status, including academic probation and suspension.

REGISTRATION

The first step in the registration process is admission to the University. In order to attend classes at Norfolk State University, all students must complete the registration process. A schedule booklet outlining registration policies and procedures, schedule of classes, final examination schedules, and other information pertaining to registration for a given semester or summer school is available in the Office of the Registrar and is issued to each student prior to the scheduled registration period. Registration dates are included in the University calendar shown in this catalog. Students are responsible for complying with all of the policies and procedures governing registration, changing of class schedules, paying tuition, and fulfilling other requirements outlined in this catalog, the current schedule booklet, and other official publications. Each student must obtain the signature of the department head or the academic advisor on the Course Registration Worksheet, indicating approval of the student's schedule of courses. A student is not enrolled or registered until all necessary fees are paid.

EARLY REGISTRATION

Currently enrolled students are encouraged to register in advance (pre register) for the following spring or fall semester. The procedures for pre registration for an ensuing semester are published in the Registration Information and Schedule of Classes booklet available in the Office of the Registrar. The dates and times for registration are included in the Academic Calendar.

LATE REGISTRATION

A late registration fee of \$75 will be assessed against any student who fails to complete registration within the specified period for regular registration. The last dates for late registration, adding classes, and changing class schedules are listed in the Academic Calendar. Exceptions must be approved by the Vice President for Academic Affairs.

Additional information about academic policies and procedures related to registration, matriculation, withdrawal, degree completion and graduation is provided in the Academic Policies section of the catalog.

TRANSCRIPT OF RECORD

A transcript is a history of the student's permanent academic record. Transcripts are issued only upon the written request of the student or his or her authorized agents and should be requested at least 7 days prior to the date needed.

Students may request transcripts of work completed at the University by completing a transcript Request Form in person on the first floor of Wilson Hall, Room 110, or by mailing the request to: Registrar's Office, Room 110 Harrison B. Wilson Hall, 700 Park Avenue, Norfolk, Virginia 23504. The fee for each transcript is \$ 3.00 and may be paid in person at the Cashier's office, first floor of Wilson Hall or mailed with the written request. Students should allow at least 3 to 7 business days for processing.

Transcripts are released only when a student's account is paid in full and the student's loans are current.

RELEASE OF STUDENT INFORMATION

Student records are not available without the student's written consent.

I. **Exceptions**: school officials, including teachers within the educational institution or local educational agencies that have a legitimate educational interest.

The following information has been declared "Directory Information" and may be released by the University without prior consent of the student: name, address, date and place of birth, major field of study, participation in official activities, weight and height of athletic team members, dates of attendance, degree, honors and awards received, and previous educational agency or institution attended.

II. **"Directory Information"** will not be released for commercial purposes. A student may contact the Office of the Registrar in writing, to request that "Directory Information" not be released.

Access to personal records and files is guaranteed to every student and subject only to regulations as to time, place, and supervision. Members of the faculty with administrative assignments may have access for internal educational purposes as well as for routinely necessary administrative and statistical purposes.

Properly identified officials from federal, state, and local governmental agencies may be given the following information: name and address of parent or guardian if student is a minor and any information required under legal compulsion.

Unless under legal compulsion, personal access to a student's file should be denied to any person making an inquiry.

Disciplinary proceedings will not be made available to any person or agency unrelated to the University.

Upon graduation or withdrawal from the institution, the records and files of former students shall continue to be subject to the provisions of this code.

III. Documents that Constitute a Permanent Record:

- A. Admissions Application
- B. High School Transcript
- C. SAT/ACT Scores
- D. Domicile Application (if appropriate)
- E. Advanced Placement Credit (if appropriate)
- F. Grade Changes (if appropriate)
- G. Transfer Evaluation Credits (if appropriate)
- H. Graduation Application
- I. Degree Request (if appropriate)
- J. History of Student

IV. Retention and Disposition of Records

According to Records Retention and Disposition Schedule, General Schedule No. III records are retained 5 years from date of last action, and then destroyed.

ACADEMIC RESOURCES AND SERVICES

OFFICE OF THE FIRST YEAR EXPERIENCE

757-823-8507

The first year of college is the foundation upon which the entire academic experience is built. Norfolk State University views the first year of college as an essential time to help students build a solid foundation for life-long academic, personal, and career success. For this reason, the Office of the First Year Experience was established to assist students in making the transition to college, to work as advocates for first-year students, to provide academic support services to first-year students, to work with faculty to increase student retention and persistence to graduation, and to serve as a resource to all University units in serving the needs of first-year students.

The Office of The First Year Experience oversees the various activities and programs currently existing to support students; designs, recommends, and coordinates existing and new programs or initiatives focusing on the first-year experiences of new and transfer students; ensures cohesiveness in academic support services impacting new and transfer students; and assesses student outcomes as a result of first-year curricular and co-curricular programs and services.

The Office of The First Year Experience strives to:

- Assist students in making the transition to college
- Address the needs of first-time freshmen and transfer students
- Work with faculty to increase student persistence to graduation
- Work with faculty to ensure students achieve general education goals
- Serve as a resource to faculty advisors

New Student Orientation and Freshman Seminar

757-823-8912

New Student Orientation

New students (entering freshmen and transfer students) are invited to the campus for New Student Orientation during the summer or prior to the beginning of the second semester. All students attending these sessions register for the next semester classes and participate in activities that familiarize the students with the University's facilities, policies, procedures, services and programs.

Freshman Seminar

Freshman seminar (FRS 100) is a course required for all new students (entering freshmen and first time transfer students who have not taken an orientation course at the transferring institution) enrolled in the University for the first time. It is a requirement for graduation. The course meets one hour per week for one semester and carries no hours of credit. The course will be evaluated as Pass/Fail.

Academy for Collegiate Excellence and Student Success (ACCESS)

757-823-8507

The Academy for Collegiate Excellence and Student Success (ACCESS) Program is a multi-faceted comprehensive program designed to facilitate and improve student success, retention and graduation rates. Emphasis is on intrusive academic advising which involves selecting courses, strengthening basic skills, reinforcing classroom instruction, and enhancing overall student academic, personal, and career development.

ACCESS serves as an advocate for students and provides academic support services to all students. As advocates for students, ACCESS collaborates with all units in an effort to increase student retention and to produce academically prepared professionals who are ready to contribute to their communities. For additional information, please contact ACCESS at 757-823-8507 or visit www.nsu.edu/access/.

Comprehensive Language Learning Center

The Comprehensive Language Learning Center, located in Room 134 of J. Hugo Madison Hall, is a state of the art, interactive laboratory providing tutorial, computer assisted, audio, and video services for students and teachers of writing and the foreign languages.

Child Development Laboratory

The Child Development Laboratory is part of Early Childhood Education in the School of Education. The laboratory provides a training and observation facility for class assignments, research, student teaching and field work.

It provides a readiness curriculum for ages 2.6 to 5 years. Hours of operation are 8:00 a.m. to 5:00 p.m.

Educational Media and Television Center .....	39

The primary aims of the Educational Media and Television Center are (1) to provide educational media and television services for the instructional use of faculty and students; (2) to assist them in developing a systematic approach to the selection, utilization and evaluation of educational media and television for instruction; (3) to assist faculty and students under certain conditions in developing minimum competence in the operation and care of audio-visual and television equipment and facilities; and (4) to assist them in increasing their understanding of the role and value of educational technology in the teaching and learning process.

Mathematics Testing Center

The mission of the Mathematics Testing Center is:

1. to monitor computer pretests for the MTH 101 Elementary Algebra Lab Component;
2. to evaluate and record results of pretest mastery for MTH 101 faculty;
3. to diagnose deficiencies of students enrolled in MTH 101;
4. to provide tutorial assistance for all pre-calculus courses.

Mathematics Media Center

This center contains workstations and audio visual materials to support classroom assignments and activities.

Multicultural Learning Resource Center

The Multicultural Learning Resource Center has a twofold purpose: (1) to identify, locate and/or provide materials and instructional media appropriate for use in developing teaching competence in multiple disciplines, with students whose abilities, socioeconomic status and cultural heritage differ, and (2) to encourage client competence in media selection and utilization.

Planetarium

The Norfolk State Planetarium is primarily a sky theater and laboratory, which may serve as a dramatic and fascinating facility for teaching concepts of Earth space science.

The Planetarium provides public shows for the University, the community, and the general public as a community service.

Interested community groups are invited to make reservations for a prepared show or they may request planetarium personnel to create a "tailor-made" program on a topic of special interest.

Teacher Education Resource Center (TERECE)

The Teacher Education Resource Center is committed to providing high quality service to teacher education candidates. TERECE increases the capacity of teacher candidates/interns to meet the requirements of methods courses. The primary goal is to link students with teacher resources. Education materials are available for loan, including assessment instruments, curricula, audio visuals, reference books, computer software and assistive technology.

The School of Liberal Arts Social Science Center for Applied Research and Public Policy

The Center for Applied Research and Special projects is a computer-based social science research laboratory. Research and special projects include, but are not limited to, voting behavior studies; urban and neighborhood development studies; transportation studies; health population and policy studies; international development studies; and nonprofit organizations and government agencies restructuring studies. The Center provides opportunities for students as well as faculty to gain expertise. The Center for Applied Research and Special Projects is nationally recognized as one of the most technologically advanced research centers in the country.

Communication Sciences and Disorders Center

Special services in speech, language and hearing therapy are provided for students who have unusual difficulties in oral communication. These services are coordinated by a staff of highly trained speech pathologists and audiologists. There are no charges for these services. Students must be referred to the Speech Communication Laboratory by a member of the faculty. This is the only requirement for acceptance to the Center. Students, however, must assume the responsibility for meeting therapy appointments once they have been accepted. Dismissal from therapy is determined by the Speech Center staff.

**THE OFFICE OF GRADUATE STUDIES
(757) 823-8015**

The Office of Graduate Studies administers the University's twenty (20) graduate programs in the Schools of Education, Liberal Arts, Social Work, and Science and Technology. The Office is responsible to the Vice-President for Academic Affairs for the provision of fundamentally sound program development to meet the demands of a dynamic society. The Director of Graduate Studies serves as Chair of the Graduate Council and initiates activities and policies designed to maintain the currency of the graduate programs.

THE GRADUATE COUNCIL

The Graduate Council is responsible for the planning, development, and recommendation of policies, regulations, and procedures for all graduate programs at the University. Its aim is to ensure the satisfactory coordination of graduate studies and the

maintenance of high quality graduate instruction. The Council, therefore, determines the following: (1) criteria for the selection of graduate faculty; (2) instructional loads for the graduate faculty; (3) requirements for admission to graduate study at the University; (4) mechanisms for the evaluation of effectiveness of graduate programs; (5) regulations governing the number of undergraduate hours which graduate students can apply towards a graduate degree and the admission of undergraduate students to graduate courses; (6) the number of transferable graduate credits that a student is allowed to accumulate and (7) other matters regarding procedures, policies, and regulations as they are presented to the Council for consideration.

Membership on the Graduate Council is restricted to representatives from those schools housing graduate programs, those schools which have been granted approval by the State Council of Higher Education in Virginia to implement graduate programs, the Faculty Senate, the Vice President for Academic Affairs, the library, one graduate student, and a representative of the Centers of Higher Education.

DEGREES GRANTED

Norfolk State University offers advanced degrees in the following areas:

1. Applied Sociology (Master of Arts) - Jointly with Old Dominion University
(Old Dominion University serves as the Institution of Record)
2. Media and Communications - Master of Arts
 - A. Interpersonal Communication Sequence
 - B. Mass Communications Sequence
 - C. Journalism Sequence
3. Community Psychology – Master of Arts
4. Clinical Psychology – Doctor of Clinical Psychology (Virginia Consortium Program in Clinical Psychology with Eastern Virginia Medical School serving as the institution of record) PSY.D.
5. Secondary Education - Master of Arts in Teaching (MAT)
6. Early Childhood Education – Master of Arts in Teaching
7. Materials Science - Master of Science
8. Music - Master of Music (MMUS)
9. Pre-Elementary Education - Master of Arts
10. Severe Disabilities - Master of Arts
11. Social Work - Master of Social Work (MSW) - Doctor of Social Work (DSW)
12. Urban Affairs - Master of Arts
13. Urban Education - Master of Arts
14. Visual Studies (Jointly with Old Dominion University) - Master of Arts - Master of Fine Arts (MFA)
(Norfolk State serves as the Institution of Record for the Visual Studies Program)
15. Criminal Justice - Master of Arts
16. Computer Science - Master of Science

Additional information about graduate studies at NSU is provided in the Graduate Studies Catalog.

SCHOOL OF BUSINESS**H. Martin Shane, Dean****(757) 823-8920****NORFOLK STATE UNIVERSITY MISSION STATEMENT**

To provide an affordable, high-quality education for an ethnically and culturally diverse student population, equipping them with the capability to become productive citizens who continuously contribute to a global and rapidly changing society.

THE SCHOOL OF BUSINESS MISSION STATEMENT

The mission of the School of Business at Norfolk State University is to provide a high-quality, management education to a diverse student population. This is accomplished primarily through teaching and the development of instructional and other processes which ensure that students are equipped to be productive citizens in a global society.

ACCREDITATION

The School of Business is accredited by AACSB International --The Association to Advance Collegiate Schools of Business. Founded in 1916, AACSB International is recognized as the sole accrediting agency for baccalaureate, master's, and Ph.D. degree programs in business administration and accounting by the U.S. Department of Education and by the Council on Post Secondary Accreditation.

ORGANIZATION OF THE SCHOOL

The Norfolk State University School of Business has five departments:

1. Accounting
2. Management and Marketing
3. Finance and Entrepreneurship
4. Management Information Systems
5. Tourism and Hospitality Management

PROGRAMS OF STUDY

The Bachelor of Science (B.S.) degree is offered in Accounting, Business Education and Tourism and Hospitality Management. The Bachelor of Science (B.S.) in General Business has concentrations in Entrepreneurship, Finance, Management Information Systems, Management and Marketing.

ADMISSION REQUIREMENTS**A. Business Majors**

The School of Business has a lower division (freshman, sophomore) and an upper division (junior, senior). Admission requirements for lower division students are:

1. Completion of two units of high school mathematics (including one unit of algebra) and two units of science.
2. A cumulative grade point average of "C" (2.00) or better in high school or college work.
3. Indication of readiness to enroll in English 101, adequate reading skills, and eligibility to enroll in college mathematics as evidenced by scores on college placement examinations.

Admission to the upper division requires the completion of all courses in the lower division (freshman, sophomore years) with a minimum cumulative grade point average of 2.00. Non matriculating students may not take courses in the School of Business without consent of the department head and dean.

Students transferring courses to Norfolk State University from colleges and universities accredited by AACSB International may be granted advanced standing.

Transfer credits from community colleges and other schools not accredited by AACSB International will be accepted for those approved courses equivalent to those specified for the freshman and sophomore years in the major program selected in the School of Business. Exceptions to this policy may be established by the Dean of the School of Business and the Department Head. At least 50 percent of business course credits must be earned at NSU.

B. Minor in Business

A non-business student is required to take SIX courses (18 Hours) to earn a minor in Business. This will include FIVE required courses (15 hours) and ONE elective course (3 hours).

Required Courses

BAD 175	Introduction to Business	3
ACC 201	Principles of Accounting I	3
MGT 365	Organizational Behavior & Theory	3
MKG 366	Principles of Marketing	3
MSY 375	MIS and E-Commerce	3

Elective Courses (Choose one)

DSC 370	Total Quality Management	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3

COMMON BUSINESS KNOWLEDGE

The following courses are to be taken by each student in a baccalaureate program in the School of Business to meet the Common Business Knowledge requirements:

ACC 201	Principles of Accounting I	3	BAD 450	Business Seminar	1
ACC 202	Principles of Accounting II	3	FNC 281	Legal Environment for Business	3
ASM 330	Business Communications	3	FNC 360	Corporate Finance	3
BAD 175	Introduction to Business	3	MGT 365	Organizational Behavior and Theory	3
DSC 270	Business Statistics	3	MGT 478	Strategic Management	3
DSC 376	Statistics & Quantitative Methods	3	MKG 366	Principles of Marketing	3
DSC 476	Operations Management	3	MSY 284	Advanced Microcomputing	3
ECN 211	Principles of Economics I	3	MSY 375	Management Information Systems & E-Commerce	3
ECN 212	Principles of Economics II	3			
ENT 387	Introduction to Entrepreneurship	3	Business Core Elective		3
TOTAL					55 cr hrs

CURRICULUM REGULATIONS

- All freshman and sophomore-level (lower division) courses in the curriculum must be completed before enrolling in junior and senior-level (upper division) courses. Upon completion of the lower division courses, a student whose grade point average is at least 2.0 may apply to the Department for admission to upper division.
- A letter grade of "C" or higher must be earned in all courses offered in the School of Business. In addition, a letter grade of at least "C" must be earned in the following non-business courses:

ENG 101	Communication Skills I	MTH 132	Calculus for Non-Science Majors
ENG 102	Communication Skills II	SCM 285	Principles of Speech
MTH 131	Pre-calculus for Non-Science Majors		

TRANSFER STUDENTS

Credits transferred to Norfolk State University from other AACSB-International-accredited colleges or universities may be accepted as substitutes for equivalent courses in the accounting curriculum at Norfolk State University, without restriction. Credits transferred to Norfolk State University from colleges or universities not accredited by the AACSB-International may be accepted as substitutes only for those courses determined to be equivalent to lower division courses in the accounting curriculum at Norfolk State University. Credits transferred to Norfolk State University from the Virginia Community College System (VCCS) will be accepted as substitutes for equivalent courses in the accounting curriculum at Norfolk State University, according to the Norfolk State University/Virginia Community College System Transfer Guide. Exceptions to this policy could result from testing or other validation procedures established by the Dean of the School of Business and the Department Head.

ATTENDANCE POLICY

All students must attend class in accordance with the University attendance policy stated in the student handbook. Failure to do so may result in dismissal from class or a grade of "F."

COURSE LOAD

In order to ensure that students have the best chance of successfully pursuing their studies, the maximum permissible course load for all majors will depend on current cumulative grade point average. The following course load limitations will apply.

CUMULATIVE GPA	MAXIMUM HOURS
Below 2.0	12
2.0 - 2.49	15
2.5 and above	18

SCHOLARSHIPS

The School of Business awards a limited number of scholarships each year to students who show high promise and/or demonstrate a need for financial assistance. Special scholarship programs in the School of Business include the American Institute of Certified Public Accountants (AICPA) Scholarship Program, Philip Morris, Bank of America, Norfolk Southern, Disney, and El-Fayoumy Scholarships. Students interested in applying for scholarships may contact the Chair of the Scholarships Committee for the School of Business.

STUDENT ORGANIZATIONS

Various student organizations exist in the School of Business and are designed (1) to develop competent, assertive business leadership; (2) to create an interest and understanding of the many career opportunities in business, industry, and government; and (3) to encourage improvement in scholarship and service and promote school loyalty. A listing of student organizations includes the following:

American Marketing Association
Beta Gamma Sigma
Finance and Banking Club
Society for the Advancement of Management

Students in Free Enterprise (SIFE)
Management Information Systems Club
National Association of Black Accountants (NABA)

SCHOOL OF BUSINESS ADVISORY COUNCIL

The School of Business Advisory Council operates as an external group to review policies, procedures, and programs in the School of Business. In addition, the Advisory Council through its Corporate Associates Program (CAP) is the major fund-raising component in the School of Business.

CAREER PLANNING AND PLACEMENT

The School of Business offers career-development seminars and services to aid students in making a successful transition from school to work. Career-development seminars, conducted by the Placement Office, aid students in developing career-planning and job-search abilities. In addition, numerous employers from business, industry, and government visit the University to interview students seeking employment. The School of Business sends a resume book with the resumes of graduating seniors to selected Fortune 500 Corporations twice a year.

CENTER FOR ENTREPRENEURSHIP **Melinda Harris, Acting Director** **(757) 823-2655**

The Center provides leadership, programs, and resources that enable the University to add value to businesses served while immersing students in the entrepreneurial experience. Through multidisciplinary teams, the Center extends knowledge and technical assistance that act to strengthen and expand the number and quality of minority- and women-owned, growth-oriented, and technology-driven businesses.

Students are strongly encouraged to participate in the activities, programs, and initiatives of the Center. The Center creates varied opportunities for students to participate through membership on consulting teams and internships. Experiential learning complements academic preparation by deepening and enriching students' understanding of entrepreneurship and ownership. This experience, and the insights gained, serve to build confidence and stimulate the entrepreneurial spirit.

All majors are welcome. The faculty members aligned with the Center bring a wealth of corporate and entrepreneurial experience, and they actively serve as mentors and coaches to students. In many cases, students engaged by the Center earn while they learn. The goals of the Center are to:

- Design and deliver educational programs (workshops, seminars, internships) and technical assistance to individuals and organizations in order to expand entrepreneurial expertise.
- Engage in applied research that contributes knowledge and encourages business formation and growth among minorities and women.
- Create an environment that immerses NSU students in the entrepreneurial experience.
- Propose recommendations to policy makers to develop and shape effective programs and policies for supporting growth-oriented, technology-based ventures.

DEPARTMENT OF ACCOUNTING
Allan D. Unseth, Department Head
(757) 823-8217

The primary objective of the Department of Accounting is to prepare students to become successful. This is achieved by making available a learning environment in which students are encouraged to develop both technical and interpersonal skills. The Department prepares students for careers in public accounting, industry or the governmental sector. The faculty encourages a commitment to life-long learning and strives to develop technical competence, information technology proficiency, critical thinking, teamwork and communication.

PROGRAM OF STUDY

The Bachelor of Science degree in Accounting requires a minimum of 122 hours of undergraduate work. The courses required of all accounting majors are as follows:

ACCOUNTING CURRICULUM
(Bachelor of Science in Accounting)

First Year			Third Year		
FRS 100	Freshman Seminar	0	ACC 301	Intermediate Accounting I	3
BAD 175	Introduction to Business	3	ACC 302	Intermediate Accounting II	3
xxx xxx	Science Elective	3	ACC 315	Federal Income Tax I	3
xxx xxx	Science Laboratory Elective	1	ACC 413	Cost Accounting	3
BIO 100	Biological Science	3	ASM 330	Business Communications	3
ENG 101	Communication Skills I	3	DSC 376	Statistics and Quantitative Methods	3
ENG 102	Communication Skills II	3	ENT 387	Introduction to Entrepreneurship	3
HED 100	Personal and Community Health	2	FNC 360	Corporate Finance	3
MTH 131	Pre-calculus for Non-Science Majors	3	MGT 365	Organizational Behavior and Theory	3
MTH 132	Calculus for Non-Science Majors	3	MKG 366	Principles of Marketing	3
MSY 284	Advanced Microcomputing	3	TOTAL		30 cr hrs
PED 100	Fitness for Life or Modified PED	1			
PSY 210	Introduction to Psychology	3	Fourth Year		
TOTAL		31 cr hrs	ACC 330	Accounting Systems	3
			ACC 411	Intermediate Accounting III	3
Second Year			ACC 414	Auditing	3
ACC 201	Principles of Accounting I	3	BAD 450	Business Seminar	1
ACC 202	Principles of Accounting II	3	DSC 476	Operations Management	3
DSC 270	Business Statistics	3	MGT 478	Strategic Management	3
ECN 211	Principles of Economics I	3	MSY 375	Management Information Systems & E-Commerce	3
ECN 212	Principles of Economics II	3	SOC 325	Society, Business, and Internationalism	3
FNC 281	Legal Environment	3	xxx xxx	Global/Cultural & Language Elective	6
LOG 210	Logic: Critical Thinking	3	xxx xxx	Business Core Elective	3
SCM 285	Principles of Speech	3	TOTAL		31 cr hrs
xxx xxx	Humanities	3			
xxx xxx	Global/Cultural & Language Elective	3	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL		30 cr hrs	General Education Requirements		40
			Common Business Core		55
			Major Requirements		21
			Liberal Arts Supplement		6
			TOTAL		122 cr hrs

Minor in Accounting

A minor in Accounting requires the completion of the following courses

ACC 201	3	ACC 301	3
ACC 202	3	300- and/or 400-level accounting courses	6

All courses at the 300 and 400 levels must be preceded by listed prerequisites. To receive a minor, the students must achieve a minimum grade of "C" in all accounting courses taken. Also, a minimum of six hours in upper-level courses in the minor requirement must be taken at Norfolk State University.

Certifications

Many graduates want to obtain a professional certification. The Certified Public Accountant (CPA) certificate is the best known of these. Effective July 1, 2006, students taking the CPA examination in Virginia will have to meet the 150-hour requirement. However, most states already require students to meet the 150-hour requirement. Students should discuss with their advisors the options that the Department of Accounting has for meeting this requirement.

Graduates of the program may also take the Certified Management Accountant (CMA) examination or the Certified Internal Auditor (CIA) examination. These examinations do not require 150 hours of college credit.

Dual-Degree Program

There are two dual degree programs. A student will be able to pursue degrees in accounting and general business (with a concentration in management information systems or finance). Each program has a 30-semester hour curriculum for the 5th year. The student would receive two diplomas, and both degrees will appear on the student's permanent academic record. Please see a faculty advisor or the department head for more information.

DEPARTMENT OF FINANCE AND ENTREPRENEURSHIP**Wold Zemedkun, Department Head****(757) 823-8955**

This department's curricula consist of two career-oriented sequences, either of which leads to a Bachelor of Science in General Business: Entrepreneurship and Finance. The objectives of the department curricula are as follows:

1. To provide students majoring in Finance with a thorough knowledge of the concepts, theories, and principles needed to develop and implement successfully financial management systems.
2. To provide students with a broad background of management concepts, theories, and principles which can be used effectively in entrepreneurial and corporate entrepreneurial environments.
3. To help students understand and appreciate the different aspects of business, including being an entrepreneur.
4. To help students prepare for graduate programs.

ENTREPRENEURSHIP CURRICULUM
(Bachelor of Science in General Business)

First Year			Third Year		
FRS 100	Freshman Seminar	0	ASM 330	Business Communications	3
BAD 175	Introduction to Business	3	DSC 376	Statistics and Quantitative Methods	3
xxx xxx	Science Elective	6	ENT 386	New Venture Finance	3
xxx xxx	Science Laboratory Elective	1	ENT 387	Introduction to Entrepreneurship	3
ENG 101	Communication Skills I	3	FNC 360	Corporate Finance	3
ENG 102	Communication Skills II	3	MGT 365	Organizational Behavior and Theory	3
HED 100	Personal and Community Health	2	MKG 366	Principles of Marketing	3
MTH 131	Pre-calculus for Non-Science Majors	3	MSY 375	Management Information Systems & E-Commerce	3
MTH 132	Calculus for Non-Science Majors	3	SOC 325	Society, Business, and Internationalism	3
MSY 284	Advanced Micro computing	3	xxx xxx	Global/Cultural & Language Elective	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1	TOTAL		30 cr hrs
PSY 210	Introduction to Psychology	3			
TOTAL		31 cr hrs			
Second Year			Fourth Year		
ACC 201	Principles of Accounting I	3	BAD 450	Business Seminar	1
ACC 202	Principles of Accounting II	3	DSC 476	Operations Management	3
DSC 270	Business Statistics	3	ENT 465	Small Business Management	3
ECN 211	Principles of Economics I	3	ENT 476	Franchising	3
ECN 212	Principles of Economics II	3	ENT 482	Managing Growing Ventures	3
FNC 281	Legal Environment	3	ENT 484	Creativity Innovation and Change Management	3
LOG 210	Logic: Critical Thinking	3	ENT 495	International Entrepreneurship	3
SCM 285	Principles of Speech	3	ENT xxx	Entrepreneurship Elective	3
xxx xxx	Humanities	3	MGT 478	Strategic Management	3
xxx xxx	Global/Cultural & Language Electives	3	xxx xxx	Global/Cultural & Language Elective	3
TOTAL		30 cr hrs	xxx xxx	Business Core Electives (See Note E)	3
			TOTAL		31 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	40
Common Business Core	55
Major Requirements	21
Non-Business Supplement	6
TOTAL	122 cr hrs

FINANCE CURRICULUM
(Bachelor of Science in General Business)

First Year			Second Year		
FRS 100	Freshman Seminar	0	ACC 201	Principles of Accounting I	3
BAD 175	Introduction to Business	3	ACC 202	Principles of Accounting II	3
xxx xxx	Science Elective	6	DSC 270	Business Statistics	3
xxx xxx	Science Laboratory Elective	1	ECN 211	Principles of Economics I	3
ENG 101	Communication Skills I	3	ECN 212	Principles of Economics II	3
ENG 102	Communication Skills II	3	FNC 281	Legal Environment	3
HED 100	Personal and Community Health	2	LOG 210	Logic: Critical Thinking	3
MTH 131	Pre-calculus for Non-Science Majors	3	SCM 285	Principles of Speech	3
MTH 132	Calculus for Non-Science Majors	3	xxx xxx	Humanities	3
MSY 284	Advanced Micro computing	3	xxx xxx	Global/Cultural & Language Electives	3
PED 100	or PED 101/102	1	TOTAL		30 cr hrs
PSY 210	Introduction to Psychology	3			
TOTAL		31 cr hrs			
			Third Year		
			ACC 361	Financial Statement Analysis	3
			ASM 330	Business Communications	3

DSC 376	Statistics and Quantitative Methods	3	FNC 488	International Finance	3
ENT 387	Introduction to Entrepreneurship	3	FNC xxx	Finance Elective	3
FNC 360	Corporate Finance	3	MGT 478	Strategic Management	3
FNC 310	Risk Management	3	MSY 375	Management Information Systems & E-Commerce	3
FNC 362	Investments	3	xxx xxx	Global/Cultural & Language Elective	6
MGT 365	Organizational Behavior and Theory	3	xxx xxx	Business Core Elective	3
MKG 366	Principles of Marketing	3	TOTAL		31 cr hrs
SOC 325	Society, Business & Internationalism	3			
TOTAL		30 cr hrs			
Fourth Year					
BAD 450	Business Seminar	1	SUMMARY OF GRADUATION REQUIREMENTS		
DSC 476	Operations Management	3	General Education Requirements		40
FNC 363	Financial Institutions	3	Common Business Core		55
FNC 395	Introduction to Personal Finance Planning	3	Major Requirements		21
			Non-Business Supplement		6
			TOTAL		122 cr hrs

DEPARTMENT OF MANAGEMENT AND MARKETING

Gary L. Whaley, Department Head
(757) 823-8915

The Department of Management and Marketing offers two concentrations, that lead to the Bachelor of : Management and Marketing.

The mission of the Department is to provide students with knowledge that will enable them to become productive managers and entrepreneurs. To accomplish this mission, the Department developed effective curricula in Management and Marketing; provide students with the state of the art body of knowledge in these areas; and develop and maintain faculty who are committed to excellence in teaching, research, and service to the University and the business community.

The objectives of these curricula are as follows:

1. To provide students with necessary skills that will enable them to function successfully in all types of organizations.
2. To provide students with a state-of-the-art body of knowledge in Total Quality Information Technology and in its application to all organizational functions.
3. To enable students to better understand the relationship between information technology and decision-making models in their respective functional areas.
4. To assist students in preparing for graduate studies in the areas of quality management, human resource management, and marketing.
5. To provide students with insight, guidance, training and sensitivity to the multicultural and global nature of the industry workforce and the public served.

MANAGEMENT CURRICULUM
(Bachelor of Science in General Business)

First Year			Third Year		
FRS 100	Freshman Seminar	0	ASM 330	Business Communications	3
BAD 175	Introduction to Business	3	DSC 370	Total Quality Management	3
xxx xxx	Science Elective	6	DSC 376	Statistics and Quantitative Methods	3
xxx xxx	Science Laboratory Elective	1	ENT 387	Intro. to Entrepreneurship	3
ENG 101	Communication Skills I	3	FNC 360	Corporate Finance	3
ENG 102	Communication Skills II	3	MGT 365	Organizational Behavior and Theory	3
HED 100	Personal and Community Health	2	MKG 366	Principles of Marketing	3
MTH 131	Pre-calculus for Non-Science Majors	3	MGT 368	Human Resource Management	3
MTH 132	Calculus for Non-Science Majors	3	MSY 375	Management Information System & E-Commerce	3
MSY 284	Advanced Microcomputing	3	SOC 325	Society, Business & Internationalism	3
PED 100	or PED 101/102	1	TOTAL		30 cr hrs
PSY 210	Introduction to Psychology	3			
TOTAL		31 cr hrs			
Second Year			Fourth Year		
ACC 201	Principles of Accounting I	3	BAD 450	Business Seminar	1
ACC 202	Principles of Accounting II	3	DSC 476	Operations Management	3
DSC 270	Business Statistics	3	MGT 478	Strategic Management	3
ECN 211	Principles of Economics I	3	MGT 410	Leadership and Diversity in Management	3
ECN 21	Principles of Economics II	3	MGT 415	International Management	3
FNC 281	Legal Environment	3	MGT 420	Organizational Change and Development	3
LOG 210	Logic: Critical Thinking	3	MGT xxx	Management Electives	6
SCM 285	Principles of Speech	3	xxx xxx	Global/Cultural & Language Electives	6
xxx xxx	Humanities	3	xxx xxx	Business Core Elective	3
xxx xxx	Global/Cultural & Language Elective	3	TOTAL		31 cr hrs
TOTAL		30 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
			General Education Requirements		40
			Common Business Core Requirements		55
			Major Requirements		21
			Non-Business Supplement		6
			TOTAL		122 cr hrs

MARKETING CURRICULUM
(Bachelor of Science in General Business)

First Year			Third Year		
FRS 100	Freshman Seminar	0	ASM 330	Business Communications	3
BAD 175	Introduction to Business	3	DSC 376	Statistics and Quantitative Methods	3
xxx xxx	Science Elective	6	ENT 387	Introduction to Entrepreneurship	3
xxx xxx	Science Laboratory Elective	1	FNC 360	Corporate Finance	3
ENG 101	Communication Skills I	3	MGT 365	Organizational Behavior and Theory	3
ENG 102	Communication Skills II	3	MKG 366	Principles of Marketing	3
HED 100	Personal and Community Health	2	MKG 367	Customer Identification and Analysis	3
MTH 131	Pre-calculus for Non-Science Majors	3	MKG 411	Salesmanship	3
MTH 132	Calculus for Non-Science Majors	3	MSY 375	Management Information Systems & E-Commerce	3
MSY 284	Advanced Microcomputing	3	SOC 325	Society, Business & Internationalism	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1	TOTAL		30 cr hrs
PSY 210	Introduction to Psychology	3			
TOTAL		31 cr hrs	Fourth Year		
Second Year			BAD 450	Business Seminar	1
ACC 201	Principles of Accounting I	3	DSC 476	Operations Management	3
ACC 202	Principles of Accounting II	3	MGT 478	Strategic Management	3
DSC 270	Business Statistics	3	MKG 412	Marketing Management	3
ECN 211	Principles of Economics I	3	MKG 413	Strategies for Retail Business	3
ECN 212	Principles of Economics II	3	MKG 416	International Marketing	3
FNC 281	Legal Environment	3	MKG 497	Marketing Research Strategies and Opportunities	3
LOG 210	Logic: Critical Thinking	3	MKG xxx	Marketing Elective	3
SCM 285	Principles of Speech	3	xxx xxx	Global/Cultural & Language Electives	6
xxx xxx	Humanities	3	xxx xxx	Business Core Elective	3
xxx xxx	Global/Cultural & Language Electives	3	TOTAL		31 cr hrs
TOTAL		30 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
			General Education Requirements		40
			Common Business Core		55
			Major Requirements		21
			Non-Business Supplement		6
			TOTAL		122 cr hrs

TOURISM AND HOSPITALITY MANAGEMENT
Lawrence E. Epplein, Interim Department Head
(757) 823-2490

Tourism and hospitality is a global industry consisting of more than 300,000 hotels and 8 million restaurants and employing 60 million people worldwide. The Bachelor of Science in Tourism and Hospitality Management offers a multidisciplinary approach to applying business principles to the industry. The program requires course work from various departments within the School of Business, as well as from other areas within the University.

The mission of the Tourism and Hospitality Management Department is to prepare students, through the use of theory-based instruction and practical experience, to assume leadership roles in a challenging and changing global hospitality environment.

Following completion of the general education core and business courses, students take advanced courses that detail the nature and functioning of the tourism and hospitality industry, including its unique management, marketing, legal, financial and human resource aspects.

Objectives of the department's curriculum are as follows:

1. To prepare students for an entry-level management position in the tourism and hospitality industry.
2. To prepare students to apply sound business principles to all aspects of the tourism and hospitality industry, including hotel/lodging, restaurant and food service, and travel-related services.
3. To provide students with insight, guidance, training and sensitivity to the multi-cultural and global nature of the industry workforce and public served.
4. To instill in students the service nature of the tourism and hospitality industry with a focus on the internal customer (the employee) as the key to affecting external customer loyalty.

TOURISM AND HOSPITALITY MANAGEMENT CURRICULUM
(Bachelor of Science in Tourism and Hospitality Management)

First Year

FRS 100	Freshman Seminar	0	HRM 310	Professional Development	3
CSC 150	Computer Literacy	3	MGT 365	Organization Behavior and Theory	3
ENG 101	Communication Skills 1	3	MKG 366	Principles of Marketing	3
ENG 102	Communication Skills II	3	HRM 391	Work Experience	3
HRM 100	Professional Development I	3		Tourism and Hospitality Management Elective	
HRM 115	Introduction to Hospitality	3		(from list below)	3
HRM 120	Sanitation Principles	3		Tourism and Hospitality Management Elective	
BAD 175	Introduction to Business	3		(from list below)	3
Math 103	Contemporary Mathematics	3		Tourism and Hospitality Management Elective	
PHY 100	Physical Science	3		(from list below)	3
PHY 100L	Physical Science Lab	1	TOTAL		30 cr hrs
Global/Cultural & Language Elective		3			
TOTAL		31 cr hrs	Fourth Year		

Second Year

BIO 100	Biological Science	3	MGT 415	International Management	3
HRM 112	Principles of Nutrition	3	HRM 440	Hospitality Sales and Marketing	3
ECN 211	Principles of Economics I	3	HRM 462	Human Resource Management	3
HED 100	Personal and Community Health	2	HRM 471	Hospitality Law	3
HRM 200	Computers in Hospitality	3	HRM 490	Senior Project	2
HRM 230	Hospitality Accounting I	3	XXX XXX	Free Elective	3
HRM 330	Hospitality Accounting II	3		Tourism and Hospitality Management Elective	
PED 100	Fundamentals of Fitness for Life	1		(from list below)	3
SCM 285	Principles of Speech	3		Tourism and Hospitality Management Elective	
Global/Cultural & Language Elective		3		(from list below)	3
Global/Cultural & Language Elective		3		Tourism and Hospitality Management Elective	
				(from list below)	3
TOTAL		30 cr hrs	TOTAL		30 cr hrs

Third Year

HRM 210	Front Office Management	3	SUMMARY OF GRADUATION REQUIREMENTS		
ASM 330	Business Communication	3	General Education Requirements		40
Global/Cultural & Language Elective		3	Tourism and Hospitality Management Core		56
			Tourism and Hospitality Management Electives		21
			Non-Major Supplement		3
			TOTAL		120 cr hrs

Tourism and Hospitality Management Electives

Students must choose 7 courses (21 credit hours) from the following 3-credit courses:

HRM 150	Tourism Principles	HRM 381	Facilities Layout and Design
HRM 211	Housekeeping	HRM 400	Restaurant Management
HRM 359/359L	Commercial Foods/Lab	HRM 401	Club and Resort Management
HRM 240	Introduction to Gaming	HRM 402	Management By Menu
HRM 242	The Travel Agency	HRM 403	Catering Management
HRM 280	Dining Room and Beverage Management	HRM 441	Restaurant Entrepreneurship
HRM 300	Hospitality Purchasing	HRM 449	International Tourism
HRM 342	The Recreation Industry	HRM 466	Multi-Cultural Management in the Hospitality Industry
HRM 351	Principles of Event Planning and Management	HRM 481	Hospitality Property Management
HRM 361	Training for the Hospitality Organization	HRM 494	Hospitality Franchising

DEPARTMENT OF MANAGEMENT INFORMATION SYSTEMS

Moncef Belhadjali, Department Head
(757) 823-8996

The Department of Management Information Systems (MIS) provides educational opportunities for students desiring to prepare for careers as computer support specialists, systems analysts, computer consultants, information specialists as well as for teacher licensure in business education. Throughout the MIS curriculum, E-Commerce skills are taught. Studies in MIS lead to the Bachelor of Science degree in General Business. A Bachelor of Science also is offered in Business Education.

This department exists to provide an intellectual climate and educational environment where students may find a sense of identification, belonging, responsibility, and achievement that will prepare them for roles of leadership and for professional careers in business, government, and education.

The objectives of the Management Information Systems curricula are as follows:

- To provide learning experiences in the areas of specialization that will prepare students to meet the demands of the information age.
- To provide a learning environment that will enhance the mastery of subject matter and specific skills within the major content areas.
- To increase students' awareness and use of information technology for the performance of tasks related to organizational functions.
- To teach E-Commerce skills.

- To provide opportunities for students to develop cognitive and communication skills that will enhance their capacity to develop analytical, problem-solving, and decision-making skills.
- To provide opportunities and skills for students to be competitive in a chosen career and/or professional school with a commitment to the profession.

MANAGEMENT INFORMATION SYSTEMS CURRICULUM (Bachelor of Science in General Business)

First Year			Third Year		
FRS 100	Freshman Seminar	0	ASM 330	Business Communications	3
BAD 175	Introduction to Business	3	DSC 376	Statistics and Quantitative Methods	3
xxx xxx	Science Elective	6	ENT 387	Introduction to Entrepreneurship	3
xxx xxx	Science Laboratory Elective	1	FNC 360	Corporate Finance	3
ENG 101	Communication Skills I	3	MGT 365	Organizational Behavior and Theory	3
ENG 102	Communication Skills II	3	MKG 366	Principles of Marketing	3
HED 100	Personal and Community Health	2	MSY 374	Programming in Visual Basic	3
MTH 131	Pre-calculus for Non-Science Majors	3	MSY 375	Management Information Systems & E-Commerce	3
MTH 132	Calculus for Non-Science Majors	3	MSY 390	Business Database Management	3
MSY 284	Advanced Microcomputing	3	SOC 325	Society, Business, & Internationalism	3
PED 100	PED 101/102	1	TOTAL		30 cr hrs
PSY 210	Introduction to Psychology	3			
TOTAL		31 cr hrs			
Second Year			Fourth Year		
ACC 201	Principles of Accounting I	3	BAD 450	Business Seminar	1
ACC 202	Principles of Accounting II	3	DSC 476	Operations Management	3
DSC 270	Business Statistics	3	MGT 478	Strategic Management	3
ECN 211	Principles of Economics I	3	MSY 372	Business Applications in Visual C++	3
ECN 212	Principles of Economics II	3	MSY 410	Information Systems Analysis and Design	3
FNC 281	Legal Environment	3	MSY 419	Networking	3
LOG 210	Logic: Critical Thinking	3	MSY 499	Senior Project in MIS	3
SCM 285	Principles of Speech	3	MSY 422	Decision Support & Expert Systems	3
xxx xxx	Humanities	3	xxx xxx	Business Core Elective	3
xxx xxx	Global/Cultural & Language Electives	3	xxx xxx	Global/Cultural & Language Electives	6
TOTAL		30 cr hrs	TOTAL		31 cr hrs
SUMMARY OF GRADUATION REQUIREMENTS					
General Education Requirements					40
Common Business Core Requirements					55
Major Requirements					21
Non-Business Supplement					6
TOTAL					122 cr hrs

BUSINESS EDUCATION CURRICULUM (Bachelor of Science in Business Education)

First Year			Second Year		
FRS 100	Freshman Seminar	0	ASM 210	Keyboarding III	3
BAD 175	Introduction to Business	3	ASM 230	Office Communications	3
MSY 184	Essentials of Microcomputing	3	ACC 201	Principles of Accounting I	3
XXX	Natural Science Elective	6	ACC 202	Principles of Accounting II	3
XXXL	Natural Science Lab Elective	1	ECN 211	Principles of Economics I	3
ENG 101	Communication Skills I	3	ECN 212	Principles of Economics II	3
ENG 102	Communication Skills II	3	FNC 281	Legal Environment of Business	3
HED 100	Personal and Community Health	2	MSY 284	Advanced Microcomputing	3
MTH 131	Pre-calculus for Non-Science Majors	3	LOG 210	Logic: Critical Thinking	3
MTH 132	Calculus for Non-Science Majors	3	SCM 285	Principles of Speech	3
PED 100	or PED 101/102	1	xxx xxx	Humanities	3
PSY 210	Introduction to Psychology	3	TOTAL		33 cr hrs
TOTAL		31 cr hrs			

To apply to upper division management information systems, students must have completed all freshman- and sophomore- level courses with a cumulative grade point average of "2.0" or higher.

Third Year

ENT 387	Introduction to Entrepreneurship	3
ASM 324	Business Systems and Procedures	3
MGT 365	Organizational Behavior and Theory	3
SED 201	Schools and the Teaching Profession	3
xxx xxx	Education Elective	3
SED 380	Foundations of Methods in Secondary Schools	3
MKG 366	Principles of Marketing	3
ASM 330	Business Communications	3
MSY 374	Programming in Visual Basic	3
xxx xxx	Business Elective	3
TOTAL		30 cr hrs

Fourth Year

SED 405	Reading in the Content Area	3
SED 420	Educational Technology	3
SED 486	Educational Psychology and Behavior Management	3
ASM 499	Special Seminar in Business Subjects	3
SED 499	Directed Teaching	12
SED 499P	Professional Seminar	0
xxx xxx	Global/Cultural & Language Electives	6
TOTAL		30 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	31
Common Business Core Requirements	42
Major Requirements	42
Liberal Arts Supplement	9
TOTAL	124 cr hrs

SCHOOL OF EDUCATION**Jean Braxton, Dean****Donna W. Dabney, Assistant Dean****(757) 823-8701**

Theme: "Preparing competent, compassionate, cooperative and committed leaders."

The School of Education is responsible for providing leadership, coordination, and evaluation of all teacher education programs at the University. Its central purpose is to provide pre-service and in-service educational programs to prospective teachers, in-service teachers, administrators, and others engaged in educational activities in schools and other agencies. Corollary purposes are as follows:

1. to contribute to the knowledge base in the field of educational theory and practice in a multi-cultural, multi-lingual, multi-racial society.
2. to provide leadership in involving public schools, universities, and communities in collaborative educational efforts.
3. to provide service to other agencies engaged in education in such a manner as to promote the realization of equal educational opportunity and equal educational results for all children.

CONCEPTUAL FRAMEWORK

The conceptual framework adopted by Norfolk State University's professional education programs describes the vision and purpose of the School of Education to prepare educators to work in Pre-K-12 schools. Consistent with the institution's mission, its focus is to prepare competent, compassionate, cooperative and committed leaders capable of meeting the diverse needs of all learners. Supported by a strong knowledge base, the conceptual framework provides a system for ensuring coherence and a well-articulated professional commitment to knowledge, teaching competence, leadership, and student learning. This is reflected in the curriculum, instruction and clinical experiences provided to develop the knowledge, skills and dispositions that are valued in teachers and other professional school personnel.

ACCREDITATION

All of the teacher education programs sponsored by the School of Education have been approved by the State Department of Education and have been accredited by the National Council for Accreditation of Teacher Education (NCATE). Each program is designed to prepare teachers to meet the teacher certification requirements for the state of Virginia as well as requirements for successful study at the graduate school level.

ORGANIZATION OF SCHOOL

The courses of instruction offered by the School of Education are organized into departments, which sponsor a wide array of specialization possibilities for students. The following departments and centers are as follows:

Department of Elementary Education
Department of Health, Physical Education and
Exercise Science
Department of Secondary Education and School Leadership

Department of Special Education
The H. H. Bozeman Integrated Media/Resource Center
The Center for Teaching Excellence

PROGRAMS OFFERED

The School of Education offers undergraduate programs in the following fields:

Elementary Education
(Courses are provided as part of a degree
program in an academic field.)
B.S., Early Childhood Education
B.S., Exercise Science/Physical Education

Special Education
(Courses are provided as part of a degree
program in an academic field. See page 53)
Secondary Education
(Courses are provided as a part of a degree
program in an academic field. See page 52)

Undergraduate programs leading to the Bachelor of Science degree require a minimum of 120 semester hours of credit. These programs lead to the Virginia Collegiate Professional Teacher Certificate or to a specific educational career.

Students seeking teacher certification must earn degrees in academic areas and complete the 18-semester hour professional education sequence and 12-semester hour student teaching experience in the School of Education.

APPLICATION/ADMISSION TO TEACHER EDUCATION

Admission to Norfolk State University does not imply automatic admission to teacher education programs. Each prospective teacher must apply to the School of Education for admission to the professional education program and must maintain standards prescribed for retention in the program. Freshman and sophomore students admitted to the pre-professional program are required to apply for admission to the professional education program after completion of the sophomore courses (inclusive of 60 credit hours).

CRITERIA FOR ADMISSION TO TEACHER EDUCATION**PROFESSIONAL LEVEL**

Applicant must have done the following:

1. completed all prescribed (per curricula) freshman and sophomore courses.
2. earned a grade point average of 2.5 or better in all lower level (freshman and sophomore) courses.
3. earned a grade of "C" or better in all English and math courses.
4. submitted Speech Screening results.
5. exhibited physical and mental health requisite to the responsibilities and duties of the teaching profession.
6. evidenced character and temperament appropriate for the duties and responsibilities for the teaching profession and exhibited a professional interest in teaching.
7. earned a grade of "C" or better in EED 201, SED 201, or SPE 201.
8. passed the PRAXIS I Examination and submit original copy of PRAXIS scores.
9. received departmental recommendation.
10. submitted a portfolio containing items specified in departmental handbook.

APPLICATION PROCEDURES FOR ADMISSION TO TEACHER EDUCATION

1. Application may be made to the School of Education after the second semester of the sophomore year (minimum 60 credit hours). Special forms will be provided by the School of Education in the Center for Professional Development.
2. Applications will be evaluated as "Approved" or "Rejected." Applicants "Rejected" may reapply the next year.
3. The student must receive "Approved" admission to teacher education before registering for upper level professional courses.

RETENTION IN TEACHER EDUCATION

Once admitted to teacher education, the following conditions apply:

1. The student must achieve all of his or her major subject departmental objectives and his or her professional objectives in a quality manner.
2. The student must work closely with his or her assigned advisor and maintain better than a 2.5 grade-point average in the major areas and professional education with no final grade less than "C" in either area.
3. The student must maintain good standing with the University and with the School of Education.

ADMISSION TO DIRECTED TEACHING

The prerequisites for admission to directed teaching are as follows:

1. Admission to teacher education.
2. Satisfactory results from the Pre-professional Skills Test (PRAXIS I).
3. Passing scores on Praxis II or a receipt of registration to take PRAXIS II must be submitted before mid-term of the semester of student teaching. Experience must be submitted with the application to student teach.
4. Completion of observation/participation.
5. Submission of student teaching application.
6. Evidence of above average academic accomplishment in major subject field.
7. Evidence of above average academic accomplishment in professional education, including both general and special courses.
8. An overall average scholastic record of 2.5 or better for all undergraduate work completed.
9. Departmental endorsement (major subject field) (DEPARTMENT HEAD). (See Student Teaching Application).
10. Status as a graduating senior in December or May of the school session in which directed teaching is to be done (DEPARTMENT HEAD/ADVISOR).
11. Evidence of above average achievement in written and oral communications, including all communications requirements for earning a baccalaureate degree from the University.
12. Satisfactory personality and character references (ADVISOR or DEPARTMENT HEAD).
13. Choice of teaching as a primary vocation (STUDENT TEACHING APPLICATION).
14. Completion of required methods courses within the last two semesters prior to making application for admission to directed teaching (ADVISORY REPORT).
15. For transfer students, completion of some coursework at this University, including at least one methodology course, before approval for student teaching (DEPARTMENT HEAD).

TEACHER CERTIFICATION ENDORSEMENT

The following steps are required for students seeking teacher certification endorsement as undergraduates:

Secondary School Certification Endorsement

1. Students must take the General Education Core of 40 semester hours.
2. Students must earn an undergraduate degree in the field in which they plan to teach. The fields are listed below.

Art/Fine Arts	Earth Science	Music/Vocal
Biology	English	Physical Education/
Business	History and Social Studies	Driver Education
Chemistry	Mathematics	Physics
Endorsement in Occupational Child Care, Clothing	Music/Instrumental	

3. Students must take the following professional education courses (18 semester hours) plus student teaching (12 semester hours):

SED 201	American Schools and the Teaching Profession	SED 390	Secondary Social Studies Methods (for History/Social Science majors)
SED 233	Seminar in Assessment and Evaluation	SED 420	Educational Technology
SED 380	Foundations of Methods in Secondary Schools	SED 486	Educational Psychology and Behavior Management
SED 384	Teaching Methods of Mathematics/Science/ Technology (for mathematics/science majors in place of SED 488)	SED 488	School/Community Relations
		SED 499	Directed Teaching and Seminar

4. Students must pass the PRAXIS I examination prior to taking the methods courses.

Elementary Certification Endorsement

- Students must take the General Education Core of 40 semester hours.
- Students must earn a degree in one of the following fields:

English	History and Social Studies
Interdisciplinary Studies	Psychology

3. Students must take the following courses in elementary education and professional education (18 semester hours):

EED 201	American Schools and the Teaching Profession	EED 384	Teaching Reading in the Elementary School
EED 274	The Study of Young Children	EED 450	Diagnostic Reading
EED 300	Methods and Materials for Teaching Science, Mathematics, and Technology	EED 461	Curriculum & Instruction in the Elementary School Grades (4-6)
EED 360	Curriculum & Instruction for Primary Grades (Pre-K-3)	EED 499	Directed Teaching (Student Teaching)
EED 374	Methods of Teaching Social Studies in the Elementary School		

4. Students must pass the Praxis I examination prior to enrolling in 300- or 400-level EED courses.

*Enrollment requires completion of requirements for admission to teacher education.

Special Education Certification Endorsement

- Students must take the General Education Core of 40 semester hours.
- Students must earn a degree in a liberal arts major, e.g.,

English	History and Social Studies
Interdisciplinary Studies	Psychology

- Students must take 24 semester hours plus student teaching (12 semester hours) in special education and professional education courses.
- Students must pass the PRAXIS I examination before student teaching.
- Students must complete preparation to teach learners with learning disabilities and mental retardation or emotional disturbance.

Learning Disabilities

SPE 210	American Schools & the Teaching Profession	3	AND		
SPE 490	Assessment of Exceptional Students	3	Option (a): Mental Retardation		
SPE 312	Educational and Behavioral Management	3	SPE 332	Nature of and Strategies for Teaching Learners with MR	3
SPE 344	Teaching Reading to Exceptional Learners	3	SPE 499A	Directed Teaching-Mental Retardation	6
			TOTAL		9 cr hrs
SPE 345	Characteristics and Medical Aspects of Disabilities	3	OR		
SPE 372	Collaboration, Inclusion, Transition and Other Curricular Adjustments	3	Option (b): Emotional Disturbance		
SPE 499C	Directed Teaching-Learning	3	SPE 334	Nature of and Strategies for Teaching Learners with ED	3
TOTAL		21 cr hrs	SPE 499B	Directed Teaching-Emotionally Disturbed	6
			TOTAL		9 cr hrs

TEACHER CERTIFICATION PROCEDURES

Bachelor's degree graduates seeking a teaching certificate endorsement must report to the Department of Graduate Studies for approval, counseling, and advisor assignment. (Lists of courses required for each teaching field are found in this catalog under each department.) All applicants for teaching certificates must take the PRAXIS examination and make passing scores required by the Virginia Department of Education, prior to admission to teacher education.

The passing scores are as follows:

	CBT	PPST		CBT
Reading	326	178	French: Content Knowledge	169
Mathematics	323	178	German: Content Knowledge	162
Writing	324	176	Family and Consumer Services	550
Art Education	159		Technology Education	610
Biology: Content Knowledge	155		Mathematics: Content Knowledge	147
Business Education	590		Music: Content Knowledge	160
Chemistry: Content Knowledge	153		Physical Education	151
Elementary Education	143		Social Studies: Content Knowledge	161
English Language			Spanish: Content Knowledge	161
Literature and Composition: Content and Knowledge	172		Speech/Communication	470

UNIVERSITY WIDE COUNCIL ON TEACHER EDUCATION (CTE)

The Council on Teacher Education is an advisory committee for implementing the total University emphasis on quality preparation of prospective teachers. Policies are executed by the School of Education. The Council is composed of representatives from all departments of the University that sponsor teacher preparation programs.

THE CENTER FOR PROFESSIONAL DEVELOPMENT

Margaret Knight, Director
(757) 823-8715

The Center for Professional Development has the responsibility for providing all formal field experiences, observation/participation, directed teaching, and internships for people wishing to enter the education profession. Observation and participation experiences are provided for freshman, sophomore, and junior-level students. Student teaching and internship experiences are provided for senior level and graduate students.

H. H. BOZEMAN INTEGRATED MEDIA/RESOURCE CENTER

The H. H. Bozeman Integrated Media/Resource Center provides supplementary materials and instructional media for the School of Education and for other schools and departments for which the collections are relevant. Two centers comprise the component: The Instructional Media Center and the Multi-Cultural/Instructional Resource Center. The combined collections include resources and equipment appropriate for use from pre school through adult education levels, with emphasis on the training and professional development of the teacher.

DEPARTMENT OF ELEMENTARY EDUCATION

Arletha McSwain, Department Head
(757) 823-2700

The Elementary Education Department provides undergraduate and graduate programs for students seeking preparation to work with young children in the community, agencies, and public school settings.

Elementary Certification Endorsement (PreK-6)

- Students must take the General Education Core of 40 semester hours.
- Students must earn a degree in one of the following fields:

English	Mathematics
History	Psychology
- Students must take the following courses in elementary education and professional education for endorsement (36 semester hours):

SED 201	American Schools and the Teaching Profession	EED 374	Methods of Teaching Social Studies in the Elementary School
EED 274	The Study of Young Children	EED 450	Teaching Literacy in the Elementary School
EED 465	Methods and Materials for Teaching Science, Mathematics and Technology	EED 490	Diagnostic Reading
EED 360	Curriculum & Instruction for Primary Grades (PreK-3)	EED 461	Curriculum & Instruction in the Elementary School Grades (4-6)
		EED 499	Directed Teaching (Student Teaching)
- Students must pass the PRAXIS examinations.
*Enrollment requires completion of requirements for admission to teacher education.

**ELEMENTARY EDUCATION CERTIFICATION ENDORSEMENT GRADES PRE-K-6 CURRICULUM
B.A. IN PSYCHOLOGY**

First Year			Third Year		
FRS 100	Freshman Seminar	0	EED 360	Curriculum & Instruction for Primary Grades 3 (Pre K- 3)	
ENG 101	Communication Skills I	3	PSY XXX	Electives	10
ENG 102	Communication Skills II	3	MTH 141	Mathematics for Elementary Teachers I	3
MTH 103	Contemporary Mathematics	3	MTH 142	Mathematics for Elementary Teachers II	3
MTH 105	Elementary Algebra	3	PSY 360	Experimental Psychology	3
BIO 100	Biological Science	3	PSY 360L	Experimental Psychology Lab	1
BIO 100L	Biological Science Lab	3	EED 461	Curriculum & Instruction for Elementary School (4-6)	3
CHM 100	Chemistry or PHY 100	3	EED 450	Teaching Literacy in the Elementary Schools	3
CHM 100L	Chemistry or PHY 100L	3	EED 465	Methods and Materials for Teaching Science, Mathematics and Technology	3
CLS 150	Computer Concepts & Applications	3	TOTAL		31 cr hrs
HIS 103	American History	3			
PSY 210	Introduction to Psychology	3			
PED 100	Fundamentals of Fitness for Life	1			
HED 100	Personal & Community Health	2			
TOTAL		32 cr hrs			
Second Year			Fourth Year		
EED 201	American Schools & Teaching Profession	3	PSY	Elective	3
PSY 211	Basic Principles of Psychology	3	INT 350	Trends and Issues of Diverse Populations	3
EED 274	Study of Young Children	3	PSY 492	Psychology Seminar	3
SCM 285	Principles of Speech	3	EED 490	Diagnostic Reading	3
SCI 381	Science for Elementary Teachers	3	EED 470	Methods of Teaching Social Studies in the Elementary School	3
SCI 381L	Science for Elementary Teachers Lab	1	EED 499	Directed Teaching	12
ENG 207	Literature in the Western World	3	TOTAL		27 cr hrs
PSY 270	Statistics in Psychology or PSY 370	3			
SOC 101	Introduction to Social Science	3	Summary of Graduation Requirements		
HUM 210	Humanities	3	I.	General Education Core	41
ENG 203	Advanced Communication Skills	3	II.	Psychology	28
TOTAL		31 cr hrs	III.	Secondary Concentration	24
			IV.	Support Concentration II Student Teaching	12
			V.	Supporting Courses	16
			TOTAL		121 cr hrs

NOTE: STUDENTS MUST PASS PRAXIS I AND APPLY FOR
ADMISSION TO TEACHER EDUCATION AT THE END OF 60 HOURS

**ELEMENTARY EDUCATION ENDORSEMENT Pre-K-6; MATHEMATICS CURRICULUM
(FOR PERSONS WHO DO NOT HAVE A B.S. OR B.A. DEGREE)
BACHELOR OF SCIENCE IN INTERDISCIPLINARY STUDIES**

First Year			ENG 203	Advanced Communication Skills	3
ENG 101	Communication Skills	3	ENG 207	Literature of the Western World	3
ENG 102	Communication Skills.	3	SCM 285	Principles of Speech	3
MTH 105	Intermediate Algebra	3	HUM 210	Humanities	3
MTH 151	College Algebra	3	EED 201	The American Schools and the Teaching Profession	3
BIO 100	or BIO 110 or PHY 100 or CHM 100	6	FIA 301	or MUS 301 or ENG 383 or FIA 170 or MUS 234	3
PHY 100L	or BIO 100L or CHM 100L	2	POS 315	or PSY 340 or HIS 335 or HIS 336 or HIS 371	3
HIS 102	American History	3	EED 274	The Study of Young Children	3
SOC 101	Introduction to Social Science	3	INT 308	Interdisciplinary Seminar	3
CSC 150	or CLS 150 or TED 170	3	TOTAL		33 cr hrs
HED 100	Personal and Community Health	2			
PED 100	Fundamental Fitness for Life	1			
TOTAL		32 cr hrs			
Second Year			NOTE: STUDENTS MUST PASS PRAXIS I AND APPLY FOR ADMISSION TO TEACHER EDUCATION AT THE END OF 60 HRS		
MTH 141	Teaching Mathematics in the Elementary Schools	3			
MTH 142	Teaching Mathematics in the Elementary Schools	3			

Third Year			EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
INT 360	Research Interdisciplinary Studies	3	EED 490	Diagnostic Reading and Prescriptive Reading	3
INT 375	Language and Society	3	CSC 170	Computer Programming	3
MTH 153	College Algebra and Trigonometry	3	INT 350	Trends and Issues with Diverse Populations	3
MTH 184	Calculus	3	EED 499	Directed Teaching.	12
CSC 169	Foundations of Computers	3	TOTAL		28 cr hrs
INT 322	Approaches to Critical Analysis	3	SUMMARY OF GRADUATION REQUIREMENTS		
EED 465	Methods of Teaching Science, Mathematics, and Technology	3	I. General Education Requirements		44
EED 470	Methods of Teaching Social Studies in the Elementary School	3	II. Interdisciplinary Core		15
EED 360	Curriculum and Instruction for Primary Grades (Pre K-3rd)	3	III. Secondary Concentration Elementary Education		24
EED 450	Teaching Literacy in the Elementary School	3	IV. Supportive Concentration I Liberal Arts Core (LAC)		16
TOTAL		30 cr hrs	V. Supportive Concentration II - Student Teaching		12
Fourth Year			VI. Supporting Courses		13
SCI 381	Science for Teachers	3	TOTAL		124 cr hrs
SCI 381L	Science for Teachers Lab	1	*Recommended courses for electives, PSY 280, PSY 322, PSY 215, PSY 288, INT 400, ENG 452, ENG 210, EED 233, ANY FOREIGN LANGUAGE OR HUMANITIES COURSE		

**ELEMENTARY EDUCATION ENDORSEMENT PK-6; ENGLISH CURRICULUM
(FOR PERSONS WHO DO NOT HAVE A B.S. OR B.A. DEGREE)
BACHELOR OF SCIENCE IN INTERDISCIPLINARY STUDIES**

First Year			ENG 306	Literary Criticism	3
ENG 101	Communication Skills	3	ENG 315	Survey of English Literature	3
ENG 102	Communication Skills.	3	ENG 341	Survey of American Literature	3
MTH 103	Contemporary Mathematics	3	INT 322	Approaches to Critical Analysis	3
MTH 105	Intermediate Algebra	3	EED 465	Methods of Teaching Science, Mathematics, and Technology	3
BIO 100	Biological Science or BIO 110 or PHY 100 or CHM 100	6	EED 470	Methods of Teaching Social Studies in the Elementary School	3
PHY 100L	Lab or BIO 100L or CHM 100L	2	EED 360	Curriculum and Instruction for Primary Grades (Pre K-3rd)	3
HIS 102	American History	3	EED 450	Teaching Literacy in the Elementary School	3
SOC 101	Introduction to Social Science	3	TOTAL		30 cr hrs
CSC 150	Computer Literacy or CLS 165 or TED 170	3	Fourth Year		
PED 100	Fundamental Fitness for Life	1	SCI 381	Science for Elementary Teachers	3
HED 100	Personal and Community Health	2	SCI 381L	Science for Elementary Teachers Lab	1
TOTAL		32 cr hrs	EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
Second Year			EED 490	Diagnostic Reading and Prescriptive Reading	3
MTH 141	Teaching Mathematics in the Elementary Schools	3	ENG 452	Literature for Children and Adolescence	3
ENG 203	Advanced Communication Skills	3	INT 350	Trends and Issues with Diverse	3
ENG 207	Literature of the Western World	3	EED 499	Directed Teaching.	12
SCM 285	Principles of Speech.	3	TOTAL		28 cr hrs
HUM 210	Humanities	3	SUMMARY OF GRADUATION REQUIREMENTS		
EED 201	The American Schools and the Teaching Profession	3	I. General Education Core		44
MTH 142	Teaching Mathematics in the Elementary Schools	3	II. Interdisciplinary Studies Core		15
FIA 301	Art Appreciation or MUS 301	3	III. Secondary Concentration Elementary Education		24
POS 315	or PSY 340 or HIS 335 or HIS 336 or HIS 371	3	IV. Supportive Concentration I Liberal Arts Core (LAC)		15
EED 274	The Study of Young Children	3	V. Supportive Concentration II - Student Teaching		12
INT 308	Interdisciplinary Seminar	3	VI. Supporting Courses		13
TOTAL		33 cr hrs	TOTAL		123 cr hrs

NOTE: STUDENTS MUST PASS PRAXIS I AND APPLY FOR ADMISSION TO TEACHER EDUCATION AT THE END OF 60 HRS

*Recommended courses for electives, PSY 280, PSY 322, PSY 215, PSY 288, INT 400, ENG 452, ENG 210, EED 233, ANY FOREIGN LANGUAGE OR HUMANITIES COURSE.

Third Year		
INT 360	Research Interdisciplinary Studies	3
INT 375	Language and Society	3

**ELEMENTARY EDUCATION ENDORSEMENT PK-6; HISTORY CURRICULUM
BACHELOR OF SCIENCE IN INTERDISCIPLINARY STUDIES**

First Year			HIS 328	History of Virginia	3
ENG 101	Communication Skills	3	ECN 211	Economics	3
ENG 102	Communication Skills	3	GEO 130	Principles of Geography	3
MTH 103	Contemporary Mathematics	3	INT 322	Approaches to Critical Analysis	3
MTH 105	Intermediate Algebra	3	EED 465	Methods of Teaching Science, Mathematics, And Technology	3
BIO 100	or BIO 110 or PHY100 or CHM 100	6	EED 374	Methods of Teaching Social Studies in the Elementary School	3
BIO 100L	or PHY 100L or CHM 100L or CHM 100L	2	EED 360	Curriculum and Instruction for Primary Grades (Pre K-3rd)	3
HIS 102	American History	3	EED 450	Teaching Reading in the Elementary School	3
SOC 101	Introduction to Social Science	3			
CSC 150	or CLS 150 or TED 170	3			
PED 100	Fundamental Fitness for Life	1			
HED 100	Personal and Community Health	2			
TOTAL		32 cr hrs	TOTAL		30 cr hrs

Second Year			Fourth Year		
MTH 141	Teaching Mathematics in the Elementary Schools	3	SCI 381	Science for Elementary Teachers	3
ENG 203	Advanced Communication Skills	3	SCI 381L	Science for Elementary Teachers Lab	1
ENG 207	Literature of the Western World	3	EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
SCM 285	Principles of Speech.	3	EED 490	Diagnostic Reading	3
HUM 210	Humanities	3	HIS 439	Recent American History from 1932 to Present	3
EED 201	The American Schools and the Teaching Profession	3	INT 350	Trends and Issues with Diverse Populations	3
MTH 142	Teaching Mathematics in the Elementary Schools	3	EED 499	Student Teaching	12
FIA 301	Art Appreciation or MUS 301	3	TOTAL		28 cr hrs
POS 315	or PSY 340 or HIS 335 or HIS 336 or HIS 371	3	SUMMARY OF GRADUATION REQUIREMENTS		
EED 274	The Study of Young Children	3	I. General Education Requirements		44
INT 308	Interdisciplinary Seminar	3	II. Interdisciplinary Studies Core		15
TOTAL		31 cr hrs	III. Secondary Concentration Elementary Education		24
			IV. Supportive Concentration I Liberal Arts Core (LAC)		15
			V. Supportive Concentration II - Student Teaching		12
			VI. Supporting Courses		13
			TOTAL		123 cr hrs

NOTE: STUDENTS MUST PASS PRAXIS I AND APPLY FOR
ADMISSION TO TEACHER EDUCATION AT THE END OF 60 HRS

Third Year			*Recommended courses for electives, PSY 280, PSY 322, PSY 215, PSY 288, INT 400, ENG 452, ENG 210, EED 233, ANY FOREIGN LANGUAGE OR HUMANITIES COURSE.		
INT 360	Research Interdisciplinary Studies	3			
INT 375	Language and Society	3			

**BACHELOR OF SCIENCE IN EARLY CHILDHOOD DEVELOPMENT
CHILD CARE (NON-TEACHING) OPTION**

First Year			Second Year		
BIO 100	Biological Science	3	EED 201	American Schools and the Teaching Profession	3
BIO 100L	Biological Science Lab	1	EED 233	Critical Thinking	3
ENG 101	Communication Skills I	3	ENG 203	Advanced Communication Skills	3
ENG 102	Communication Skills II	3	EED 274	The Study of Children	3
HED 100	Personal and Community Health	2	FIA 301	Art Appreciation or MUS 301	3
HIS 100	History of Civilization or HIS 101	3	PSY 210	Intro to Psychology	3
HIS 102	U.S. History or HIS 103	3	PSY 215	Human Growth and Development	3
MTH 103	Contemporary Mathematics	3	HUM 210	Humanities	3
MTH 105	Elementary Algebra	3	HIS 335	African-Am. History or HIS 336, PSY 340, POS 315, ENG 383	3
PED 100	Fundamental Fitness for Life	1	SCM 285	Principles of Speech	3
PHY 100	Physical Science or CHM 100	3	SOC 101	Introduction to Social Science	3
PHY 100L	Physical Science Lab or CHM 100L	1			
CSC 150	Computer Literacy	3	TOTAL		33 cr hrs
TOTAL		32 cr hrs			

Third Year			Fourth Year		
EED 360	Curriculum and Instruction in ECE	3	EED 450	Teaching Literacy in Elem. Schools	3
PSY 312	Behavioral Analysis	3	EED 465	Methods Sci./Math/Technology	3
HFD 230	Activities for Children	3	INT 350	Trends and Issues of Diverse Populations	3
HFD 232	Creative Activities for Children	3	EED 499A	Practicum	3
HFD 370	Analyzing the Behavior of Children	3	EED 499B	Practicum	3
ENG 452	Literature for Children	3	EED 499E	Practicum	3
DRM 226	Children's Theatre	3	HFD 460	Organization and Administration of Child	
SWK 211	Interviewing Techniques	3		Care Programs	3
Electives		7	HFD 420	Parent Education	3
TOTAL		31 cr hrs	TOTAL		24 cr hrs
SUMMARY OF GRADUATION REQUIREMENTS					
TOTAL					120 cr hrs

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND EXERCISE SCIENCE

Delano Tucker, Department Head

(757) 823-8703

The Department offers professional preparation leading to the Bachelor of Science Degree with the following emphases:

Physical Education - Teacher Certification K-12	Kinesiotherapy
Health Fitness Instructor	Exercise Science Nutrition Option

The certified physical educator is trained to teach physical education in grades K-12. The teacher certification program in physical education also permits an add-on endorsement in health, aquatics, and/or driver education.

The certified health fitness instructor is trained to deliver fitness training in corporate settings, health spas, and in other areas of the sport and fitness industry.

The kinesiologist is a health care professional who, under the direction of a physician, treats the effects of disease, injury and congenital disorders through the use of therapeutic exercise, rehabilitation exercise and education.

The Exercise Science Nutrition option blends both exercise science and nutrition and is designed for the student who plans a career focusing on both of these disciplines. It includes the undergraduate academic requirements set forth by the American Dietetic Association for students who are interested in applying for dietetic internships.

PHYSICAL EDUCATION CURRICULUM (B.S., EXERCISE SCIENCE/PHYSICAL EDUCATION)

First Year					
FRS 100	Freshman Seminar	0	PED 251	Modern Dance	1
BIO 110	Biological Science**	3	PED 253	Gymnastics	1
BIO 110L	Biological Science Lab**	1	PED 261	Team Sports I	1
CSC 150	Computer Science*	3	PED 262	Team Sports II	1
ENG 101	Communication Skills I	3	PED 287	Human Anatomy	3
ENG 102	Communication Skills II	3	PED 287L	Human Anatomy	1
HED 170	Personal & Community Health	3	PED 288	Human Physiology	3
HIS 100	or HIS 101 or HIS 102 or HIS 103	3	PED 288L	Human Physiology Lab	1
MTH 103	or MTH 153	3	PSY 215	Human Growth and Development	3
PED 151	or PED 152	1	SCM 285	Principles of Speech	3
PED 158	Fundamentals of Physical Education	1	SED 201	Amer. Schools & the Teaching Profession	3
PED 159	Fundamentals of Physical Education	1	Elective		3
PED 280	Introduction to Physical Education	3	TOTAL		31 cr hrs
SOC 101	Introduction to Sociology	3	NOTE: STUDENTS MUST PASS PRAXIS I AND APPLY FOR ADMISSION TO TEACHER EDUCATION AT THE END OF 60 HRS		
TOTAL		31 cr hrs			

* or CLM 165, CLS 165, BAD 184, CSC 169, CIT 150, EEN 141, FIA 180, or TED 170

** Physical Education majors will be advised of Biology General Education requirement.

Department Requirement - PED 179 or Red Cross Equivalent

Second Year			Third Year		
HUM 210	Humanities	3	PED 271	Individual Sports I	1
HUM 211	Humanities	3	PED 272	Individual Sports II	1
HED 442	Safety	3	PED 335	Techniques and Skills	1
PED 134	Advanced Beginning Swimming	1	PED 350	Methods of Teaching Physical Education in Elementary Schools	3
			PED 356	Kinesiology	3
			PED 357	Organization and administration of Physical Education	3
			PED 361	Coaching	3
			PED 362	Officiating	1
			PED 365	Adapted Physical Education	3

PED 369	Assessment and Evaluation in Physical Education	3	** or HIS 336, HIS 370, HIS 371, HIS 377, POS 315, PSY 340, OR SOC 237	
PED 450	Motor Learning	3	**** Enrollment requires completion of requirements for admission to teacher education.	
PED 477	Physiology of Muscle Exercise	3		
HED 368A	Curriculum/Methods in Health Education	3		
SED 405	Reading in the Content Areas	3		
TOTAL		32 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS	
			General Education	34
			Major Requirements	87
			Electives	0
Fourth Year			TOTAL	121 cr hrs
HIS 335	African-American History to 1865**	3		
PED 358	Methods & Materials of Secondary Physical Education ****	3	Health Endorsements	
PED 480	Principles of Physical Education	3	FSN 110, PED 179, 200/ 300, HED 100/170, 368A, 442	
PED 499	Seminar	1		
SED 420	Educational Technology	3	Driver Education Endorsements	
SED 486	Educational Psychology and Behavior Management	3	PED 441	3
SED 499	Student Teaching	12	PED 444	3
TOTAL		27 cr hrs		

HEALTH FITNESS INSTRUCTOR CURRICULUM (B.S., EXERCISE SCIENCE/PHYSICAL EDUCATION)

First Year			PED 358	Methods & Materials of Secondary Physical Education	3
FRS 100	Freshman Seminar	3	PED 365	Adapted Physical Education	3
BIO 110	Biological Science**	4	EXS 369	Evaluation in Physical Education	3
CSC 150	Computer*	3	PED 477	Physiology of Muscle Exercise	3
ENG 101	Communication Skills I	3	SCM 285	Speech	3
ENG 102	Communication Skills II	3	TOTAL		33 cr hrs
HED 170	Personal & Community Health	3			
HIS 100	History of Civilization***	3	Fourth Year		
MTH 103	Contemporary Mathematics	3	EXS 265	Exercise for Special Populations	2
PED 133	Beginning Swimming	1	PED 300	Advanced Weight Training	2
PED 200	Weight Training/Conditioning.	2	PED 450	Motor Learning	3
PED 280	Introduction to Physical Education	3	Electives		3
SOC 101	Introduction to Social Science	3	Internship (Local)		4
TOTAL		31 cr hrs	Internship		12
			TOTAL		26 cr hrs
* or CLM 165, CLS 165, BAD 184, CSC 169, CIT 150, EEN 141, FIA 180, or TED 170					
** Physical Education majors will be advised of Biology General Education requirement.					
*** or HIS 101, HIS 102, or HIS 103					
Second Year			SUMMARY OF GRADUATION REQUIREMENTS		
Elective		3	General Education		38
CHM 215	Chemistry	3	Major Requirements		76
CHM 215L	Chemistry Lab	1	Electives		7
FSN 110	Nutrition	3	TOTAL		121 cr hrs
HUM 210	Humanities	3	Electives - Choose from the list below:		
HUM 211	Humanities	3	INDIVIDUAL SPORTS/TEAM SPORTS		
PED 179	First Aid	2	PED 204	Tennis I	1
PED 251	Modern Dance	1	PED 158/159	Fundamentals	1
PED 287	Human Anatomy	3	PED 206	Tennis II	1
PED 287L	Human Anatomy	1	PED 261/262	Team Sports	1
PED 288	Human Anatomy	3	PED 209	Bowling	1
PED 288L	Human Anatomy Lab	1	PED 210	Golf	1
PSY 215	Human Growth and Development	3	PED 212	Racquetball	1
TOTAL		30 cr hrs	PED 271/272	Individual/Dual Sports	1
			REC 382	Rec Games	1
Third Year			HEALTH CONTENT		
EXS 237	Care & Prevention of Athletic Injuries	3	FSN 312	Nutrition	3
EXS 363	Clinical Aspects of Aging	2	AQUATICS		
EXS 380	Stress Management	3	PED 134	Advanced Beginning Swimming	1
EXS 447L	Physiological Basis of Exercise Rehabilitation Lab	1	PED 235	Intermediate Swim	1
HIS 335	History	3	PED 325	Lifesaving	1
PED 356	Kinesiology	3	RHYTHMS		
PED 357	Organization & Administration of Physical Education	3	PED 107	Aerobics	1
			PED 108	Water	1
			PED 109	Health Fitness	1
			PED 251	Modern Dance	1

**EXERCISE SCIENCE CURRICULUM
(B.S., EXERCISE SCIENCE/PHYSICAL EDUCATION)**

First Year			Third Year		
FRS 100	Freshman Seminar	0	EXS 355	Anatomical Kinesiology	3
BIO 100	Biological Science	3	EXS 356	Biomechanics of Human Motion (Lab Hours 100 Orthopedics)	3
BIO 100L	Biological Science Lab	1	PSY 280	Abnormal Psychology (Lab Hours 100 Psychiatry)	3
CHM 215	Chemistry	3	PED 365	Adapted Physical Education	3
CHM 215L	Chemistry Lab	1	EXS 357	Organization and Administration	3
HIS 100	or HIS 102 or HIS 103	3	FSN 110	Introduction to Nutrition	3
EXS 170	Introduction to Exercise Science	3	SCM 285	Principles of Speech or PED 447	3
ENG 101	Communication Skills	3	EXS 447L	Physiology of Exercise Lab	1
ENG 102	Communication Skills	3	EXS 369	Research Methods and Statistical Eval	3
HED 170	Personal/Community Health	3	PED 179	First Aid	2
MTH 153	College Algebra & Trigonometry	3	PSY 380	Physiological Psychology	3
SOC 101	Intro to Social Science	3	TOTAL		33 cr hrs
PED 133	or PED 134 Swimming	1			
EXS 265	Therapeutic Exercise and Sports	2			
EXS 266	Therapeutic Exercise and Sports	2			
TOTAL		34 cr hrs			
Second Year			Fourth Year		
CSC 150	or CLS 150	3	EXS 430	Neurological and Pathological Foundations (Lab Hours 100 Neurology)	3
HUM 210	Humanities	3	EXS 387	Clinical Kinesiology I	3
HUM 211	Humanities	3	EXS 388	Clinical Kinesiology II	3
PHY 152	General Physics	3	EXS 445	Therapeutic Modalities	3
PHY 152L	General Physics Lab	1	PED 450	Motor Learning	3
PED 287	Human Anatomy	3	EXS 363	Clinical Aspects of Aging (Lab Hours 100 Geriatric)	3
PED 287L	Human Anatomy Lab	1	EXS 493C	Clinical Internship (Lab Hours 200 Cardiac)	6
PSY 210	Introduction to Psychology	3	EXS 493D	Clinical Internship (Lab Hours 200 Clinical Specialization)	6
EXS 237	Care and Prevention of Athletic Injuries (Lab Hours 100 Orthopedics)	3	TOTAL		29 cr hrs
HIM 120	Medical Terminology	3	TOTAL CURRICULUM HOURS		129 cr hrs
PED 288	Human Physiology	3			
PED 288L	Human Physiology Lab	1			
PSY 228	Human Growth and Development (Lab Hours 100 Pediatrics)	3			
TOTAL		33 cr hrs			

**EXERCISE SCIENCE NUTRITION OPTION CURRICULUM
(B.S., EXERCISE SCIENCE/PHYSICAL EDUCATION)**

First Year			PHY 152/152L General Physics & Lab			4
FRS 100	Freshman Seminar	0	SCM 285	Principles of Speech		3
CHM 221	College Chemistry	3	TOTAL			35 cr hrs
CHM 221L	College Chemistry Lab	1	Third Year			
CSC 150	Computer Concepts	3	BIO 310	General Microbiology		4
ENG 101	Communication Skills	3	CHM 312/312L	Introduction to Organic Chem & Lab		4
ENG 102	Communication Skills	3	CHM 313/313L	Introduction to Biochemistry & Lab		4
EXS 170	Introduction to Exercise Science	3	EXS 355	Anatomical Kinesiology		3
FSN 101	Introduction to Food Science & Nutrition	2	EXS 356	Biomechanics of Human Motion		3
FSN 110	Science of Human Nutrition	3	FSN 330/330L	Scientific Food Development & Lab		4
MTH 153	College Algebra & Trigonometry	3	FSN 340	Nutrition Education		3
PED 107	Aerobics	1	FSN 410	Nutrition in Aging		3
SOC 101	Social Science	3	HUM 210	Humanities		3
TOTAL		28 cr hrs	TOTAL			31 cr hrs
Second Year			Fourth Year			
BIO 165	Human Anatomy & Physiology Lab	4	ENG 383	Cultural Elective		3
BIO 166	Human Anatomy & Physiology Lab	4	EXS 447/447L	Exercise Physiology & Lab		4
CHM 222	College Chemistry & Lab	4	EXS 369	Research Methods & Statistics		3
CHM 222L	College Chemistry Lab	1	FSN 356	Advanced Nutrition		3
EXS 364	Techniques of Weight Training & Conditioning	2	FSN 426/426L	Nutrition in Disease & Lab		4
FSN 102	Professional Development and Experiences Seminar	1	FSN 449	Nutrition in Sports and Fitness		3
FSN 160	Food Cost Control	3	FSN 450	Professional Seminar		3
FSN 312	Chemical Foundations of Nutrition	3	FSN 460	Quantity Food Production		3
FSN 320	Food Service Administration	3	FSN 484	Rural/Urban Nutrition		3
HIS 101	History of West Civilization	3	TOTAL			29 cr hrs
			TOTAL CURRICULUM HOURS			123 cr hrs

DEPARTMENT OF SECONDARY EDUCATION AND SCHOOL LEADERSHIP**Sean S. Warner, Department Head****(757) 823-8178**

The Department of Secondary Education and School Leadership offers a multi-dimensional Urban Education degree program and teacher education to assist in-service and pre-service school practitioners interested in acquiring state-endorsements/certifications as well as enhancing their professional development.

Secondary School Certification Endorsement

1. Candidates must take the General Education Core before applying to teacher education (see Office of Student Teaching regarding admission to teacher education).
2. Students must earn an undergraduate degree in the field in which they plan to teach.

Art/Fine Arts	Earth Science	Mathematics	Physics
Biology	English	Music / Instrumental	
Business	Health	Music / Vocal	
Chemistry	History and Social Studies	Physical Education / Driver Education	

3. Prior to admission to teacher education, students must pass the Praxis I examination and successfully complete 200-level professional education courses:

SED 201	American Schools and the Teaching Profession	SED 233	Seminar in Assessment and Evaluation (only for candidates who have not taken PRAXIS 1 examination)
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Students who have not met this requirement are not eligible to take 300-level or 400-level professional education (SED) courses in the Teacher Education Program (See admission to teacher education criteria).

*SED 380	Foundations of Methods in Secondary Schools	3	SED 420	Educational Technology	3
*SED 390	Secondary Social Studies Methods (History and Social Studies Majors only)	3	SED 486	Educational Psychology and Behavior Management	3
SED 405	Reading in the Content Areas		SED 488	School/Community Relations	3
			SED 499	Directed Teaching	12

Candidates must be accepted to teacher education before taking 300- and 400-level professional education courses (see department or Office of Student Teaching for admissions criteria)

DEPARTMENT OF SPECIAL EDUCATION**Carole Morris, Department Head****(757) 823-8714**

The Department of Special Education offers a sequence of courses and experiences designed for persons interested in careers as special educators and related professionals. Program graduates are employed as special class teachers, resource room teachers, regular class teachers, educational programmers and diagnosticians. The curriculum prepares graduates to teach and/or work with exceptional residential schools, hospitals, centers for the handicapped and other institutions. A broad-based course sequence ensures competence in planning and implementing individualized education plans for exceptional persons in the least restrictive environment.

Two undergraduate degree programs are offered that prepare graduates for public school teaching with options in (a) Emotional Disturbance/Learning Disabilities and (b) Learning Disabilities/Mental Retardation. In these teacher certification programs, students earn the B.A. degree in Psychology, or the B.S. degree in Interdisciplinary Studies.

Special Education Teacher Certification Endorsements

1. Students must be a candidate for a degree in a liberal arts major, such as .:

English	Interdisciplinary Studies
History and Social Science	Psychology

2. Student must take the following courses in Special Education and professional education (24 semester hours):

3. Students must pass the PRAXIS examinations.
4. Students must complete preparation to teach learners with learning disabilities and mental retardation or emotional disturbance.

Learning Disabilities

SPE 210	American Schools & the Teaching	3	SPE 440	Collaboration, Inclusion, Transition and	3
SPE 312	Educational and Behavioral Management	3	SPE 490	Assessment of Exceptional Students	3
SPE 344	Teaching Reading to Exceptional Learners	3	SPE 499B	Directed Teaching- Learning Disabilities	6
SPE 321	Characteristics, Medical and Legal Aspects	3	TOTAL		24 cr hrs

AND**Option (a): Mental Retardation**

SPE 332	Understanding and Teaching Learners with MR	3	SPE 499C	Directed Teaching-Mental Retardation	6
			TOTAL		9 cr hrs

OR**Option (b): Emotional Disturbance**

SPE 334	Understanding and Teaching Learners with ED	3	SPE 499A	Directed Teaching-Emotionally Disturbed	6
			TOTAL		9 cr hrs

LEARNING DISABILITIES/MENTAL RETARDATION CURRICULUM**B.A. Degree in Psychology*****B.S. Degree in Interdisciplinary Studies******FIRST YEAR**

FRS 100	Freshman Seminar	0
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
HIS 102	History to 1877 or HIS 103 U.S. History	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
PHY 100	Physical Science	3
SOC 101	Introduction to Social Science or	3
FIA 201	Art Appreciation or MUS 301	
	Music Appreciation	3
TOTAL		28 cr hrs

SECOND YEAR

CSC 150		3
ENG 207	Computer Literacy	3
PSY 210	Introduction to World Literature***	3
PSY 211	Introduction to Psychology	3
PSY 228	Basic Principles of Psychology	3
PSY 230	Developmental Psychology	3
PSY 280	Educational Psychology**	3
SCM 285	Abnormal Psychology	3
SPE 210	Principles of Speech	3
INT 308	American Schools and the Teaching	3
PSY 270	Introduction to Interdisciplinary Studies***	3
PED 365	Statistics in Psychology**	3
	Adaptive Physical Education	1
TOTAL	Elective	31 cr hrs

THIRD YEAR

HIS 370	African History and Culture	3
INT 360	Research in Interdisciplinary Studies***	3
INT 375	Language and Society***	3
PSY 322	Psychology of Exceptional Children	3
PSY 360	Experimental Psychology**	3
PSY 360L	Psychology Lab**	1
PSY 381	Topics in Psychology	3
SPE 321	Characteristics, Medical and Legal Aspects	3
SPE 332	Understanding and Teaching Learners with Mental Retardation	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition and	3
SPP 312	Speech and Language Development	3
	Elective Psychology	3
	<i>Elective Interdisciplinary Studies</i>	<i>1</i>
TOTAL		31 cr hrs

FOURTH YEAR

PSY 390	Fundamentals of Learning	3
INT 322	Approaches to Critical Analysis***	3
INT 411	Ideas and Their Influences***	3
PSY 397	Research in Psychology**	3
PSY 492	Psychology Seminar**	3
SPE 312	Educational Psychology and Behavioral	3
SPE 336	Understanding and Teaching Students with Learning Disabilities	3
SPE 490	Assessment of Exceptional Students	3
SPE 499B	Directed Teaching-Learning Disabilities	6
SPE 499C	Directed Teaching-Mental Retardation	6
TOTAL		30 cr hrs

***SUMMARY OF GRADUATION REQUIREMENTS**

General Education Requirements	43
Major Requirements	77
TOTAL	120 cr hrs

*Enrollment requires completion of requirements for admission to teacher education.

**Courses for the B.A. in Psychology (Bold)

***Courses for the B.S. in Interdisciplinary Studies (Italics)

EMOTIONAL DISTURBANCE/LEARNING DISABILITIES CURRICULUM**B.A. Degree in Psychology*****B.S. Degree in Interdisciplinary Studies******FIRST YEAR**

FRS 100	Freshman Seminar	0
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
HIS 102	History to 1877 or HIS 103 U.S. History	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
PHY 100	Physical Science	3
SOC 101	Introduction to Social Science	3
FIA 201	Art Appreciation or MUS 301 Music App	3
TOTAL		28 cr hrs

SECOND YEAR

CSC 150	Computer Literacy	3
ENG 207	Introduction to World Literature***	3
PSY 210	Introduction to Psychology	3
PSY 211	Basic Principles of Psychology	3
PSY 228	Developmental Psychology	3
PSY 230	Educational Psychology**	3
PSY 280	Abnormal Psychology	3
SCM 285	Principles of Speech	3
SPE 210	American Schools and the Teaching	3
INT 308	Introduction to Interdisciplinary Studies***	3
PSY 270	Statistics in Psychology**	3
PED 365	Adaptive Physical Education	3
Elective		3
Elective		1
TOTAL		31 cr hrs

THIRD YEAR

HIS 370	African History and Culture	3
INT 360	Research in Interdisciplinary Studies***	3
INT 375	Language and Society***	3
PSY 322	Psychology of Exceptional Children	3
PSY 360	Experimental Psychology**	3
PSY 360L	Psychology Lab**	1
PSY 381	Topics in Psychology	3
SPE 321	Characteristics, Medical and Legal Aspects in Special Education	3
SPE 334	Understanding and Teaching Learners with Emotional Disturbance	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition and Other Curricular Adjustments	3
SPP 312	Speech and Language Development	3
Elective Psychology		3
Elective Interdisciplinary Studies		1
TOTAL		31 cr hrs

FOURTH YEAR

PSY 390	Fundamentals of Learning	3
INT 322	Approaches to Critical Analysis***	3
INT 411	Ideas and Their Influences***	3
PSY 397	Research in Psychology**	3
PSY 492	Psychology Seminar**	3
SPE 312	Educational Psychology and Behavioral	3
SPE 336	Understanding and Teaching Students with Learning Disabilities	3
SPE 490	Assessment of Exceptional Students	3
SPE 499B	Directed Teaching-Learning Disabilities	6
SPE 499A	Directed Teaching-Emotional	6
TOTAL		30 cr hrs
*SUMMARY OF GRADUATION REQUIREMENTS		
	General Education Requirements	43
	Major Requirements	77
TOTAL		120 cr hrs

*Enrollment requires completion of requirements for admission to teacher education.

**Courses for the B.A. in Psychology (Bold)

***Courses for the B.S. in Interdisciplinary Studies (Italics)

PARAPROFESSIONAL EDUCATION CERTIFICATE PROGRAM CURRICULUM**YEAR ONE****1st Semester**

EDU 101	Collegiate Communication Literacy Skills	
SPE 103	Collegiate Quantitative Literacy Skills	3
SPE 105	Overview of Inclusion Education and Services	3
SPE 107	Human Relations Skills and Ethics	3
CSC 150	Computer Concepts and Applications	3

2nd Semester

ENG 101	Communication Skills	3
MTH 103	Mathematics in General Education	3
SPE 109	Guiding Classroom Behaviors of Learners	3
PSY 211	Basic Principles of Psychology	3
SPE 198	Practicum for Paraprofessionals	3
TOTAL		30 cr hrs

YEAR TWO**1st Semester**

ENG 102	Communication Skills	3
SPE 111	Learning through Literature	3
PSY 215	Human Growth and Development	3
SPE 299	Internship for Paraprofessionals	3
	Elective	3

2nd Semester

SPE 113	Facilitating Reading Instruction	3
EDU 115	Facilitating Learning Mathematics and	3
SPE 210	American Schools and the Teaching	3
SPE 213	Critical Thinking and Assessment Skills	3
	Elective	3
TOTAL		30 cr hrs

SCHOOL OF LIBERAL ARTS
Marilyn Broadus-Gay, Acting Dean
William A. Byrne, Assistant Dean
(757) 823-8118

The School of Liberal Arts embraces ten academic departments in the fine and performing arts, humanities, and social sciences. The departments are English and Foreign Languages, Fine Arts, General Studies, History, Interdisciplinary Studies, Mass Communications and Journalism, Music, Political Science, Psychology, and Sociology. The Army ROTC program is located in the School of Liberal Arts as well.

Students in the School of Liberal Arts have access to a wealth of learning experiences. The School offers students an opportunity to understand and appreciate world cultures as reflected in languages and the arts; enhance communication and interpersonal skills; and prepare for careers supported by studies in the liberal, creative, performing, and media arts.

The social sciences deal with the relationships of mankind. Whether from an economic, political, sociological, psychological or historical perspective, the focus, as well as the interest of the social sciences, is on the human condition.

The goals of the School of Liberal Arts are as follows:

1. To provide an intellectually liberating education for students that is conducive to life-long learning.
2. To impart knowledge, strengthen communicative and quantitative abilities, and enhance research and inquiry skills in the various subject matter areas.
3. To develop habits of independent thought and critical thinking.
4. To promote attitudes of understanding, respect, and tolerance for one's own culture and the cultures of other peoples.
5. To engender in students an appreciation of the moral and ethical components of life.
6. To define educational standards that addresses the changing paradigms and diverse needs of students in a changing global society.
7. To provide a highly qualified pool of graduates for the global work force.
8. To contribute to the social consciousness and cultural enrichment of the community through the provision of programs, exhibits, and workshops in the arts, humanities, and social sciences.

TECHNOLOGICAL PROFICIENCY

The School of Liberal Arts realizes that technological proficiency is an integral component of career preparation and life-long learning. Accordingly, all curricula in the School of Liberal Arts incorporate basic and discipline-appropriate technological instruction.

The SOLA-TEC Center is housed under the School of Liberal Arts. The aim of SOLA-TEC is to infuse technology into every facet of instruction and academic management via modes of delivery and accessibility that are consistent with learning and accountability patterns in contemporary life.

DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES
Annie S. Perkins, Department Head
(757) 823-8891

DEGREE OFFERED

Bachelor of Arts in English

The English/Foreign Languages areas of the Department aim to develop in students an understanding of language development and of the structure and uses of language in its various written and spoken forms. It is the Department's goal to help students in all majors to develop facility in the use of the English language for various purposes and contexts and to respond appreciatively to the beauty and power of language in a variety of forms. The Department offers its majors opportunities for specialization in English/Liberal Arts, Communication Sciences and Disorders, and Spanish Literature to prepare them for graduate study or for careers in teaching, writing, speech-and-hearing therapy, and other professions. Courses in theatre performance and technology, in African-American literature, in creative writing, and in speech communication also help prepare students for a variety of careers.

The Communication Sciences and Disorders program is a pre-professional training program that prepares students for graduate study in speech-language pathology. Those entering this program should note that employment as a speech-language pathologist is usually not possible for those with only a bachelor's degree. An advanced degree (master's or doctorate) in speech-language pathology is required both for state licensure and certification by the American Speech-Language-Hearing Association.

The Foreign Languages program in the Department seeks to develop students' fundamental skills in French, Spanish, and other languages, as staff resources permit, and to generate interest in foreign cultures. For students concentrating in Spanish literature, the Department offers advanced courses leading to careers and professions enhanced by a mastery of Spanish language and culture.

ENGLISH REQUIREMENTS

Requirements for a major: Thirty-six or more hours are required in discipline-related courses in all of the sequences for the Bachelor of Arts in English. All discipline-related courses must be passed with a grade of C or better.

Requirements for certification to teach in the State of Virginia: A minimum of thirty-six semester hours (including ENG 101, ENG 102, American and British literature, language, and related courses) is required. Students in the English degree curriculum and the Spanish literature concentration may seek certification to teach in middle or high school.

FOREIGN LANGUAGE REQUIREMENTS

General foreign language requirements can be fulfilled upon the successful completion of course work through the 212 (or 213: Scientific French/German) level. Students may satisfy all or part of this requirement by obtaining satisfactory scores on a CLEP examination.

Freshmen and transfer students who wish to enter any language course above the 111 level will take a placement test in order to determine their eligibility to pursue advanced courses. This test will be administered by the foreign languages faculty.

Requirements for a concentration in Spanish literature: An English major may have a concentration in Spanish literature. The concentration consists of 24-39 semester hours beyond the 111/112 level. The Department reserves the right to increase or reduce requirements depending upon the potential of the individual student.

ASSESSMENT REQUIREMENTS FOR MAJORS

All prospective English graduates will be required to take a comprehensive examination prior to graduation. Dates and times of administration will be announced by the Department. All majors will be required to write and defend a senior thesis or complete a senior project appropriate to their concentration.

Additional Recommendation:

All students should consider taking LOG 210: Logic and Critical Thinking.

Note: Descriptions for general education humanities courses (HUM 210 and HUM 211) are listed at the end of the course offerings for music.

ENGLISH DEGREE CURRICULUM

First Year			Third Year		
BIO 100	Biological Science	3	ENG 306	Introduction to Literary Criticism	3
BIO 100L	Biological Science Lab or CHM or PHY 100L	1	ENG 315	Survey of English Literature I	3
CHM 100	Chemistry: Man & Environment or PHY 100	3	ENG 316	Survey of English Literature II	3
CSC 150	Computer Concepts and Applications	3	ENG 341	Survey of American Literature I	3
ENG 101	Communication Skills I	3	ENG 342	Survey of American Literature II	3
ENG 102	Communication Skills II	3	ENG 383	African-American Literature	3
ENG 114	Techniques of Vocabulary Building	2	ENG 410	The History of the English Language	3
FRN 111	Elementary French I or SPN 111	3	ENG 413	Shakespeare	3
FRN 112	Elementary French II or SPN 112	3	ENG 419	Contemporary American English Grammar	3
FRS 100	Freshman Seminar	0	SOC 101	Introduction to Social Science	3
HED 100	Personal and Community Health	2	TOTAL		30 cr hrs
HIS 100	History of Civilization or HIS 101, 102, or 103	3	Fourth Year		
PED 100	Fundamentals of Fitness for Life	1	Unrestricted Electives		18
TOTAL		30 cr hrs	ENG 412	Chaucer, or ENG 430	3
Second Year			ENG 450	Research Seminar and Senior Thesis	3
CSC 200	Advanced Computer Concepts	3	ENG 454	Young Adult Literature	3
ENG 207	Introduction to World Literature	3	ENG 456	Women's Studies or ENG 459	3
ENG 210	Practical English Grammar	3	ENG 460	Assessment & Evaluation of Writing or ENG 449	3
ENG 286	Advanced Composition	3	TOTAL		33 cr hrs
FRN 211	Intermediate French I or SPN 211	3	SUMMARY OF GRADUATION REQUIREMENTS		
FRN 212	Intermediate French II or SPN 212	3	General Education Requirements		40
HUM 210	Humanities I or		Major Requirements		62
HUM 211	Humanities II	3	Electives		18
MTH 103	Contemporary Mathematics	3	TOTAL		120 cr hrs
SCM 285	Principles of Speech	3			
TOTAL		27 cr hrs			

TEACHER LICENSURE ENDORSEMENT

Students wishing to pursue a career in teaching must take the following steps:

1. Follow the curriculum for the degree in English.
2. Use the elective hours for professional courses.
3. See the academic advisor in the Department of English and Foreign Languages.
4. See the academic advisor in the Department of Secondary Education and School Leadership.
5. Take the PRAXIS I test and make a passing score in order to be admitted to the teacher education program.
6. Pass the PRAXIS II examination before graduation.
7. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours):

SED 201 American Schools and the Teaching Profession
 SED 380 Foundations of Methods in Secondary Schools
 SED 405 Reading in the Content Area

SED 420 Educational Technology
 SED 486 Educational Psychology and Behavior Management
 SED 488 School/Community Relations
 SED 499 Directed Teaching and Seminar

Note: Students seeking middle school and high school endorsement in English must also take HIS 102 or 103 and 3 additional hours of mathematics.

COMMUNICATION SCIENCES AND DISORDERS CURRICULUM

First Year

BIO 105	Human Biology w/Lab	4
CSC 150	Computer Concepts and Use	3
ENG 101	Communication Skills I	3
FRS 100	Freshman Seminar	0
HED 100	Personal and Community Health	2
HIS 100	History of Civilization (101, 102, or 103)	3
CHM 100	Chemistry: Man and Environment	3
CSD 116	Orientation to Communication Sciences and Disorders	1
ENG 102	Communication Skills II	3
ENG 114	Techniques of Vocabulary Building	2
MTH 105	Elementary Algebra	3
PED 100	Fundamentals of Fitness	1
SOC 101	Introduction to Social Science	3
TOTAL		31 cr hrs

Second Year

CSC 200	Advanced Computer Concepts	3
CSD 213	Computers and other instrumentation in Com. Sciences and Disorders	1
CSD 218	Anatomy & Physiology/Speech Mechanism	3
HUM 210	Humanities	3
PSY 210	Introduction to Psychology	3
SCM 285	Principles of Speech	3
CSD 211	Phonetics	3
CSD 212	Speech and Language Development	3
ENG 207	Introduction to World Literature	3
HUM 211	Humanities	3
MTH 250	Elementary Statistics Concepts	3
TOTAL		31 cr hrs

Third Year

CSD 311	Methods & Materials in Communication Disorders	3
CSD 312	Phonological/Articulatory & Language Disorders	3

CSD 313	Introduction to Audiology and Hearing Sciences	3
ENG 303	Professional & Technical Writing	3
SWK 220	Human Behavior and Social Environment I	3
CSD 315	Neurogenic and Other Organic Disorders	3
CSD 320	Voice and Speech Science	3
ENG 306	Introduction to Literary Criticism	3
ENG 341	Survey of American Literature I	3
SWK 221	Human Behavior II	3
TOTAL		30 cr hrs

Fourth Year

CSD 413	Research Methods in Com. Sciences and Disorders	3
CSD 414	Voice and Fluency Disorders	3
CSD 415	Clinical Practicum in Communication Disorders	3
ENG 342	Survey of American Literature II	3
ENG 383	African-American Literature	3
CSD 416	Habilitation/Rehabilitation of Hearing Disorders	3
CSD 417	Clinical Practicum in Communication Disorders II	3
CSD 418	Seminar: Topics in Communication Sciences and Disorders	1
ENG 419	Contemporary American English Grammar	3
SPE 310	Characteristics & Strategies of Cognitively Delayed or SPE 342 Learning Disabilities	3
TOTAL		28 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS:

General Education Requirements	40
Major Requirements (ENFL)	23
Concentration requirements (CSD)	42
Cognate Electives	15
TOTAL	120 cr hrs

SPANISH LITERATURE CONCENTRATION CURRICULUM

First Year

BIO 100	Biological Science	3
BIO 100L	Biological Science Lab or CHM or PHY 100L	1
CHM 100	Chemistry: Man & Environment or PHY 100	3
CSC 150	Computer Concepts and Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
FRS 100	Freshman Seminar	0
HIS 100	History of Civilization or HIS 101, 102, or 103	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
SPN 111	Elementary Spanish I or SPN 211	3
SPN 112	Elementary Spanish II or SPN 212	3
TOTAL		29 cr hrs

Second Year

CSC 200	Advanced Computer Concepts	3
ENG 207	Introduction to World Literature	3
ENG 210	Practical English Grammar.	3
ENG 286	Advanced Composition	3
HED 100	Personal and Community Health	2
SCM 285	Principles of Speech	3
SOC 101	Introduction to Social Science	3
SPN 211	Intermediate Spanish I or SPN 215 or 216	3
SPN 212	Intermediate Spanish II or SPN 215 or 216	3
SPN 220	Spanish Civilization	3
TOTAL		29 cr hrs

Third Year			Fourth Year		
ENG 306	Introduction to Literary Criticism	3	Electives		6
ENG 315	Survey of English Literature I	3	ENG 410	History of the English Language or ENG 419	3
ENG 316	Survey of English Literature II	3	ENG 413	Shakespeare	3
ENG 341	American Literature I	3	HUM 210	Humanities I OR	
ENG 342	American Literature II	3	HUM 211	Humanities II	3
ENG 383	African-American Literature	3	SPN 320	Latin-American Civilization	3
SPN 321	Survey of Spanish Literature I	3	SPN 332	Literature of the 19th Century	3
SPN 322	Survey of Spanish Literature II	3	SPN 333	Literature of the 20th Century	3
SPN 340	Drama of the Golden Age	3	SPN 350	Cervantes	3
SPN 450	Phonetics or SPN 485	2	SPN 454	Advanced Grammar & Composition	3
TOTAL		29 cr hrs	SPN 490	Senior Seminar	3
			TOTAL		33 cr hrs
SUMMARY OF GRADUATION REQUIREMENTS					
General Education Requirements					40
Major Requirements					74
Electives					6
TOTAL					120 cr hrs

NOTE Students seeking a license to teach in the middle school and high school will take the following additional courses and see their advisors in the Department of English and Foreign Languages and in the Department of Secondary Education and School Leadership:

ENG 454	SED 201	SED 420	SED 499
HIS 102 OR 103	SED 380	SED 486	
MTH (elective)	SED 405	SED 488	

REQUIREMENTS FOR A MINOR IN ENGLISH

For an English minor, non-English majors should take 9 credit hours of CORE courses and 9 credit hours of other English courses. The Department recommends that a student seeking an English minor choose ENG 207: Introduction to World Literature in the Humanities category and ENG 383: African-American Literature in the Cultural Elective category under the General Education requirements in the Catalog. The 18 credit hours for the minor in English should be distributed as follows:

Nine (9) credit hours of CORE courses:	Additional nine (9) credit hours of courses:
ENG 210: Practical English Grammar or	ENG 3XX or ENG 4XX
ENG 286: Advanced Composition	ENG 3XX or ENG 4XX
ENG 341 or 342: Survey of American Literature I or II	ENG 3XX or ENG 4XX
ENG 306: Introduction to Literary Criticism	

DEPARTMENT OF FINE ARTS Chinedu Okala, Department Head (757) 823-8844

The Department of Fine Arts takes its title and general direction from the traditional roles of drawing, painting, and sculpture. However, the goal of recent years has been to eliminate constricting departmental barriers, to increase interrelationship of all creative activities, and to broaden the educational potential. This has placed greater emphasis on a wider spectrum of courses and programs, more varied technology, and a neoteric pedagogy.

DEGREES OFFERED

Bachelor Of Arts In Fine Arts And Graphic Design

The degree program offers two sequences: Fine Arts and Fine Arts Education.

ASSESSMENT REQUIREMENTS:

All students majoring in the Department of Fine Arts are required to maintain a professional portfolio that demonstrates their creative development. The portfolio is reviewed at scheduled intervals for advisement purposes. Participation in the "Seniors Gallery Exhibition" is required of all graduates.

FINE ARTS CURRICULUM**First Year**

ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
FIA 114	Basic Design	3
FIA 115	Basic Design II	3
FIA 116	Basic Design III	3
FIA 120	Drawing	3
FIA 121	Drawing	3
FIA 180	Computer Literacy for the Arts	3
HED 100	Personal & Community Health	2
MTH 103	Contemporary Mathematics	3
FRS 100	Freshman Seminar	0
PED 100	Fundamentals of Fitness for Life	1
TOTAL		30 cr hrs

Third Year

FIA 240	Sculpture, Carving & Welding	3
FIA 261	Printmaking	3
FIA 270	History of Art Survey I	3
FIA 271	History of Art Survey II	3
SCM 285	Principles of Speech	3
FIA 320	Intermediate Drawing	3
FIA 370	African/American Art History	3
FIA XXX	FIA Elective (300 level FIA or FDM class)	3
XXX	Free Elective (200 or 300 level free elective or FIA or FDM)	3
XXX	Free Elective (200 or 300 level free elective or FIA or FDM)	3
TOTAL		30 cr hrs

Second Year

BIO 100	Biological Science	3
CHM 100	Chemistry or PHY 100	3
CHM 100L	Chemistry Lab or PHY 100L	1
FIA 140	Ceramics	3
FIA 220	Life Drawing	3
FIA 234	Painting	3
FIA XXX	FIA Elective (100 or 200 level FIA or FDM)	3
XXX	Free Elective(100 or 200 level free elective or FIA or FDM)	3
XXX	Free Elective (100 or 200 level free elective or FIA or FDM)	3
HIS 100	History of Civilization	3
SOC 101	Introduction to Sociology	3
TOTAL		31 cr hrs

Fourth Year

XXX	Cultural Elective* (limited to one of the selected cultural electives)	3
FIA XXX	FIA Elective (300 or 400 level FIA or FDM Class)	3
XXX	Free Elective (300 or 400 level free elective including FIA or FDM)	3
FIA XXX	FIA Elective (400 level FIA or FDM class)	3
FIA XXX	FIA Elective (400 level FIA or FDM class)	3
FIA 470	Modern Art History	3
FIA 491	Advanced Studio Problems	3
XXX	Free Elective (300 or 400 level free elective including FIA or FDM)	3
FIA 495	Portfolio Preparation & Senior Exhibition	2
HUM 210	Humanities	3
TOTAL		29 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	40
Major Requirements	60
TOTAL	120 cr hrs

A non-art minor can be established by choosing carefully with your advisor the 15 – 18 necessary hours of free electives.

RECOMMENDED ELECTIVES:**CULTURAL ELECTIVES:**

ENG 383	HIS 371	POS 315	SOC 237
HIS 336	MUS 234	PSY 340	

FINE ART ELECTIVES may be any FIA or FDM 100, 200, 300, or 400 level courses listed in the NSU Student Handbook, the Department of Fine Arts Handbook, or the NSU Semester Schedule Book.)

FINE ARTS EDUCATION CURRICULUM**First Year**

ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
FIA 114	Basic Design	3
FIA 115	Basic Design II	3
FIA 116	Basic Design III	3
FIA 120	Drawing	3
FIA 121	Drawing	3
FIA 140	Ceramics	3
FIA 160	Lettering	3
HED 100	Personal & Community Health	2
FRS 100	Freshman Seminar	0
PED 100	Fundamentals of Fitness for Life	1
TOTAL		30 cr hrs

Second Year

BIO 100	Biological Science	3
CHM 100	Chemistry or PHY 100	3
CHM 100L	Chemistry Lab or PHY 100L	1
FIA 141	Ceramics	3
FIA 180	Computer Literacy for the Arts	3
FIA 214	Craft Design	3
FIA 220	Life Drawing	3
FIA 240	Sculpture, Carving, & Welding	3
FIA 261	Printmaking	3
HIS 102	History of Civilization	3
MTH 103	Contemporary Mathematics	3
TOTAL		31 cr hrs

Third Year			Fourth Year		
Cultural Elective*		3	FIA 320 Intermediate Drawing		3
FIA 234 Painting		3	FIA 365 Elementary Photography		3
FIA 314 Fine Arts & Methods		3	HUM 210 Humanities		3
FIA 270 History of Art Survey I		3	SED 420 Educational Technology I		3
FIA 271 History of Art Survey II		3	SED 486 Educational Sociology		3
SCM 285 Principles of Speech		3	SED 488 School/Community Relations		3
SED 201 American Schools & the Teaching Profession		3	SED 499 Directed Teaching		12
SED 233 Critical Thinking & Assessment Skills		3	SED 499P Student Teaching Professional Seminar		0
SED 380 Foundations of Methods in Secondary Education		3	TOTAL		30 cr hrs
SOC 101 Introduction to Social Sciences		3	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL		30 cr hrs	General Education Requirements		40
			Professional Education Requirements		27
			Major Requirements		54
			TOTAL		121 cr hrs

Teacher Licensure Endorsement:

Students wishing to pursue a career in teaching art must take the following steps:

1. Follow the curriculum for the degree in Fine Arts.
2. Use elective hours for professional courses.
3. See the academic advisor in their major department.
4. See the academic advisor in the School of Education.
5. Pass the PRAXIS I Examination prior to applying for admission to Teacher Education.
6. Pass the PRAXIS II Examination before graduation.

NOTE Endorsement is for K through 12.

***RECOMMENDED ELECTIVES:**

ENG 383	FIA 370	HIS 336	HIS 371	PSY 340
FIA 250	FIA 470	HIS 337	MUS 234	SED 405
FIA 251	HIS 335	HIS 370	POS 315	SOC 237

MINOR IN FINE ARTS (for students majoring in other departments)**REQUIREMENTS AND OPTIONS ARE AS FOLLOWS:****REQUIRED COURSES:**

FIA 115 Basic Design II	3	FIA 3XX Dept. Elective (FDM or FIA)	3
FIA 120 Basic Drawing I	3	FIA 3XX OR 4XX	
FIA 260 Introduction to Advertising	3	Dept. Elective (300 or 400 level)	3
FIA 3XX Dept. Elective (FDM or FIA)	3	TOTAL HOURS NEEDED:	18

NOTE All department FIA or FDM electives may be chosen from those listed in the Fine Arts Department's Handbook, the NSU Student Catalog or the NSU Schedule of Classes for each semester. The electives should be chosen after a student has consulted with his or her advisor.

FIA 115 Basic Design II, a design development course in color design, is necessary for all students. The FDM designation refers to the fashion classes and the FIA designation refers to all of the other Fine Arts studio and history classes.

DEPARTMENT OF GENERAL STUDIES

Department Head: Associate Dean of Liberal Arts
(757) 823-8118

The Office of the First Year Experience and The Academy for Collegiate Excellence and Student Success (ACCESS) provide two courses designed to address the needs of undeclared students and students on academic probation. For more information, please phone (757) 823-8507 or see www.nsu.edu.

The Office of New Student Orientation coordinates Freshman Seminar. This seminar is an introduction to university life. For more information, please phone (757) 823-8912.

The Honors Program coordinates the honors seminars. For more information, please phone the director at (757) 823-8208 or email the director at honors@nsu.edu.

DEPARTMENT OF HISTORY**Charles H. Ford, Department Head****(757) 823-8828**

The Department of History provides students with a critical intellectual framework for assessing and understanding human affairs. The Department offers a broad spectrum of history and geography courses leading to the Bachelor of Arts degree in history. Curriculum sequences are available in History, History Social Science (Education), and History Military Science (Army and Navy).

The general objectives of the Department are as follows:

1. To enhance students' intellectual perspective by enriching their liberal education studies.
2. To develop students' research, critical thinking, analytical, and writing skills.
3. To familiarize students with the traditions of American history and the contributions of African Americans to that history.
4. To introduce students to the heritage of world civilizations and to foster in them an understanding and appreciation of those civilizations.
5. To prepare students to be informed and responsible members of a democratic society.
6. To prepare departmental majors for their professions and careers.

The departmental degree program is designed to prepare students for careers in law, teaching, public relations, journalism, foreign services, business, and other professions.

Assessment

In order to monitor and evaluate students' academic progress at Norfolk State in accordance with state mandates, the University has developed an assessment program. All History majors are required to participate in this program, as designed and administered by the department.

It is the policy of the History Department that History majors take the required 100-level and 200-level classes (HIS 100, HIS 101, HIS 102, HIS 103, and HIS 205) prior to registering for any upper-level (HIS 300+) classes. In order to take upper-level classes before the completion of the 100-level surveys, students must receive permission from the chair. HIS 205, Introduction to History, should be taken by all History majors and minors after the third semester of admission to the University and/or after the student has taken the basic American history sequence of HIS 102 and HIS 103.

Upon completion of the survey courses, students must take a departmental assessment test, measuring their competency in American and world history. The results of this test will be used for diagnostic purposes to inform students of the progress they have made and to point out those areas in which they are still deficient. If students pass the test, they are relieved of any future requirements to take another assessment test. If students do not pass the test, they may retake it once a semester until it is passed.

Each history major must pass the departmental assessment test. Those students who have not passed the test before enrolling in HIS 497 must pass the assessment examination as a part of the requirements of that course. A student who does not pass the assessment test before the end of HIS 497 will receive an "I" for the course and will not subsequently be given a grade for the course until the test is passed. Because HIS 497 is a required course, as well as the department's capstone course, students cannot complete any of the History curricula--and therefore cannot graduate--without completing this course.

The assessment test is comprised of three parts:

- Multiple choice questions
- Essay questions drawn from both American and world history
- Map exercises, including identification of countries

For further information, contact the History Department: Phone (757) 823 8828 or e-mail chford@nsu.edu or lgrant@nsu.edu.

HISTORY CURRICULUM

(Note: Students in this curriculum may tailor their electives to include an emphasis on African and African Diaspora Studies. See corresponding certificate program below.)

First Year			Second Year		
FRS 100	Freshman Seminar	0	HUM 210 or FIA 201 or MUS 301 .		3
BIO 100	Biological Science	3	HUM 211 or FIA 201 or MUS 301.		3
BIO 100L	Biological Science Lab	1	Electives		6
CSC 150	Computer Concepts & Applications	3	HIS 102	History of World Civilizations, Part 1	3
ENG 101	Communication Skills I	3	HIS 103	History of World Civilizations, Part 2	3
ENG 102	Communication Skills II	3	LOG 210	Logic: Critical Thinking	3
FL 111	Foreign Language	3	PHY 100	Physical Science	3
FL 112	Foreign Language	3	POS 100	American National Government	3
HED 100	Personal & Community Health	2	HIS 205	Introduction to History (FO)	3
HIS 102	U.S. History to 1865	3	TOTAL		30 cr hrs
HIS 103	U.S. History since 1865	3			
MTH 103	Contemporary Mathematics	3			
PED 100	Fundamentals of Fitness for Life	1			
SOC 101	Introduction to the Social Sciences	3			
TOTAL		34 cr hrs			

Third Year			Fourth Year		
HIS 3XX	HIS 4XX Non-Western History	6	Electives		8
	Electives		History Electives		9
ECN 211	Principles of Economics	3	ENG 207	Literature of the Western World or ENG 315	
Elective		3		or ENG 316	3
CSC 200	Advanced Computer Concepts	3	HIS 497	Introduction to Historical Research	3
GEO 130	Principles of Geography	3	POS 430	Modern Theory or POS 431**	3
ENG 203	Advanced Communication Skills		TOTAL		26 cr hrs
	or ENG 286 or ENG 303	3			
ENG 383	African American Literature		SUMMARY OF GRADUATION REQUIREMENTS		
	or FIA 170 or MUS 234 or HIS 335/336	3	General Education Requirements		40
HIS 439	United States from 1932 to Present	3	Major Requirements		63
SCM 285	Principles of Speech	3	Electives		17
TOTAL		30 cr hrs	TOTAL		120 cr hrs

(Twenty-one semester hours of History at the 300-400 level are required for a major in the Department, with a minimum of six credit hours of non-Western history.)

HISTORY AND SOCIAL SCIENCE/EDUCATION CURRICULUM

First Year			Third Year		
FRS 100	Freshman Seminar	0	History Elective		3
BIO 100	Biological Science	3	ECN 211	Principles of Economics	3
BIO 100L	Biological Science Lab	1	ECN 212	Principles of Economics	3
CSC 150	Computer Concepts & Applications	3	ENG 203	Advanced Communication Skills or	
ENG 101	Communication Skills I	3		ENG 286 or ENG 207 or ENG 303	3
ENG 102	Communication Skills II	3	ENG 383	African American Literature	
FL 111	Foreign Language	3		or FIA 170 or MUS 234 or HIS 335/336	3
FL 112	Foreign Language	3	HIS 346	Twentieth Century Europe	3
HED 100	Personal and Community Health	2	HIS 328	History and Government of Virginia	3
HIS 102	U.S. History to 1865	3	HIS 439	United States from 1932 to Present	3
HIS 103	U.S. History since 1865	3	SED 380	Foundations of Methods in Secondary	
SOC 101	Introduction to the Social Sciences	3		Schools**	3
MTH 103	Contemporary Mathematics	3	SED 390	Secondary Social Studies Methods	3
PED 100	Fundamentals of Fitness for Life	1	SED 420	Educational Technology	3
TOTAL		34 cr hrs	SED 486	Educational Psychology & Behavior	
				Management	3
Second Year			TOTAL		36 cr hrs
HUM 210	Humanities or FIA 201 or MUS 301	3			
HUM 211	Humanities or FIA 201 or MUS 301	3	Fourth Year		
GEO 130	Principles of Geography	3	Non-Western History Electives		6
HIS 100	History of World Civilizations, Part 1	3	GEO XXX	Geography Advanced Course	3
HIS 101	History of World Civilizations, Part 2	3	HIS 497	Introduction to Historical Research	3
LOG 210	Logic: Critical Thinking	3	POS 360	International Politics	3
PHY 100	Physical Science	3	SCM 285	Principles of Speech	3
POS 100	American Government	3	SED 488	School-Community Relations	3
POS 231	American State & Local Government	3	SED 499	Directed Teaching	12
SED 201	American Schools & the Teaching		TOTAL		33 cr hrs
	Profession	3			
POS 430	Modern Theory or POS 431	3	SUMMARY OF GRADUATION REQUIREMENTS		
HIS 205	Introduction to History (FO)	3	General Education Requirement		40
TOTAL		36 cr hrs	History-Social Science		69
			Professional Education Core		
			(including 12 Hours of Directed Teaching)		30
			TOTAL		139 cr hrs

Endorsement Requirements:

The Department requires 36 hours in history including 15 hours in lower level U.S. history, world civilization, and introduction to history courses, as well as 21 hours of advanced history courses (300-400 level) with a minimum of 6 credit hours of non-Western courses. The candidate must also complete 18 hours of professional education courses and 12 hours of student teaching for certification in secondary education.

A minimum grade of "C" is required in all history and geography, political science, economics, professional education, and English 101, 102, and 203 courses. These requirements apply to all areas of endorsement.

*Students must pass the PRAXIS I Test prior to applying for admission to Teacher Education and enrollment in upper level professional education courses. SED 233, while not required, may be taken before taking the PRAXIS Exam.

**Must be taken prior to directed teaching.

To be endorsed as a teacher in social studies, the applicant shall complete 30 hours of education courses and 42 hours of social studies courses, including 18 upper level semester hours in history, 12 semester hours in political science, 6 semester hours in

geography, and 6 semester hours in economics. Within the endorsement, the applicant wishing to teach a course in cultural anthropology and sociology or social psychology must complete a minimum of 6 semester hours in these disciplines.

An applicant seeking a separate endorsement in history must complete 24 semester hours: American history (including Virginia history), European history, world history, and contemporary affairs (State Department of Education Guidelines).

For Early Childhood Certification Endorsement:

Students must fulfill the degree requirements for the History and Social Science Curriculum and take the following courses in Early Childhood Education and professional education (18 semester hours) as well as student teaching (12 semester hours):

SED 201	American Schools and the Teaching Profession	ECE 461	Curriculum and Instruction in Early Primary
SED 233	Seminar in Assessment and Evaluation	ECE 484	Teaching Reading in Early Childhood Education
ECE 274	The Study of Young Children	ECE 499	Directed Teaching
ECE 460	Curriculum and Instruction in Preschool and Kindergarten		

*For Special Education Certification Endorsement:

Students must fulfill the degree requirements for the History and Social Science curriculum and take the prescribed curriculum (24 semester hours) in Special Education and professional education (see Department of Special Education) as well as 12 semester hours of student teaching.

HISTORY-MILITARY SCIENCE (ARMY) CURRICULUM

First Year			Third Year		
FRS 100	Freshman Seminar	0	Non-Western History Electives		6
BIO 100	Biological Science	3	ENG 383	African-American Literature	
BIO 100L	Biological Science Lab	1		or FIA 170 or MUS 234 or HIS 335/336	3
CSC 150	Computer Concepts & Applications	3	CSC 200	Advanced Computer Concepts	3
ENG 101	Communication Skills I	3	FL 111	Foreign Language	3
ENG 102	Communication Skills II	3	FL 112	Foreign Language	3
HIS 102	U. S. History until 1865	3	HIS 380	American Military History	3
HIS 103	U. S. History Since 1865	3	MSL 311	Advanced Leadership Management	3
POS 100	American National Government	3	MSL 311D	Drill and Ceremonies	1
MSL 111	Fundamentals of Leadership/Management	2	MSL 312	Advanced Leadership Management	3
MSL 112	Fundamentals of Leadership/Management	2	MSL 312D	Drill and Ceremonies	1
MSL 111D	Basic Drill & Ceremony or MSL 112D	1	MSL 313	Advanced Camp*	0
MTH 103	Contemporary Mathematics	3	SCM 285	Principles of Speech	3
TOTAL		30 cr hrs	TOTAL		32 cr hrs
Second Year			Fourth Year		
SOC 101	Introduction to Social Science	3	History Electives (300-400 level)		6
ENG 203	Advanced Communication Skills or		GEO 130	Principles of Geography	3
	ENG 286 or ENG 207 or ENG 303	3	HIS 439	United States from 1932 to Present (SO)	3
HIS 100	History of World Civilizations, Part 1	3	HIS 497	Introduction to Historical Research (FO)	3
HIS 101	History of World Civilizations, Part 2	3	MSL 411	Theory/Dynamics of Military Team	3
HUM 210	Humanities or FIA 201 or MUS 301	3	MSL 411D	Drill and Ceremonies	1
HUM 211	Humanities or FIA 201 or MUS 301	3	MSL 412	Theory/Dynamics of Military Team	3
LOG 210	Logic: Critical Thinking	3	MSL 412D	Drill and Ceremonies	1
MSL 211	Applied Leadership/Management	2	POS 360	International Politics	3
MSL 211D	Drill and Ceremonies or MSL 212D	1	TOTAL		26 cr hrs
MSL 212	Applied Leadership/Management	2	SUMMARY OF GRADUATION REQUIREMENTS		
PHY 100	Physical Science	3	General Education Requirement		40
POS 100	American National Government	3	Major Requirements		54
TOTAL		32 cr hrs	Military Science*		26
			TOTAL		120 cr hrs

For the History Military Science (Army) Sequence, 36 hours in history are required, of which 21 must be at the 300 or 400 level, with a minimum of 6 credit hours of non Western history. Twenty six credit hours in Military Science are required.

*Juniors may receive 4 semester hours credit for summer camp exercises, but these credits will not be a part of scheduling.

HISTORY MILITARY SCIENCE (NAVY) CURRICULUM

First Year			Third Year		
FRS 100	Freshman Seminar	0	Non-Western History Electives		6
BIO 100	Biological Science	3	ENG 383	African-American Literature	
BIO 100L	Biological Science Lab	1		or FIA 170 or MUS 234 or HIS 335/336	3
CSC 150	Computer Concepts & Applications	3	CSC 200	Advanced Computer Concepts	3
ENG 101	Communication Skills I	3	FL 111	Foreign Language	3
ENG 102	Communication Skills II	3	FL 112	Foreign Language	3
HIS 102	U.S. History to 1865	3	HIS 380	American Military History	3
HIS 103	U.S. History Since 1865	3	NSC 301	Navigation and Naval Operations I	3
HIS 205	Introduction to History	3	NSC 302	Navigation and Naval Operations II	3
NSC 111	Naval Laboratory	1	NSC 311	Naval Laboratory V	1
NSC 112	Naval Laboratory II	1	NSC 312	Naval Laboratory VI	1
SOC 101	Introduction to Social Science	3	SCM 285	Principles of Speech	3
MTH 103	Contemporary Mathematics	3	TOTAL		32 cr hrs
TOTAL		30 cr hrs			
Second Year			Fourth Year		
HIS 100	History of World Civilizations, Part 1	3	History Electives (300-400 level)		6
HIS 101	History of World Civilizations, Part 2	3	GEO 130	Principles of Geography	3
HUM 210	Humanities or FIA 201 or MUS 301	3	HIS 439	United States from 1932 to Present	3
HUM 211	Humanities or FIA 201 or MUS 301	3	HIS 497	Introduction to Historical Research	3
LOG 210	Logic: Critical Thinking	3	NSC 401	Leadership and Management I	3
NSC 201	Naval Ship Systems I (Engineering)	3	NSC 402	Leadership and Management II	3
NSC 202	Naval Ship Systems II (Weapons)	3	NSC 411	Naval Laboratory VII	1
NSC 211	Naval Laboratory III	1	NSC 412	Naval Laboratory VIII	1
NSC 212	Naval Laboratory IV	1	POS 360	International Politics	3
ENG 203	Advanced Communication Skills or ENG 286 or ENG 207 or ENG 303	3	TOTAL		26 cr hrs
PHY 100	Physical Science	3	SUMMARY OF GRADUATION REQUIREMENTS		
HIS 205	Introduction to History	3	General Education Requirement		40
TOTAL		32 cr hrs	Major Requirements		54
			Military Science*		26
			TOTAL		120 cr hrs

For the History Military Science (Navy) Sequence, 36 hours in history are required, of which 21 must be at the 300 or 400 level, with a minimum of 6 credit hours of non Western history. Twenty six credit hours in Military Science are required.

MINOR IN HISTORY

For those students in other majors seeking a minor in history, the following program is offered:

HISTORY MINOR

HIS 205	Introduction to History	3
HIS 3XX-HIS 4XX	History Electives	12
Total		15 cr hrs

CERTIFICATE PROGRAM IN AFRICAN AND AFRICAN DIASPORAN STUDIES

This certificate program is designed for those students who are interested in the making of the cultures of persons of African descent. The histories of the Caribbean, Latin America, Africa, and North America are its key elements. Participating faculty will require students to engage in multidisciplinary approaches in studying the formation of racial and ethnic identities, among other topics, in African and African Diasporan cultures. The program will underscore the connection between the formation of those identities and economic developments in their surrounding societies.

Certificate Program Prerequisites:

HIS 335 African American History, Part 1	3	HIS 336 African American History, Part 2	3
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Required Courses for Certificate Program:

HIS 490A Introduction to African and African Diasporan Studies	3	HIS 370 African History and Culture Pt 1	3
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Certificate Program Electives (Select one from each grouping.) 15 credits hrs.

HIS 371	African History and Culture, Part 2, or	HIS 490E	Major Themes in Contemporary Africa
HIS 365	Caribbean and Latin American History, or	HIS 448	Slavery in the Atlantic Basin
HIS 446	Colonial Latin America, or		

ENG 383	African American Literature, or	ENG 433	African and African American Biography and Autobiography, or
ENG 384	African American Literature: Poetry, or	ENG 440	Seminar in African and African American Literature, or
ENG 385	African American Literature: Fiction, or	ENG 458	Southern Black Female Aesthetic
ENG 432	African and African American Novel, or		
DRM 219	African American Drama, or	MUS 335	Jazz Literature and Criticism, or
FIA 370	African American Art, or	MUS 336	Jazz History
MUS 234	African American Music, or		
GEO 337	Geography of Africa, or	POS 463	Politics of African Nations, or
REL 330	History and Theology of the Black Church, or	PSY 340	Psychology of the African American, or
JRN 299	African Americans and Mass Media, or	SOC 237	Racial and Cultural Minorities, or
POS 315	African American Politics, or	INT 412	Contemporary Globalization

TOTAL CREDITS FOR CERTIFICATE PROGRAM:

21 cr hrs

DEPARTMENT OF INTERDISCIPLINARY STUDIES**S. Korsi Dogbe, Department Head****(757) 823-8198**

A Bachelor of Science degree in Interdisciplinary Studies is obtained through this program. It is designed to provide a strong liberal arts foundation that develops the skills to think critically and holistically. Interdisciplinary Studies is a curriculum approach that applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic or experience. The program has four basic components:

1	The General Education Core Requirements	40
2	Interdisciplinary Major Requirements	39
	Discipline Core	24
	Core Supplement	12
	Technology Supplement	3
3	Areas of Concentration	30
4	Elective	11
	TOTAL	120 cr hrs

Discipline Core

(Courses to be completed with grade of "C" or better)

INT 308	Introduction to Interdisciplinary Studies	3	INT 411	Ideas and Influences	3
INT 322	Approaches to Critical Analysis	3	INT 412	Contemporary Globalization	3
INT 360	Research in Interdisciplinary Studies	3	INT 470	Advanced Interdisciplinary Studies Seminar	3
INT 375	Language and Society	3	INT 477	Senior Thesis	3
	TOTAL			TOTAL	24

Core Supplement (Twelve credits: Select two disciplines; within each one, choose two courses)

GROUP 1					
English	6	Mass Communication		6	
ENG 306	Literary Criticism	MCM 211	Society and Mass Communications		
ENG 383	African American Literature or	MCM 315	Interviewing & Information Gathering or		
ENG 303	Professional and Technical Writing	MCM 460	Contemporary Issues & Special Problems		
GROUP 2					
Psychology	6	Sociology		6	
PSY 250	Social Psychology	SOC 137	Social Problems		
PSY 228	Development Psychology or	SOC 242	Introduction to Anthropology or		
PSY 340	Psychology of African Americans	SOC 335	Elementary & Social Statistics		

Technology Supplement

CSC 200 Advanced Computer Concepts 3

Concentration I 15**Concentration II** 15**Option:** (Approval of Department Head and School Dean)

Students are encouraged to explore new relationships between established areas of knowledge and to take an active part in designing their personalized curricula. To this end, it is possible for students who meet guidelines established by the Department to satisfy some of the course requirements via transfer credit or extensive coursework taken previously. In all such cases, approval of the Department Head and the School Dean is required.

INTERDISCIPLINARY STUDIES CURRICULUM

First Year

FRS 100	Freshman Seminar	0
*CSC 150	Computer Concepts and Applications.	3
BIO 100	Biological Science or BIO 110	3
BIO 100L	Biological Science Lab or CHM 100L or PHY 100L	1
CHM 100	Chemistry or CHM 110 or PHY 100	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History or HIS 101, 102, or 103	3
MTH 103	College Algebra	3
PED 100	Fundamentals of Fitness for Life	1
SOC 101	Introduction to Social Science	3
TOTAL		28 cr hrs

*or CLM 165, CLS 165, CSC 150, CSC 169, CIT 150, EEN 141,
FIA 180, or TED 170

Second Year

Concentration I*		15
SCM 285	Principles of Speech	3
HUM 210	Humanities and HUM 211	6
INT 308	Introduction to Interdisciplinary Studies Seminar	3
INT 322	Approaches to Critical Analysis.....	3
INT 360	Research in Interdisciplinary Studies	3
TOTAL		33 cr hrs

*Identify concentration area, plan, and begin taking courses

Third Year

Core Supplement	6	
Cultural Elective	3	
Concentration II	15	
INT 375	Language & Society	3
INT 411	Ideas and Influences	3
INT 412	Contemporary Globalization	3
TOTAL		33 cr hrs

Fourth Year

INT 470	Advanced Interdisciplinary Studies Seminar	3
INT 477	Senior Thesis	3
Core Supplement		6
Technology Supplement		3
Electives		11
TOTAL		26 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	40
Interdisciplinary Core Requirement	39
Concentration I	15
Concentration II	15
Electives	11
TOTAL	120 cr hrs

NOTE: A total of 21 semester hours of 300/400 level courses is required for the two Concentration Areas.

MINOR IN INTERDISCIPLINARY STUDIES

(18 credit hours can be taken by students who want to minor in Interdisciplinary Studies. Courses must be passed with a grade of "C" or higher.)

INT 308	Introduction to Interdisciplinary Studies	3	INT 375	Language and Society	3
INT 322	Approaches to Critical Analysis	3	INT 411	Ideas and Their Influences	3
INT 360	Foundations of Research in INT	3	INT 412	Contemporary Globalization	3
			TOTAL		18 cr hrs

E-LEARNING

The Department of Interdisciplinary Studies offers on-line courses. They are:

INT 308.90	Introduction to Interdisciplinary Studies	INT 375.90	Language and Society
INT 322.90	Approaches to Critical Analysis	INT 411.90	Ideas and Their Influences
INT 360.90	Foundations of Research in Interdisciplinary Studies		

Student Requirements

- Students should enroll at Norfolk State University (NSU), or any other college that is a member of the Tidewater consortium, and register for an NSU course.
- Students must have access to a computer (at home, work, school, etc.), Internet connection, and a web browser (Netscape Communicator 4.7 or higher or Microsoft Explorer 5.5 or higher). For further information on the minimum computer requirements go to e-Learning at the NSU website, click on Student Support, then click on "What are the minimum system requirements?"
- Upon enrollment, students receive a Norfolk State E-mail account. Students must access their Norfolk State e-mail accounts by doing the following:
 - Go to the NSU web-site (www.nsu.edu). Click on E-Learning; then click on Student Support; click on e-mail login

- information
- b. Students registered for online classes should use their Blackboard (Bb) login and access Blackboard. Once in blackboard, the student should transmit e-mail to the class instructor to ensure that they can access the class and that their e-mail is functioning properly.
- 4 E-Learning courses require students to possess basic computer skills. Students should be comfortable using a computer to word process documents, surf the internet via web browser, send and receive e-mail, and send and receive attachments.

For the most up-to-date information on e-learning courses, instructor e-mail addresses, and qualities that contribute to a successful learning experience, contact the Department of Instructional Technology or the instructor in the Department of Interdisciplinary Studies.

DEPARTMENT OF MASS COMMUNICATIONS AND JOURNALISM

Emmanuel Onyedike, Department Head
(757) 823-8331

The mission of the Department of Mass Communications and Journalism is to advance the academic, professional, and personal development of undergraduate and graduate students, alumni, and media practitioners through select programs of teaching, research, and public service that combine strong liberal arts and science studies with professional preparation for the media. The goal of the department is to produce graduates who meet high standards of performance in gathering, selecting, interpreting, and disseminating information that may determine the agenda of public discussion.

The department offers two undergraduate degree programs leading to the Bachelor of Arts in Journalism and the Bachelor of Science in Mass Communications and a graduate degree program leading to the Master of Arts in Media and Communications.

The curriculum is designed to meet the prescribed requirements of the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), the State Council of Higher Education in Virginia (SCHEV), the Southern Association of Schools and Colleges (SACS), as well as the general education requirements of Norfolk State University.

ACEJMC standards require students to complete at least 80 hours outside their major, including 65 in liberal arts and sciences.

CURRICULUM REGULATIONS

Mass Communications and Journalism students must earn "C" or better in all departmental courses and in ENG 101, ENG 102 and SCM 285.

TRANSFER CREDIT POLICY

The department will accept no more than 12 hours credit in the major taken at another institution. It will accept credits for all courses outside the major approved by the Office of Admissions and the Registrar's Office.

GENERAL BROADCAST CURRICULUM B.S. IN MASS COMMUNICATIONS

First Year			ENG 207	Introduction to World Literature or	
FRS 100	Freshman Seminar	0		ENG 207H	3
CSC 150	Computer Concepts and Application	3	FIA 201	Basic Art Appreciation or MUS 301	3
ENG 101	Communication Skills I or ENG 101H	3	MCM 261	Introduction to Media Writing	3
ENG 102	Communication Skills II or ENG 102H	3	HUM 210	Humanities or HUM 211	3
HED 100	Personal & Community Health	2	PSY 210	Introduction to Psychology	3
HIS 102	U.S. History to 1865 or HIS 103 or		SCM 285	Principles of Speech or SCM 285H	3
	HIS 100 or HIS 101	3		Elective Outside the Major	3
MCM 211	Society & Mass Communications	3	TOTAL		34 cr hrs
MCM 250	TV Production	3	Third Year		
MTH 103	Contemporary Mathematics	3	ECN 211	Principles of Economics or ECN 212	3
PED 100	Fundamentals of Fitness for Life or PED 13X		ENG 114	Techniques of Vocabulary Building	2
	or PED 20X or PED 21X	1	HIS 335	African-American History or HIS 336 or	
SOC 101	Introduction to Social Sciences or SOC 110	3		HIS 370 or HIS 371 or ENG 383 or	
POS 100	American National Government	3		FIA 170 or MUS 234 or POS 315 or	
TOTAL		30 cr hrs		PSY 340 or JRN 299	3
Second Year			LOG 210	Logic: Critical Thinking	3
BIO 100	Biological Science ...	3	JRN 290	Digital Photography or MCM 280 or	
CHM 100	Chemistry or PHY 100	3		MCM 330 or MCM 391	3
BIO 100L	Biological Science Lab or CHM 100L or		MCM 310	History of Mass Communications or	
	PHY 100L	1		MCM 363 or MCM 476	3
CSC 200	Advanced Computer Concepts	3	MCM 350	TV Directing or MCM 315 or MCM 390	3
ENG 203	Advanced Communication Skills			Elective Within the Major	3
	or ENG 286 or ENG 303	3		Electives Outside the Major	6
			TOTAL		29 cr hrs

Fourth Year			
Elective Within the Major	3	MCM 491 Internet/Web Page Design	3
Electives Outside the Major	6	TOTAL	27 cr hrs
GEO 130 Principles of Geography	3	SUMMARY OF GRADUATION REQUIREMENTS	
MCM 351 Intro to Broadcast and Film Criticism or		General Education	40
MCM 450 or MCM 485	3	Courses in the Major	39
MCM 440 Law & Mass Communications	3	Required Liberal Arts & Sciences	26
MCM 445 Ethics in Media or MCM 464 or MCM 470	3	Electives Outside the Major	15
MCM 460 Contemporary Issues & Special Problems in		TOTAL	120 cr hrs
Mass Mass Communications or MCM 362 or			
MCM 489	3		

MINOR IN MASS COMMUNICATIONS

The following 15 hours are required for one to minor in B.S. Mass Communications (General Broadcast):

Core: 9 Hours		Six More Hours	
MCM 250 TV Production	3	MCM 3XX MCM 350: TV Directing or	
MCM 261 Introduction to Media Writing	3	MCM 391: Radio & TV Announcing	3
MCM 3XX MCM 330: Elec. Field Prod. & Editing or		MCM 4XX MCM 464: Advanced TV Production or	
MCM 362: Broadcast News Writing &		MCM 470: Broadcast/Cable Programming or	
Reporting	3	MCM 476: Broadcast/Cable Sales or	
		MCM 489: Media Management or	
		MCM 491: Internet/Web page Design	3

JOURNALISM CURRICULUM B.A. IN JOURNALISM

First Year		Third Year	
FRS 100 Freshman Seminar	0	ECN 211 Principles of Economics or ECN 212	3
ENG 101 Communication Skills I or ENG 101H	3	ENG 114 Techniques of Vocabulary Building	2
ENG 102 Communication Skills II or ENG 102H ...	3	HIS 335 African-American History to 1865 or	
MCM 211 Society & Mass Communications	3	HIS 336 or HIS 370 or HIS 371 or	
PED 100 Fundamentals of Fitness or PED 13X or		ENG 383 or FIA 170 or MUS 234 or	
PED 20X or PED 21X.	1	POS 315 or PSY 340 or JRN 299	3
SOC 101 Intro to Social Sciences or SOC 110	3	JRN 330 Copy Editing	3
CSC 150 Computer Concepts and Applications	3	JRN 341 PR Practice or JRN 313 or JRN 323	3
POS 100 American National Government	3	LOG 210 Logic: Critical Thinking	3
HED 100 Personal & Community Health	2	Elective within the Major	3
HIS 102 U.S. History to 1865 or HIS 103 or		Elective outside the Major	9
HIS 100 or HIS 101	3	TOTAL	29 cr hrs
JRN 2 20 Basic Writing	3	Fourth Year	
MTH 103 Contemporary Mathematics	3	Elective within the Major	3
TOTAL	30 cr hrs	Electives outside the Major	6
Second Year		MCM 440 Law & Mass Communications or	
BIO 100 Biological Science	3	MCM 445	3
CHM 100 Chemistry or PHY 100	3	JRN 332 Graphics of Communication or JRN 342	3
BIO 100L Biological Science Lab or CHM 100L or		GEO 130 Principles of Geography	3
PHY 100L	1	MCM 310 History of Mass Communication	
JRN 210 Advertising Principles or JRN 221 or		or MCM 460	3
JRN 240	3	MCM 450 Mass Communication Theory & Research	3
ENG 203 Advanced Communication Skills or		MCM 491 Internet/Web Page Design	3
ENG 286 or ENG 303	3	TOTAL	27 cr hrs
JRN 290 Digital Photography or MCM 250 or		SUMMARY OF GRADUATION REQUIREMENTS	
FIA 365 ...	3	General Education Requirements	40
CSC 200 Advanced Computer Concepts	3	Courses in the Major	39
PSY 210 Introduction to Psychology	3	Required Liberal Arts & Sciences	26
FIA 201 Basic Art Appreciation or MUS 301	3	Electives Outside the Major	15
ENG 207 Literature of the Western World	3	TOTAL	120 cr hrs
SCM 285 Principles of Speech or SCM 285H	3		
HUM 210 Humanities or HUM 211	3		
TOTAL	34 cr hrs		

MINOR IN JOURNALISM

The following 15 hours are required for one to minor in B.A. Journalism:

Core: 9 Hours			Six More Hours		
JRN 220	Basic Writing	3	JRN 3XX	JRN 332: Graphics of Communication or	
JRN 2XX	JRN 210: Advertising Principles or			JRN 342: Promotional Writing	3
	JRN 221: News Writing or		MCM 4XX	MCM 491: Internet/Web page Design	3
	JRN 240: Public Relations Principles	3			
JRN 3XX	JRN 313: Advertising/Public Campaigns or				
	JRN 330: Copy Editing or JRN 341:				
	Public Relations Practice	3			

DEPARTMENT OF MILITARY SCIENCE (ARMY ROTC)

MAJ. Weldon B. Harris, Department Head

(757) 823-8291

The Army ROTC program consists of two programs of instruction. The four-year program is divided into two phases: a two-year Basic phase and a two-year Advanced phase. The Basic phase of the program (MSL 101, 102, 201, 202) is normally pursued by the cadet during his/her freshman and sophomore years of college. Instruction in each phase includes basic military subjects and instruction in leadership and management. The Advanced phase includes on-campus study, off-campus field training exercises, and a 35-day National Advanced Leadership Camp designed to evaluate a cadet's leadership ability and mastery of military skills. Advanced Camp usually occurs between the cadet's junior and senior years and is conducted at Fort Lewis, WA. Nurse cadets also attend a four-week hospital clinic phase at an Army hospital.

The two-year advanced ROTC Program is also extended to students who do not participate in ROTC during their freshman and sophomore years. For students entering this program, a 28-day Leader's Training Course (LTC) after the sophomore year takes the place of the Basic course traditionally required in the four-year program. Students successfully completing LTC are eligible for enrollment in the regular Advanced course for their junior and senior years.

In order to be enrolled formally in Army ROTC, a student must:

1. Be a citizen of the United States.
2. Be physically qualified under standards prescribed by the Department of the Army.
3. Be accepted by the University as a full-time enrolled student.
4. Be over 17 years of age, but must not have reached the 30th birthday upon graduation/commissioning (27th birthday for scholarship students).

**NSU COURSE
SUBSTITUTIONS**

HED 100
HIS 100,101,102,103
PED 100

AROTC COURSE

MSL 111 or MSL 112
HIS 380
MSL 211 or MSL 212

PARTICIPATION REQUIREMENTS

Students enrolling in the Basic course during their freshman and sophomore years of college incur no military obligation unless they are ROTC scholarship recipients.

All students attending NSU, either enrolled or not enrolled in ROTC, are eligible to compete for two-year or three-year ROTC scholarships. Under this program, the Army pays for tuition, laboratory fees, and other required fees, except room and board. Additionally, scholarship recipients receive \$250-\$400 per month for each month of the school year, not to exceed 10 months per year, for the duration of the scholarship. To be eligible, the student must:

1. Be a United States citizen.
2. Be at least 17 years of age by June 30 of the year in which application is made.
3. Be able to complete college with a baccalaureate degree and be under 27 years of age by June 30 of the year eligible for appointment.
4. Pass regular Army physical examination and be medically qualified.
5. Pursue any academic discipline leading to a baccalaureate degree.

Advanced ROTC students are entitled to subsistence pay at the rate of \$150-\$400 per month for each month of the school year, not to exceed 10 months per year. While attending Advanced Summer Camp, the student receives one half of the basic pay of a Second Lieutenant (approximately \$1,050). Thus, during the two years that a student is enrolled in the Advanced course, he/she will receive approximately \$3,600 in pay and allowances. This includes subsistence pay and summer camp pay.

DEPARTMENT OF MUSIC**O'Neill Sanford, Department Head****(757) 823-8025**

The Music Department offers two undergraduate degrees and one graduate degree. The Bachelor of Music in Music Education is designed to prepare teachers of music in the elementary and secondary schools. The program includes theoretical and applied music studies, general studies, music history, literature, methodology and practicum with concentration in Voice, Keyboard and Band/Orchestra instruments.

The Program leading to a Bachelor of Music with emphasis in Media is designed to expand the career preparation of students by providing knowledge, skills, and practical experience central to the needs of the music industry as represented by the broadcast and recording media. The program includes course sequences in both Music and Mass Communications.

Eligibility to major in music is determined by the Music faculty on the basis of musical background and experience, results of auditions and tests, and general qualifications to pursue Music as a major field. The Music Department is a member of the National Association of Schools of Music.

BACHELOR OF MUSIC
MUSIC EDUCATION CURRICULUM (Instrumental/Keyboard/Vocal)

First Year			MUS 273 Voice Class (Instrumental & Keyboard)	
ENG 101	Communication Skills I	3	PSY 225 or PSY 210 or PSY 215	3
ENG 102	Communication Skills II	3	SED 201 American School and Teaching Professions	3
MTH 103	Mathematics in General Education	3	SED 486 Education Psychology and Behavior Management	3
MUS 110	Ensembles*	1	TOTAL	34 cr hrs
MUS 111	Ensembles*	1		
MUS 121	Applied Minor	1	Third Year	
MUS 122	Applied Minor	1	MUS 346 Composition/Arranging	3
MUS 123	Performance Class	0	BIO 100 Biological Science or PHY 100	3
MUS 124	Performance Class	0	BIO100L Biological Science Lab or PHY 100L	1
MUS 125	Applied Major	2	HIS 100 or HIS 101, 102, or 103	3
MUS 126	Applied Major	2	MUS 234 African American Music	3
MUS 131	Music Literature**	2	MUS 310 Ensembles*	1
MUS 132	Music Literature**	2	MUS 311 Ensembles*	1
MUS 141	Sight-Singing & Ear Training	2	MUS 323 Performance Class	0
MUS 142	Sight Singing & Ear Training	2	MUS 324 Performance Class	0
MUS 145	Harmony and Keyboard	2	MUS 325 Applied Major	2
MUS 146	Harmony and Keyboard	2	MUS 326 Applied Major	2
MUS 161	String Class (Instrumental)	1	MUS 331 Music History**	2
Music Elective (Keyboard & Vocal)			MUS 332 Music History**	2
PED 100	Fundamentals of Fitness for Life	1	MUS 351 Advanced Conducting	2
TOTAL		31 cr hrs	MUS 362 Brasswind Class (Instrumental) (or music elective, Vocal & Keyboard)	1
Second Year			MUS 383 Methods in Public School Music	2
CLM 165	Computer Literacy for Musicians	3	MUS 384 Methods in Public School Music	2
HED 100	Personal and Community Health	2	SED 405 Reading in the Content Area.	3
MUS 151	Elementary Conducting	2	TOTAL	33 cr hrs
MUS 210	Ensembles*	1	**4 Semesters of Music Literature/History = 6 hours of Humanities	
MUS 211	Ensembles*	1		
MUS 221	Applied Minor	1	Fourth Year	
MUS 222	Applied Minor	1	MUS 410 Ensemble*	1
MUS 223	Performance Class	0	MUS 423 Performance Class	0
MUS 224	Performance Class	0	MUS 425 Applied Major	2
MUS 225	Applied Major	2	MUS 426 Applied Major	2
MUS 226	Applied Major	2	SED 499 Direct Teaching	12
MUS 241	Sight, Singing, & Ear Training	2	PHY 154 Physics of Music	3
MUS 242	Sight, Singing, & Ear Training	1	SCM 285 Principles of Speech	3
MUS 245	Harmony & Keyboard	2	SED 420 Educational Technology	3
MUS 246	Harmony & Keyboard	2	SOC 110 Introduction to Sociology	
MUS 260	Band Instrument Survey	1	TOTAL	29 cr hrs
MUS 261	Woodwind Class (Instrumental)			
MUS 271	Voice Diction (Vocal and Keyboard)	1	SUMMARY OF GRADUATION REQUIREMENTS	
MUS 361	Woodwind Class (Instrumental)		General Education Requirements	42
MUS 272	Vocal Diction (Vocal)	1	Requirements	58
			Teacher Education Courses	27
			TOTAL	127 cr hrs

*NOTE: Ensembles

The minimum ensemble requirement for Music Education majors who play band instruments must be satisfied by (1) four semesters in the University Band, (2) three semesters of other instrumental ensembles such as jazz ensemble or combo; percussion, woodwind or brass ensemble; or University community orchestra.

*Three semesters of Music Literature/History satisfy the Humanities core requirement.

Regular attendance at rehearsals and at all performances is required. Non music majors may enroll with or without credit.

Though Performance Class does not count in the semester hour load, it counts as one tuition hour in the student's load. **Students will not be permitted to take the Professional Education Core of courses until they have passed the Communication Skills and General Knowledge Components of the National Teacher Examination (N.T.E.).

**Professional Education Core Courses

SED 380 Found. of Methods in Secondary Schools

SED 499 Directed Teaching (Secondary Level/Elementary level)

BACHELOR OF MUSIC DEGREE WITH EMPHASIS IN MEDIA CURRICULUM

First Year			Third Year		
ENG 101	Communication Skills I	3	HIS 100	History of Western Civilization	3
ENG 102	Communication Skills II	3	MCM 250	Television Production or Music 365	3
HED 100	Personal and Community Health	2	MCM 350	Television Directing or	
MTH 103	Contemporary Mathematics	3		MUS 366 Music Video	3
MUS 110	Ensembles*	1	MUS 234	African American Music	3
MUS 111	Ensembles*	1	MUS 310	Ensembles*	1
MUS 112	Performance Workshop	0	MUS 311	Ensembles*	1
MUS 113	Performance Workshop	0	MUS 312	Performance Workshop	1
MUS 121	Applied Minor	1	MUS 313	Performance Workshop	1
MUS 122	Applied Minor	1	MUS 325	Applied Major	2
MUS 125	Applied Major	2	MUS 326	MUS 327	2
MUS 126	Applied Major	2	MUS 331	Music History	2
MUS 131	Music Literature**	2	MUS 332	Music History	2
MUS 132	Music Literature**	2	MUS 335	Jazz Literature and Criticism	3
MUS 141	Sight-Singing & Ear Training	2	MUS 346	or MUS 247 Composition	3
MUS 142	Sight Singing & Ear Training	2	PHY 154	Physics of Music	3
MUS 145	Harmony & Keyboard	2	SCM 285	Principles of Speech	3
MUS 146	Harmony & Keyboard	2	TOTAL		36 cr hrs
MUS 151	Elementary Conducting	2			
TOTAL		33 cr hrs	** 8 Semesters of Music Literature/History satisfy the Humanities core requirements		
Second Year			Fourth Year		
BIO 100	Biological Science	3	MCM 261	Introduction to Media Writing	3
BIO 100L	Biological Science Lab	1	MUS 265	Pract. App. or Mus 365 Rec. Elect Mus.	3
CLM 165	Computer Literacy	3	MCM 440	Law and Mass Communications	
MCM 211	Society and Mass Communications	3		or MUS 440	3
MUS 143	Progressive Harmony	3	MCM 351	Introduction to Broadcast & Film	
MUS 210	Ensembles*	1		Criticism	3
MUS 211	Ensembles*	1	MCM 489	Media Management	3
MUS 212	Performance Workshop	1	JRN Internship		3
MUS 213	Performance Workshop	1	MUS 410	Ensembles*	1
MUS 221	Applied Minor	1	MUS 412	Performance Workshop	1
MUS 222	Applied Minor	1	MUS 425	Applied Major	2
MUS 225	Applied Major	2	MUS 426	Applied Major	2
MUS 226	Applied Major	2	MUS 448	Arranging	3
PED 100	Fundamentals of Fitness for Life	1	JRN 495	or MCM 496 Internship	3
TOTAL		24 cr hrs	TOTAL		30 cr hrs
SUMMARY OF GRADUATION REQUIREMENTS					
General Education Requirements					40
TOTAL					123 cr hrs

Three hours of the major requirements (MUS 131 MUS 132) also serve as Humanities in General Education requirements. Three hours of major requirements (MCM 211) also serve as a Social Science in the General Education requirements.

*NOTE: ENSEMBLES

The minimum ensemble requirements for instrumental students whose major is Bachelor of Music: Emphasis in Media must be met by five consecutive semesters in the University Jazz Ensemble and two semesters of either Symphonic/Concert Band, University Community Orchestra, or small instrumental ensembles. If a student enters this curriculum below the level of proficiency required to enroll in the University Jazz Ensemble, he/she can use no more than two ensemble credits in the Jazz Laboratory Band toward fulfilling ensemble requirements.

The minimum ensemble requirements for vocal students whose major is Bachelor of Music: Emphasis in Media must be met by four consecutive semesters of University Choir or small vocal ensemble and three semesters (during the junior and senior years) of Jazz Ensemble.

Though Performance Workshop does not count in the semester hour load during the first two semesters, it counts as one tuition hour in the student's load.

DEPARTMENT OF POLITICAL SCIENCE

Rudolph Wilson, Department Head
(757) 823-8999

The Department of Political Science offers one undergraduate degree program, the Bachelor of Arts in Political Science. The Bachelor of Arts Degree in Political Science is a degree designed to fulfill a wide range of career goals in the field of Political Science. Career areas of interest include, but are not limited to, the following: Pre-Law, Public Administration, Urban Planning, International Affairs, and U.S. Politics and Theory. Contact the department for specific courses related to career areas of interest. The basic objectives of the degree program are as follows:

1. To provide basic training for students planning careers in law, public management, research, teaching, foreign affairs and urban planning.
2. To prepare students to be able to examine critically, evaluate and analyze contemporary issues in politics.
3. To provide a proper frame of reference for non-majors who wish to supplement and broaden their educational experience in Political Science.
- 4.

POLITICAL SCIENCE CURRICULUM**First Year**

Science	(BIO 100, CHM 100, PHY 100 or SCI 100)	3
BIO 100L	or CHM 100L or PHY 100L	1
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
POS 180	Introduction to Political Science	3
POS 100	American National Government	3
FRS 100,	Freshman Seminar	0
HED 100,	Personal and Community Health	2
SCM 285,	Principles of Speech	3
Elective		3
TOTAL		31 cr hrs

Second Year

Science	(BIO 100, CHM 100, PHY 100 OR SCI 100)	3
ENG 203	Advanced Communication Skills	3
ENG 114	Techniques of Vocabulary Building	2
HIS 100	HIS 101, HIS 102 or HIS 103	3
HUM 210	Humanities	3
HUM 211	Humanities	3
LOG 210	Logic: Critical Thinking	3
POS 231	State and Local Government	3
SOC 101	Introduction to Social Sciences	3
URP 192	Introduction to Urban Planning	3
Elective		3
TOTAL		32 cr hrs

Third Year

CSC 200	Advanced Computer Concepts	3
ECN 211	or ECN 212, Principles of Economics	3
URP 292	Urban Planning Law	3
POS 250	Introduction to Public Administration	3
POS 332	Introduction to Jurisprudence	3
POS 333	Methods of Research	3
POS 345	Statistics and Data Processing	3
POS 3XX	POS 4XX or URP 2XX	3
	Cultural Elective	3
	Elective	3
TOTAL		30 cr hrs

Fourth Year

POS 337	Constitutional Law (FO)	3
POS 350	Organizational Theory and Behavior	3
POS 360	International Politics (FO)	3
POS 431	Modern Political Philosophy	3
POS 451	Public Personnel Administration	3
POS 3XX	POS 4XX or URP 3XX	3
	Electives	9
TOTAL		27 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	40
Major Requirements	62
Electives	18
TOTAL	120 cr hrs

MINOR IN POLITICAL SCIENCE

Students may minor in Political Science by completing 18 credit hours in Political Science.

The basic objectives of the minor in Political Science are as follows:

1. To provide the scope of basic training for students who may choose, as an option, careers in law, public management, political research, foreign affairs and urban planning.
2. To prepare students to be able to examine critically, evaluate and analyze contemporary issues in politics.
3. To provide a proper frame of reference for non-majors who wish to supplement and broaden their educational experience in Political Science.

Course Requirements for the Minor in Political Science

POS 100, American National Government	3
POS 2XX, POS 3XX, POS 4XX, URP 2XX or URP XXX	15
TOTAL	18 cr hrs

NOTE: Students can take up to nine (9) credits that are 100 or 200 level courses; however, students must take a minimum of nine (9) credits at the 300 or 400 level courses (18 credits total).

*ENG 210 (Practical Grammar) and Eng 303 (Professional and Technical Writing) are recommended electives.

*Students interested in careers that require a specific proficiency (such as mastery of a foreign language) are encouraged to take electives consistent with those careers.

*POS 493 Public Administration Internship – This course provides field experience in a public or non-profit agency.

*POS 451: Public Personnel Administration is a prerequisite for POS

493. Please contact the Public Administration Internship Coordinator for additional requirements.

*POS 494 Pre-law Internship – This course provides field experience in a public agency, such as a public defender's office or legislative body, as well as private law firms.

*POS 493 – Please contact the Pre-law Internship Coordinator for additional requirements.

DEPARTMENT OF PSYCHOLOGY

Darlene Colson, Department Head

(757) 823-8573

The Department of Psychology offers the Bachelor of Arts Degree with concentrations in General Psychology, Teacher Certification in Early Childhood Education, and Teacher Certification in Special Education. It plays a significant role in the overall mission of the University by contributing to the development of human resources through instruction in the behavioral sciences. Graduates from the three undergraduate programs offered by this department will be prepared to assume important roles in the community as para professionals, teachers and behavioral science researchers. All programs are designed to prepare students for rigorous graduate training in psychology. The major aims of the Department are as follows:

1. To provide a flexible, relevant, and fundamentally sound curriculum for students majoring in psychology.
2. To thoroughly prepare students to render services initially as paraprofessionals, teachers and behavioral scientists; and eventually as professional psychologists.
3. To provide a thorough behavioral science background for students whose expertise can be utilized in related human service fields of employment.

GENERAL PSYCHOLOGY CURRICULUM

First Year			Third Year		
BIO 100	Biological Science	3	Free Electives		6
BIO 100L	Biological Science Lab	1	PSY Electives		9
CHM 100	Chemistry or PHY 100	3	Cross Disciplinary Electives		6
CSC 150	Computer Concepts & Applications	3	HUM 210 Humanities or MUS 301		3
ENG 101	Communication Skills I	3	PSY 360 Experimental Psychology and Lab 306L		4
ENG 102	Communication Skills II	3	Social Science Elective (from General Education Core)		3
HED 100	Personal and Community Health	2	TOTAL		31 cr hrs
MTH 103	Contemporary Mathematics	3			
PED 100	Fundamentals of Fitness for Life	1	Fourth Year		
PSY 210	Introduction to Psychology	3	PSY Electives		6
PSY 211	Basic Principles of Psychology	3	Cross Disciplinary Electives.		6
FRS 100	Freshman Orientation	0	PSY 492 Psychology Seminar		3
TOTAL		28 cr hrs	HIS 335/336 or HIS 370/371 African American or African History		3
Second Year			Free Electives		13
PSY Electives		6	TOTAL		31 cr hrs
ECN 211	Principles of Economics	3			
ENG 207	Literature of the Western World	3	SUMMARY OF GRADUATION REQUIREMENTS		
LOG 210	Logic: Critical Thinking	3	General Graduation Requirements		49
PSY 270	Statistics in Psychology	3	Major Requirements		19
PSY 280	Abnormal Psychology	3	PSY Electives		21
SCM 285	Principles of Speech	3	Cross Disciplinary Electives		12
SOC 101	Introduction to Social Science	3	Free Electives		19
CSC 200	Advanced Computer Concepts	3	Exit Writing Competency Exam		0
TOTAL		30 cr hrs	TOTAL		120 cr hrs

MINOR IN PSYCHOLOGY

PSY 210	Introduction to Psychology	3	PSY 3xx/4xx	300- or 400-Level	
PSY 211	Basic Principles of Psychology	3		Psychology Course	6
			PSY 4xx	400 Level Psychology Course	3
			TOTAL		15 cr hrs

**EARLY CHILDHOOD EDUCATION CURRICULUM
(Bachelor of Arts in Psychology)**

First Year			Third Year		
FRS 100	Freshman Orientation	0	EED 360	Curriculum & Instruction for Primary Grades	3
BIO 100	Biological Science	3	PSY	Electives	9
BIO 100L	Biological Science Lab	1	MTH 141	Math for Elementary Teachers I	3
CHM 100	Chemistry of PHY 100	3	MTH 142	Math for Elementary Teachers II	3
CHM 100L	Chemistry Lab or PHY Lab	1	PSY 360	Experimental Psychology	3
CSC 150	Computer Concepts and Applications	3	PSY 360L	Experimental Psychology Lab	1
ENG 101	Communication Skills I	3	ECE 461	Curr/Instr in Early Primary	3
ENG 102	Communication Skills II	3	EED 450	Teaching Literacy in the Elementary Schools	3
HED 100	Personal and Community Health	2	EED 465	Methods/Materials for Teaching Science, Math, and Technology	3
MTH 103	Contemporary Math	3	TOTAL		31 cr hrs
MTH 105	Elementary Algebra	3	Fourth Year		
PED 100	Fundamental of Fitness for Life	1	PSY	Electives	3
HIS 103	American History	3	PSY 492	Psychology Seminar	3
PSY 210	Introduction to Psychology	3	INT 350	Trends and Issues of Diverse Populations	3
TOTAL		32 cr hrs	EED 499	Directed Teaching	12
Second Year			EED 490	Diagnostic Reading	3
PSY 211	Basic Principles of Psychology	3	EED 470	Methods of Teaching Social Studies in the Elementary School	3
EED 201	American Schools and Teaching	3	TOTAL		27 cr hrs
ENG 207	Literature of the Western World	3	General Education Requirements		
EED 274	The Study of Young Children	3	Psychology		
PSY 270	Statistics in Psychology	3	Secondary Concentration-Elementary Education		
SOC 101	Introduction to Social Science	3	Support Concentration II-Student Teaching		
ENG 203	Advanced Communication skills	3	Supporting Courses		
SCM 285	Principles of Speech	3	TOTAL		
SCI 381	Science for Elementary Teachers	3			
SCI 381L	Science for Elementary Teachers Lab	1			
HUM 210	Humanities	3			
TOTAL		31 cr hrs			

**SPECIAL EDUCATION:
EMOTIONAL DISTURBANCE/LEARNING DISABILITIES CURRICULUM**

First Year			PSY 360L	Experimental Psychology Lab	1
FRS 100	Freshman Orientation	0	PSY 381	Topics in Psychology	2
BIO 100	Biological Science	3	SPE 321	Characteristics and Medical Aspects of Disabilities	3
BIO 100L	Biology Science Lab	1	SPE 334	Understanding and Teaching Learners with Emotional Disturbance	3
ENG 101	Communication Skills I	3	SPE 344	Teaching Reading to Exceptional Learners	3
ENG 102	Communication Skills II	3	SPE 440	Collaboration, Inclusion, Transition and Other Curricular Adjustments	3
HED 100	Personal & Community Health	2	SPP 312	Speech & Language Development	3
HIS 102	U.S. History or HIS 103	3	Psychology Elective		3
MTH 103	Contemporary Math	3	TOTAL		31 cr hrs
PED 100	Fundamental Fitness for Life	1	Fourth Year		
PHY 100	Physical Science	3	PSY 390	Fundamentals of Learning	3
SOC 101	Introduction to Social Sciences	3	PSY 397	Research in Psychology	3
FIA 201	Art Appreciation or MUS 301 Music App	3	PSY 492	Psychology Seminar	3
TOTAL		28 cr hrs	SPE 312	Educational Psychology & Behavioral Management	3
Second Year			SPE 336	Understanding and Teaching Students with Learning Disabilities	3
CSC 150	Computer Literacy	3	SPE 490	Assessment of Exceptional Children	3
PSY 210	Introduction to Psychology	3	SPE 499B	Directed Student Teaching- Learning Disabilities	6
PSY 211	Basic Principles of Psychology	3	SPE 499A	Directed Student Teaching – Emotional Disturbance	6
PSY 228	Developmental Psychology	3	TOTAL		30 cr hrs
PSY 230	Educational Psychology	3	*Enrollment requires completion of requirements for admission to teacher education.		
PSY 280	Abnormal Psychology	3	SUMMARY OF GRADUATION REQUIREMENTS		
SCM 285	Principles of Speech	3	General Education Requirements		
SPE 210	American Schools & the Teaching Profession	3	Major Requirements		
PSY 270	Statistics in Psychology	3	TOTAL		
PED 365	Adapted Physical Education	3			
TOTAL		31 cr hrs			
Third Year					
HIS 370	African History and Culture	3			
PSY 322	Psychology of Exceptional Children	3			
PSY 360	Experimental Psychology	3			

**SPECIAL EDUCATION:
LEARNING DISABILITIES/MENTAL RETARDATION CURRICULUM**

First Year			PSY 322	Psychology of Exceptional Children	3
CSC 192	Introduction to the Internet	1	PSY 360	Experimental Psychology	3
BIO 100	Biological Science	3	PSY 360L	Experimental Psychology Lab	1
BIO 100L	Biology Lab	1	PSY 270	(270) Psychological Statistics	3
ENG 101	Communication Skills I	3	PSY 381	Topics in Psychology	2
ENG 102	Communication Skills II	3	PSY 390	Fundamentals of Learning	3
PSY 210	Introduction to Psychology	3	SPE 310	Char./Strat. for Teaching the	
PSY 211	Basic Principles of Psychology	3		Mentally Disabled	3
HED 100	Personal & Community Health	2	SPE 311	Principles/Practices of Multicultural	
HIS 102	U.S. History	3		Education	1
MTH 103	Contemporary Mathematics	3	SPE 342	Char. Strat. for Teaching the	
PED 100	Fundamentals of Fitness for Life	1		Learning Disabled	3
PHY 100	Physical Science	3	SPE 371	Medical Aspects of Disabling Conditions	2
SOC 101	Introduction to Social Sciences	3	SPP 312	Speech & Language Development	3
TOTAL		32 cr hrs	TOTAL		33 cr hrs
Second Year			Fourth Year		
CSC 150	Computer Concepts and applications	3	PSY 492	Psychology Seminar	3
HIS 370	African History and Culture	3	CSC 200	Advanced Computer Concepts	3
FIA 301	Appreciation	3	SPE 440	Curricula Adjustment for Exceptional	
MUS 301	Music Appreciation	3		Children	2
PSY 228	Developmental Psychology	3	SPE 486	Educational & Behavioral Management	3
PSY 230	Educational Psychology	3	SPE 490	Assessment of Exceptional Students	2
PSY 280	Abnormal Psychology	3	SPE 496	Student Teaching Learning Disabled	6
SCM 285	Principles of Speech	3	SPE 499	Student Teaching Mentally Retarded	6
SPE 201	American Schools & the Teaching		SPE 499D	Directed Observation	0
	Profession	3	SPE 499P	Directed Observation	0
SPE 233	Seminar in Assessment & Evaluation		TOTAL		25 cr hrs
	or SED 233	3			
TOTAL		30 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
Third Year			General Education Requirements		40
HIS 370	African History & Culture	3	Psychology Requirements		33
PED 365	Adapted Physical Education	3	Secondary Major Requirements		47
			TOTAL		120 cr hrs

**DEPARTMENT OF SOCIOLOGY
(757) 823-8436**

Four major goals direct the function of the Sociology Department: teaching, research and scholarly activities, community service, and development. The Department is committed to the development of programs that facilitate the pursuit of excellence in each student's area of interest. The execution of significant social research by both faculty and students demonstrates a belief in the University as a contributor to new knowledge and better understanding of human behavior. Simultaneously, the Department seeks to serve as an interface between the theoretically oriented university and the pragmatically oriented community. Finally, the Sociology Department is committed to developing its full potential by introducing innovative programs to meet the needs of a dynamic and diverse society. The Department offers a Bachelor of Arts degree in Sociology and master's degrees in Criminal Justice, Sociology* and Urban Affairs.

*Joint Degree Program with Old Dominion University

SOCIOLOGY CURRICULUM

First Year			Second Year		
BIO100	or BIO 105 or BIO 110 or CHM 100		BIO100	or BIO 105 or BIO 110 or CHM 100	
	or PHY 100, Physical Science.	3		or PHY 100, Physical Science.	3
BIO 100L	or CHM 100L or PHY 100L	1	HUM 210	or HUM 211 or ENG 207 or MUS 301 or	
HED 100	Personal and Community Health	2		FIA 301 or Foreign Language	6
PED 100	Fundamentals of Fitness for Life	1	LOG 210	Logic: Critical Thinking	3
HIS 100	or HIS 101 or HIS 102 or HIS 103	3	PSY 210	Introduction to Psychology,	
ENG 101	Communication Skills	3		POS 100 or ECN 211	3
ENG 102	Communication Skills	3	SCM 285	Principles of Speech .	3
FRS 100	Freshman Seminar	0	SOC 137	or CJS 200	3
MTH 103	or MTH 105	3	SOC 225	Social Science Research Skills	3
SOC 101	Introduction to the Social Sciences	3	SOC 234	or SOC 228	3
SOC 110	Introduction to Sociology	3	CSC 200	Advanced Computer Concepts	3
CSC 150	Computer Concepts and Applications	3	TOTAL		30 cr hrs
TOTAL		28 cr hrs			

Third Year			SOC 393	Internship or Approved electives	6
ENG 383	or HIS 335 or HIS 336 or HIS 370 or HIS 371 or HIS 377 or PSY 240 or POS 315 or SOC 237	3	SOC 394	Internship Seminar	0
SOC 338	or SOC 331	3	Approved Elective		3
SOC 344	Methods of Social Research	3	SOC 462	Complex Organizations	3
SOC 355	Elementary Social Statistics	3	SOC 499	Applied Sociology	3
SOC 3XX	Sociology or CJS Elective	9	Free Electives		14
Free Electives		9	TOTAL		32 cr hrs
TOTAL		30 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
Fourth Year			General Education Requirements		40
SOC 446	Sociological Theory	3	Major Requirements		45
			Other Requirements		12
			Free Electives		23
			TOTAL		120 cr hrs

MINOR IN SOCIOLOGY

Introduction			Organization (Select One Course)	3
SOC 110	Introduction to Sociology	3	SOC 446	Sociological Theory
			SOC 458	Social Inequality
Social Problems (Select One Course)		3	SOC 462	Complex Organizations
SOC 137	Social Problems		General (Select One Course)	3
SOC 228	Demographic Principles		SOC 3XX	
SOC 234	Urban Sociology		SOC 4XX	
CJS 200	Introduction to Criminal Justice		CJS 3XX	
Research			CJS 4XX	
SOC 344	Methods of Social Research	3	TOTAL	15 cr hrs

SCHOOL OF SCIENCE AND TECHNOLOGY**Sandra J. DeLoatch, Dean****Larry Mattix, Associate Dean****(757) 823-8180**

The School of Science and Technology is a dynamic School. It has been, and remains, a major force for change within the University as an innovator and initiator of most of the high demand and high technological programs on campus. It is represented by a wide array of course selections in eight (8) major areas: Computer Science, Engineering, Health Sciences, Mathematics, Natural and Applied Sciences, Nursing, Naval Science, and Technology. Through the initiative of Norfolk State University's President, the School has also embarked upon a program for excellence in science called the Dozoretz National Institute for Mathematics and Applied Sciences (DNIMAS). The Institute accepts only exceptionally prepared minority student. Entrance into the Institute is through special application. The school commits to accountability in providing excellence in instruction through departmental programs which integrate communication, mathematics, science, technology, and professional concerns, while addressing a wide spectrum of individual needs and abilities. The overall mission of the School of Science and Technology is as follows:

1. To develop humanistic and competent professionals who can serve as science and technology specialists and health-care providers.
2. To apply state-of-the-art scientific research and technological know-how to the problems and needs of the region and the nation.
3. To foster scholarship and leadership in the sciences, in technology, in engineering, and in health professions in the community.

ACCREDITATION/APPROVALS

The following programs, sponsored by the School of Science and Technology, have been approved by the State Council of Higher Education for Virginia (SCHEV). They have also been accredited and/or approved by appropriate national accrediting agencies.

1. Computer Science - Computer Science Accreditation Board (CSAB), 184 N. Street, Stamford, CT 06901, (203) 975-1117
2. Chemistry-American Chemical Society (ACS), 1155 Sixteenth Street, N.W., Washington, DC 20036, (202) 872-4589
3. Food Science and Nutrition - Commission on Accreditation/Approval for Dietetics Education of the American Dietetic Association, 216 W. Jackson Blvd, Chicago, IL 60606, (312) 899-0040.
4. Medical Technology - National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Ave., Suite 670, Chicago, IL 60631, (773) 714-8880
5. Nursing A.S. - National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, New York 10006, (800) 669-1656 and the Virginia Board of Nursing, 6606 W. Broad Street, 4th Floor, Richmond, VA 23230, (804) 662-9909.
6. Nursing B.S. - National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, New York 10006, (800) 669-1656 and the Virginia Board of Nursing, 6606 W. Broad Street, 4th Floor, Richmond, VA 23230, (804) 662-9909.
7. Technology - National Association of Industrial Technology (NAIT), 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104, (734) 677-0720

ORGANIZATION OF THE SCHOOL

The courses offered by the School of Science and Technology are organized into departments, which sponsor a wide array of possibilities for students. The following departments are included:

Department of Allied Health
Department of Biology
Department of Chemistry
Department of Computer Science
Department of Engineering

Department of Mathematics
Department of Nursing
Department of Physics
Department of Technology

DEGREES OFFERED

The School of Science and Technology offers programs terminating at the associate, baccalaureate and master degree levels. Students admitted to the School of Science and Technology may choose from fields of study in programs terminating at the associate, baccalaureate and master degree levels. Undergraduate programs leading to the Bachelor of Science degree generally require a minimum of 120 semester hours of credit.

ADMISSION REQUIREMENTS

Admission to Norfolk State University does not imply automatic admission to the following programs:

1. DNIMAS
2. Engineering
3. Health Information Management
4. Medical Technology
5. Nursing

CRITERIA FOR ADMISSION TO HEALTH INFORMATION MANAGEMENT PROFESSIONAL PHASE

1. Complete all prerequisite courses by the end of the semester proceeding the professional phase.
2. Achieve a minimum overall grade point average of 2.0.
3. Achieve a minimum science grade point average of 2.0.
4. Forward to the Admissions Committee an application for admission to the professional phase of the Health Information Management Program.

CRITERIA FOR ADMISSION TO MEDICAL TECHNOLOGY PROFESSIONAL PHASE

1. Students must seek application through the Medical Technology Admissions Committee.
2. Students must complete all prerequisite courses by the end of the semester preceding the Clinical Phase.
3. Students must have a minimum science GPA of 2.0.
4. Students must submit three letters of recommendation from persons familiar with the students' ability.

CRITERIA FOR ADMISSION TO NURSING: ASSOCIATE OF SCIENCE

1. Students must complete two units of high school or higher mathematics (including one unit of algebra), one unit of biology, and one unit of chemistry with a minimum average of "C" in each course. The biology and chemistry classes must be current within the past ten years.
2. Students must have a cumulative GPA of 2.0 or better in high school or college work.

CRITERIA FOR ADMISSION TO NURSING: LPN - RN

1. Students must meet the same prerequisites as for entrance to the associate degree sequence.
2. Students must be currently licensed in the state of Virginia as a LPN.
3. Completion of validation process or graduation from an articulated LPN program is a requirement.

CRITERIA FOR ADMISSION TO NURSING: BACHELOR OF SCIENCE PROGRAM (RN-COMPLETION)

1. Students must have a minimum GPA of 2.0 in college.
2. Students must be currently licensed as registered nurses.
3. Students must have a grade of "C" or better in all previous nursing and science courses.
4. Students must have the minimum prerequisites of transfer courses:

Mathematics (Math 105)	3	Human Growth/Development	
Anatomy and Physiology	8	or Child Psychology	3
Communication English Composition	6	Microbiology	4
Computer Concepts	3	Lower level Nursing Classes	30
General Psychology	3	Sociology	3
	TOTAL		63

CRITERIA FOR ADMISSION TO NURSING: SECOND - DEGREE BACCALAUREATE PROGRAM

1. Completion of undergraduate or higher degree.
2. Admission to NSU by December 1 for Summer Session, and August 1 for January Session.
3. A cumulative GPA of 2.5 in the prior degree and a "C" or 2.0 in the science courses (anatomy and physiology, biology, chemistry, etc.).

CRITERIA FOR ADMISSION TO NURSING: LPN - BSN PROGRAM

1. Completion of 73 semester hours in prerequisite courses.
2. Admission to NSU by December 1 for Summer Session, and August 1 for January Session.
3. A cumulative GPA of 2.5 in college courses and 2.0 in sciences (anatomy and physiology, biological sciences, chemistry and pathophysiology).

GENERAL EDUCATION REQUIREMENTS

Students seeking degrees in any of the disciplines in the School of Science and Technology must complete the General Education requirements of the University.

DEPARTMENT OF ALLIED HEALTH
Mildred K. Fuller, Department Head
(757) 823-2366

The Department of Allied Health offers majors concentrations or certificates in the disciplines of Food Science and Nutrition, Funeral Services, Health Information Management, Health Services Management, and Medical Technology. The purpose of the Department is to prepare students in the preventive, diagnostic, and therapeutic aspects of health care.

The Bachelor of Science degree is offered in Health Information Management, Health Services Management, and Medical Technology. A Certificate of Completion is awarded in Health Services Management.

OBJECTIVES OF DEPARTMENT

1. To provide curricular offerings and clinical training which will allow students to work in areas of health-care administration, health maintenance, disease prevention, diagnosis, treatment, and rehabilitation.
2. To instill a sense of ethical responsibility as health-care workers.
3. To prepare students who will become professionals in the health-care industry.
4. To prepare students for entry-level positions in certain areas in the health-care industry.

FUNERAL SERVICE PROGRAM

Norfolk State University offers an extensive program designed to prepare students for careers in the complex field of mortuary science. Our diversified curriculum addresses the changing needs and demands of contemporary funeral directing, embalming and business management. The Norfolk State University Funeral Service Program is accredited by the following agency:

The American Board of Funeral Service Education
38 Florida Ave.
Portland, ME 04103
(207) 797-7686

AIMS & PURPOSES

The aims and purposes of the Funeral Service Certificate Program are as follows:

1. to inspire each student to achieve proficiency and efficiency in the practical skills of Embalming and Restorative Art.
2. to provide each student a better understanding of the complexities and dynamics of grief, the ability to better anticipate the needs of those bereaved, and to more fully appreciate the role and central value of the funeral service practitioner as a caregiver in the community.
3. to provide educational opportunities in the intensive theory portion of funeral service education, along with practical learning experience, in preparation for state and/or national board examinations, which are required for licensure in funeral service.

GENERAL ADMISSION POLICIES

Norfolk State University fulfills its opportunities for higher education for all people, regardless of their socio-economic status, race, sex, age, religion or national origin by identifying and accepting students with academic promise. Norfolk State University seeks to admit in-state and out-of-state applicants whose education, preparation, aptitude and achievement and motivation combine to indicate a reasonable probability of success in one or more of the University's schools.

The University makes an effort to maintain a diverse student population because of the benefits that accrue to all students and to the entire educational process. Further, the University reserves the right to base individual admission in any given year upon a variety of factors, including the number of applicants for available space.

ADMISSION REQUIREMENTS

- Completed Application
- Non-Refundable \$25 Application Fee
- Official High School Transcript (GED score if applicable)
- Post Secondary Education Transcript (if applicable)
- Two Letters of Recommendation
- 250-word essay explaining why student has chosen Funeral Service as a career
- SAT or ACT scores (if under 21 years of age only)

FUNERAL SERVICE CURRICULUM

The Funeral Service Certificate Program at Norfolk State University offers courses from several content areas: Public Health and Technical, Business Management, Social Sciences and Legal, Regulatory and Ethical areas.

Sixty-two (62) hours are required to complete the program. The areas of concentration and specific requirements are as follows:

Public Health & Technical (26 credit hours)			Social Science/Humanities (14 credit hours)		
CHM 100	Chemistry	3	PSY 381	Topics in Psychology: Death & Dying	3
BIO 320	Pathophysiology	3	SOC 304	Mortality	3
BIO 163	Microbiology	3	FNS 301	Intro to Funeral Services	2
BIO 165	Human Anatomy & Physiology	3	ENG 101	Communication Skills I	3
FNS 340	Embalming I for Funeral Service	4	ENG 102	Communication Skills II	3
FNS 345	Embalming II for Funeral Service	4			
FNS 350	Restorative Art I	3	Legal, Ethical, & Regulatory (4 credit hours)		
FNS 355	Restorative Art II	3	FNS 322	Funeral Service Law	2
			FNS 373	Ethics in Funeral Service	2
Business Management (15 credit hours)					
ACC 201	Principles of Accounting	3	General Education (3 credit hours)		
FNS 330	Computer Concepts/Applications	3	HED/PE	Health & PE Elective	2
FNS 360	Intro to Management I for Funeral Service	3	HSM 300L	Funeral Service Review Lab	1
FNS 365	Intro to Management II for Funeral Service	3			
FNS 370	Funeral Home Merchandising	3			

ATTENDANCE POLICY

All students must attend class in accordance with the University policy stated in the Student Handbook. Failure to do so may result in dismissal from class or a grade of "F."

CERTIFICATE COMPLETION

In order to meet requirements for the Certificate in Funeral Service from Norfolk State University, a student must complete the required 62 credit hours of General and Core courses, successfully passing each course with a grade no less than "C minus".

Currently, in order to become licensed in the Commonwealth of Virginia, the student must meet four criteria:

1. Successfully complete an accredited program of Mortuary Science.
2. Complete an 18-month apprenticeship program at an approved funeral home.
3. Successfully pass the Virginia Funeral Service Examination.
4. Successfully pass the National Board Examination.

The Funeral Service Certificate Program offered at Norfolk State University provides the theoretical and practical application of funeral service education, preparing the student for entry into the profession and for the National Board Examination.

HEALTH INFORMATION MANAGEMENT PROGRAM

Mattie G. Wilson, Program Director
(757) 823-2615

The Health Information Management Program is developed to prepare students to become professionally qualified health information managers. Students completing this program will receive a Bachelor of Science degree in Health Information Management. The program is seeking accreditation from the American Health Information Management Association, 919 North Michigan Avenue, Suite 1400, Chicago, IL 60611 (312) 233-1100 and the Commission on Accreditation of Allied Health Education Programs, American Medical Association, 515 North State Street, Suite 7530, Chicago, IL 60610, and (312) 464-4660.

Admission requirements for the Health Information Management Program are as follows:

1. Complete all prerequisite courses by the end of the semester preceding the professional phase.
2. Achieve a minimum overall grade point average of 2.0.
3. Achieve a minimum science grade point average of 2.0.
4. Forward to the admissions committee an application for admission to the professional phase of the Health Information Management Program.

TECHNICAL STANDARDS**A. General standards**

1. Possess empathy, integrity, interpersonal skills, interest, and motivation.
2. Possess the emotional well-being required for the full use of intellectual abilities; the exercise of sound judgment; and the development of mature, sensitive, and effective relationships with others.
3. Possess the capacity to adapt to changing environments, to display flexibility, and to manage under stress.

B. Students in the health information management program must have the following minimum abilities:

1. Ability to acquire and apply information from classroom instruction, laboratory experience, independent learning and team projects.
2. Ability to communicate effectively in English in oral and written form with colleagues, clerical employees in health information management departments, and other health professionals as part of the health care team.
3. Ability to communicate effectively in English in oral and written form with patients, attorneys, workers' compensation representatives, insurance companies and other third party payers, and other individuals and agencies who need information from patient records or data bases maintained in health information departments.
4. Ability to use computers and complete computer-based assignments.
5. Ability to function (consult, negotiate, share) as part of a team.
6. Ability to delegate.
7. Ability to read materials used in HIM settings, such as coding manuals, policies and procedures, patient medical records.
8. Ability to calculate mathematical information, such as hospital statistics, budgets, and productivity information.
9. Manual dexterity necessary to file medical records and cards, as well as assemble paper medical record forms.
10. Visual ability and manual dexterity necessary to prepare office layouts and to design forms and computer screens.
11. Ability to operate equipment, word processors, transcription equipment, electronic movable files, copiers, etc.
12. Ability to synthesize information regarding health care outcomes for formal, verbal and/or written presentation to health care professionals.

HEALTH INFORMATION MANAGEMENT CURRICULUM**First Year**

FRS 100	Freshman Seminar	0
BIO 110	General Biology	4
BIO 165	Human Anatomy and Physiology I	3
BIO 165L	Human Anatomy and Physiology I Lab	1
ENG 101/1C	Communication Skills I/II	6
ENG 114	Technical Vocabulary Building	2
HED 100	Personal and Community Health	2
MTH 105	Intermediate Algebra	3
HIM 120	Medical Terminology I	3
HIM 121	Medical Terminology II	3
HRP 190	Introduction to Health Professions	3
PED 100	Fundamentals of Fitness for Life	1
Elective (Social Sciences)		3
TOTAL		34 cr hrs

Second Year

BIO 166	Human Anatomy and Physiology II	3
BIO 166L	Human Anatomy and Physiology II Lab	1
BIO 320	Pathophysiology	3
CHM 110	Basic Concepts in Chemistry	3
CSC 150	Computer Literacy	3
CSC 169	Introduction to Computer Science	3
CSC 192	Introduction to Internet	1
MTH 250*	Elementary Statistics	3
SCM 285	Principles of Speech	3
Elective (African American Perspective)**		3
Elective (Humanities)		3
Elective (Social Sciences)		3
TOTAL		32 cr hrs

Third Year

HIM 310	Current Trends in Health-Care Delivery	3
HIM 311	Record Management	3
HIM 311L	Record Management Lab	1
HIM 312	Health Information Management	3
HIM 312L	Health Information Management Lab	1
HIM 315	Introduction to Management Concepts	3
HIM 316	Research Methods	3
HIM 340	Directed Practicum	3
HIM 365	Healthcare Information System	3
HSM 311	Health Legal Aspects	3
HSM 331	Health Financial Management	4
Elective(s)		3
TOTAL		33 cr hrs

Fourth Year

HIM 412	Organization & Management of Health Information Systems	3
HIM 420	Senior Research Project	3
HIM 425	Evaluation Techniques	3
HIM 450	Management Practicum	3
HIM 460	Advanced Health Information Management Seminar	2
HIM 465	Medical Information Systems	3
Elective(s)		3
TOTAL		20 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	42
Major Requirements	78
TOTAL	120 cr hrs

*ECN 220, PSY 270, SOC 355

**ENG 38X, FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371, HIS 377, HRP 290, SOC 237, PSY 340, POS 315

HEALTH SERVICES MANAGEMENT

Bernice Sawyer-Watson, Program Director
(757) 823-2367

This program in Health Services Management is organized around a core of lower level general education courses, a core of business management courses taken in the intermediate years, and further generic orientation to the unique managerial processes in the health services industry in the form of an internship and on-the-job experimental learning in the last year.

HEALTH SERVICES MANAGEMENT CURRICULUM**First Year**

Cultural Elective		3
ACC 201	Elementary Accounting	3
ACC 202	Elementary Accounting	3
CSC 150	Computer Literacy* or MSY 184	3
FRS 100	Freshman Seminar	0
BIO 100	Biological Science or any higher level or CHM 100 or PHY 100	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
HRP 190	Introduction to the Health Professions	3
MTH 151	College Algebra or MTH 131, 132, 153	3
PED 100	Fundamentals of Fitness for Life (Any active P.E)	1
TOTAL		30 cr hrs

Second Year

ECN 211	Principles of Economics	3
ECN 212	Principles of Economics	3
ECN 220	Economics and Business Statistics or PSY 270, SOC 355, POS 345 or DSC 270	3
ENG 203	Advanced Communication Skills	3

HIS 101	Social Science Electives or	
HIS 102	103, or SOC 101	6
HSM 300	Health Service Management	3
HSM 300L	Health Service Management Lab	1
HSM 310	Health Personnel	3
PSY 210	Introduction to Psychology	3
SCM 285	Principles of Speech	3
TOTAL		31 cr hrs

Third Year

HSM Restrictive Electives or ENT 3XX, DSC 3XX, HIM 3XX, MGT 3XX, MKG 3XX or FNC 3XX***		6
Humanities Electives**		6
MGT 365	Organizational Theory & Behavior	3
FNC 360	Corporate Finance & Applications	3
HIM 310	Current Trends in Health Delivery	3
HSM 311	Legal Aspects & Ethics of Health-Care Delivery	3
HSM 454	Long Term Care Administration	3
Labor Relations or Labor Laws & Legislation		
MGT 410, MGT 420, MGT 430, MGT 435, MGT 440, MGT 4XX, POS 451		3
TOTAL		30 cr hrs

* CLM 165, CLS 150, CSC 169, CIT 150, EEN 141, FIA 180, or TED 170

**ENG 38X, FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371, HIS 377, HRP 290, SOC 237, PSY 340, POS 315, HRP 290, MUS 301, Foreign Language, FIA 201

***MGT 4XX, MKT 3XX, SWK 32X, HIM 3XX, HIM 4XX, MKT 4XX

Fourth Year

Lab Elective: Biology or Chemistry or

Physical Science

Free Elective

BIO 1XX or any higher level Biology

or CHM XXX or PHY XXX

HIM 120 Medical Terminology

1

3

3

3

HSM 331	Health Financial Management	4
HSM 451	Comprehensive Health Planning	3
HSM 494	Health Services Management Internship	6
HSM Restrictive Elective or ENT 4XX or 3XX***		
HIM 3XX or 4XX or MGT 4XX or 3XX,		
MKG 3XX or 4XX, FNC 3XX or 4XX		3
HSM 497	Health Services Management & Research or HIM 420	3
TOTAL		29 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	42
Major Requirements	71
Electives	7
TOTAL	120 cr hrs

MEDICAL TECHNOLOGY

Mildred K. Fuller, Program Director

(757) 823-2366

The Medical Technology Program is designed to prepare students to meet competencies required to become medical technologist/clinical laboratory scientists. The program includes instruction in the performance of laboratory tests and their interpretation and correlation in determining the absence, presence, and extent of diseases. Students completing this program will be awarded the Bachelor of Science degree in Medical Technology and are eligible to sit for a national certifying examination.

The Medical Technology Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Ave., Suite 670, Chicago, IL 60631, (773) 714-8880.

REQUIREMENTS

Upon admission to Norfolk State University, the student may declare Medical Technology as a major. The student, including transfer students, must first complete all courses comprising the pre-professional phase of the curriculum before seeking admission to the professional phase. The student then seeks application to the professional phase of the curriculum through the Medical Technology Admissions Committee. This committee considers each applicant for admission to the clinical phase after he/she has met the following requirements:

1. Completing all prerequisite courses by the end of semester preceding the professional phase of the curriculum.
2. Achieving a minimum science grade point average of 2.0.
3. Achieving a minimum cumulative grade point average of 2.0.
4. Forwarding to the Admissions Committee a minimum of three (3) letters of recommendation from persons familiar with the student's abilities.
5. Completing the admission interview process, which includes a review of the Medical Technology Program's technical standards.

Students holding an associate degree in Clinical Laboratory Science or Medical Laboratory Technology may also seek application to the Medical Technology Program at Norfolk State University.

ESSENTIAL FUNCTIONS FOR ADMISSION

At the time of the admissions interview, applicants are given a copy of the Medical Technology Program's technical standards.

Technical standards represent the essential non-academic requirements of the program that students must master to participate successfully in the program and become employable. The following is a list of the technical abilities and skills applicants for admission must possess:

1. Manual Dexterity: Ability to use hand(s) or terminal devices with coordination.
2. Fine Motor: Ability to manipulate small objects with fingertips or adaptive devices.
3. Mobility: Ability to maneuver in the laboratory and around instruments and in patient-care settings.
4. Vision: Ability to distinguish red, yellow, and blue colors; distinguish clear from cloudy, and see through a microscope.
5. Hearing: Ability to adapt with assistive devices (i.e., phone receivers, hearing aid, etc.)
6. Speech: Ability to communicate verbally in English.
7. Writing: Ability to communicate effectively in written English.
8. Reading: Ability to read, understand, and follow directions printed in English.

Applicants are asked to sign the compliance form below to indicate that they believe they have a reasonable chance of meeting these standards. During the interview process, the students will be asked if they have any questions concerning the program's technical standards.

I, _____ (Name) attest that I have read and understand the technical standards of the Medical Technology Program, and I believe that I can and am prepared to meet these requirements.

MEDICAL TECHNOLOGY CURRICULUM (B.S. DEGREE)

First Year			Third Year		
FRS 100	Freshman Seminar	0	MDT 315	Clinical Hematology I	4
BIO 110	General Biology	4	MDT 325	Clinical Chemistry I	4
BIO 165	Human Anatomy & Physiology	3	MDT 373	Clinical Microbiology I	5
BIO 165L	Human Anatomy & Physiology	1	MDT 410	Immunology	3
CHM 221	General Chemistry I	3	MDT 425	Clinical Chemistry II	4
CHM 221L	General Chemistry I Lab	1	MDT 450	Clinical Hematology II	4
CHM 222	General Chemistry II	3	MDT 455	Immunohematology	4
CHM 222L	General Chemistry II Lab	1	MDT 473	Clinical Microbiology II	4
ENG 101	Communication Skills I	3	TOTAL		32 cr hrs
ENG 102	Communication Skills II	3			
HRP 190	Intro to Health Professions	3	Summer Session		
MTH 151	College Algebra	3	MDT 306	Phlebotomy	2
MTH 153	College Algebra & Trigonometry	3	MDT 307	Serology	2
PED 100	Fundamentals of Fitness for		MDT 308	Urinalysis	2
	Life or PED 1XX	1	TOTAL		6 cr hrs
TOTAL		32 cr hrs			
Second Year			Fourth Year		
BIO 310	General Microbiology	4	MDT 395	Hematology/Coagulation Practicum	4
CHM 312	Organic Chemistry	3	MDT 396	Immunohematology Practicum	4
CHM 312L	Organic Chemistry Lab	1	MDT 475	Medical Technology Seminar	1
CSC 150	Computer Literacy	3	MDT 480	Clinical Laboratory Administration	2
HIS 100	History of Civilization or HIS 101		MDT 495	Clinical Microbiology Practicum	4
	or any general educ. Social Sciences	3	MDT 496	Clinical Chemistry Practicum	4
HIS 335*	African-American History	3	TOTAL		19 cr hrs
HUM 210	Humanities or any General		SUMMARY OF GRADUATION REQUIREMENTS		
	Education Humanities	3	General Education		42
HUM 211	Humanities or any General		Major Requirements		79
	Education Humanities	3	TOTAL		121 cr hrs
MTH 250	Elementary Statistics Concepts	3			
SCM 285	Principles of Speech	3			
SOC 101	Introduction to Social Science or any		*ENG 38X, FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371,		
	General Education Social Sciences	3	HIS 377, HRP 290, SOC 237, PSY 340, POS 315		
TOTAL		32 cr hrs			

DEPARTMENT OF BIOLOGY

Camellia Moses Okpodu, Department Head
(757) 823-8512

The Biology Department provides a diversity of career options through four courses of study that lead to a Bachelor of Science Degree in Biology.

The objectives of the Department are as follows:

1. To prepare students for careers in biology.
2. To provide students with pre-professional training for dentistry, medicine, veterinary medicine, podiatry, osteopathy, optometry, and various allied health options.
3. To provide learning experiences in biology for students majoring in other disciplines.

Students who earn a B.S. degree in any of the three areas also have the option of completing a Biotechnology Certificate Program. The four B.S. option areas are as follows:

Option 1 Biology 1, which enables majors to pursue graduate degrees with an option for employment at the bachelor level.

Option 2 Biology 2, students will follow Option 1 then seek specific endorsement. (e.g., teachers' licensure)

Option 3 Biology 4, Pre professional, which provides a background for students having an interest in medicine, dentistry, veterinary medicine, optometry, pharmacy, osteopathy, and podiatry.

Biotechnology Certificate : The curriculum includes 15 credit hours of approved laboratory work in molecular biology/genomics, cell biology, and proteins and proteomics. The program is designed for the continuing education of research technicians with baccalaureate degrees in academic and industrial laboratories, new college graduates who want to enhance their knowledge, and undergraduates who are interested in developing skills in the latest biotechnology techniques.

Students who successfully complete the requirements for either of the four above models will be considered Biology majors. A grade of "C" or better is required in all courses of the major group. The "major group" includes all required science and mathematics courses, and this definition is applicable to all students who enrolled in the Department beginning in the Fall Semester of 1989 and thereafter.

BIOLOGY 1 CURRICULUM**First Year**

BIO 110	General Biology	4
BIO 160	General Zoology or BIO 161	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of Civilization	3
HIS 101	History of Civilization	3
MTH 151	College Algebra	3
MTH 153	College Algebra and Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
TOTAL		29 cr hrs

Third Year

BIO 263	Vertebrate Embryology	4
BIO 270	Comparative Anatomy of Vertebrates	4
BIO 274	Plant Morphology or Bio 278	4
CHM 321	Organic Chemistry I	3
CHM 322	Organic Chemistry II	3
CHM 321L	Organic Chemistry I Lab	2
CHM 322L	Organic Chemistry II Lab	2
PHY 152	General Physics	3
PHY 153	General Physics	3
PHY 152L	General Physics Lab	1
PHY 153L	General Physics Lab	1
TOTAL		30 cr hrs

Second Year

BIO 161	General Botany or BIO 160	4
BIO 271	Ecology or BIO 350	4
BIO 310	General Microbiology	4
CHM 221	General Chemistry I	3
CHM 222	General Chemistry II	3
CHM 221L	General Chemistry I Lab	1
CHM 222L	General Chemistry II Lab	1
CSC 150	Computer Literacy or	
CSC 200	Advanced Computer Concepts	3
FRN 111	Introduction to French, Spanish, or German	3
FRN 112	Introduction to French, Spanish, or German	3
SCM 285	Principles of Speech	3
TOTAL		32 cr hrs

Fourth Year

	African-American Elective from the Core*	3
	Non-Restricted Electives	3
BIO 351	Principles of Genetics	4
BIO 364	Seminar and Colloquium in Biology	1
BIO 459	General Physiology	4
BIO 474	Molecular Biology and BIO 474L or BIO 480 and/or BIO 495	8
FIA 301	Art Appreciation and/or HUM 210 and/or MUS 301 and/or ENG 207	3
TOTAL		26 cr hrs

* Select from ENG 383, FIA 170, HIS 335, or MUS 234

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	42
Major Requirements	50
Restricted Electives	28
TOTAL	120 cr hrs

BIOLOGY 2 CURRICULUM**Teacher Licensure Endorsement**

Students wishing to pursue a career in teaching must take the following steps:

1. Follow the curriculum for the Bachelor of Science degree in Biology.
2. Use the elective hours for professional courses.
3. See the academic advisor in their major department.
4. See the academic advisor in the Department of Secondary Education and School Leadership in the Bozeman Education Building, Room 200.
5. Take the PRAXIS test and make a passing score. (See the School of Education PRAXIS coordinator, JBB 125.)
6. Take the following professional education courses (18 semester hours) and complete student teaching (12 semester hours).

SED 201	American Schools and the Teaching Profession	SED 384	Teaching of Mathematics and Sciences in Secondary Schools
SED 233	Seminar in Assessment and Evaluation	SED 486	Educational Psychology and Behavior Management
SED 380	Foundations of Methods in Secondary Schools	SED 499	Directed Teaching and Seminar

BIOLOGY 4 CURRICULUM (PRE-PROFESSIONAL)**First Year**

BIO 110	General Biology	4
BIO 160	General Zoology or BIO 161	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
HIS 100	History of Civilization	3
HIS 101	History of Civilization	3
MTH 151	College Algebra	3
MTH 153	College Algebra & Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
TOTAL		29 cr hrs

CHM 221	General Chemistry I	3
CHM 222	General Chemistry II	3
CHM 221L	General Chemistry I Lab	1
CHM 222L	General Chemistry II Lab	1
FIA 301	Art Appreciation or HUM 210 or MUS 301 or ENG 207	3
FRN 111	Introduction to French, Spanish, or German	3
FRN 112	Introduction to French, Spanish, or German	3
SCM 285	Principles of Speech	3
TOTAL		31 cr hrs

Second Year

BIO 161	General Botany or BIO 160	4
BIO 271	Ecology or BIO 350	4
BIO 310	General Microbiology	4

Third Year

	Electives (nonrestricted)	3
BIO 263	Vertebrate Embryology	4
BIO 270	Comparative Anatomy of Vertebrates	4

BIO 459	General Physiology	4	BIO 364	Seminar and Colloquium in Biology	1
CHM 321	Organic Chemistry I	3	CHM 431	Biochemistry I	3
CHM 322	Organic Chemistry II	3	CHM 431L	Biochemistry I Lab	1
CHM 321L	Organic Chemistry I Lab	2	CSC 150	Computer Literacy or	
CHM 322L	Organic Chemistry II Lab	2	CSC 200	Advanced Computer Concepts	3
PHY 152	General Physics	3	FIA 301	Art Appreciation or HUM 210 or	
PHY 153	General Physics	3	MUS 301 or ENG 207		3
PHY 152L	General Physics Lab	1	MTH 184	Calculus I	4
PHY 153L	General Physics Lab	1	TOTAL		26 cr hrs
TOTAL		33 cr hrs			

*Select from ENG 383, FIA 170, HIS 335, or MUS 234

Fourth Year

African-American Elective from the Core*

BIO 351	Principles of Genetics	4	SUMMARY OF GRADUATION REQUIREMENTS		
BIO 362	Histology and Micro technique	4	General Education Requirements		42
			Major Requirements		75
			Non-restricted Elective		3
			TOTAL		120 cr hrs

BIOTECHNOLOGY CERTIFICATE PROGRAM

To be eligible for admission to the Biotechnology certificate program a student must complete the following:

1. Apply for admission to the Biotechnology Program
2. Have completed all pre-requisite course work for courses related in the program
3. Have an overall cumulative grade point average of 2.8 on a 4.0 scale

COURSE WORK

BIO 474	MOLECULAR BIOLOGY: Three credit hours. Prerequisite- BIO 351 Principles of Genetics, BIO 310, CHM 222, 222L
BIO 474L	MOLECULAR BIOLOGY LABORATORY: Two credit hours. Prerequisite- BIO 474
BIO 499	TISSUE AND CELL CULTURE: Four credit hours. Prerequisite- Consent of Instructor
BIO 510	EXPERIENCE IN BIOLOGY: Three credit hours. Prerequisite- Bio 110, General Biology
BIO 520	SPECIAL PROBLEMS IN BIOLOGY: Three credit hours. Prerequisite- Bio 110, general Biology
CHM 431	BIOCHEMISTRY I: Three credit hours. Prerequisites- CHM 322 and CHM 362
CHM 431L	BIOCHEMISTRY I LABORATORY: Three credit hours. Prerequisites- CHM 322L or 323L
CHM 432	BIOCHEMISTRY II: Three credit hours. Prerequisites- CHM 322 and CHM 362
CHM 432L	BIOCHEMISTRY II LABORATORY: Three credit hours. Prerequisites- CHM 322L or 323L
CHM 481	SPECIAL TOPICS IN CHEMISTRY: Three credit hours. Prerequisites- Approval of Chemistry Department
BIO 452	BIOLOGICAL INSTRUMENTAL TECHNIQUES: Two credit hours. Prerequisites- CHM 221, 222 and CHM 221L and 222L.
BIO 400	FORENSIC MOLECULAR BIOLOGY: Four credit hours. Prerequisites- Principles of Genetics and Organic Chemistry.

DEPARTMENT OF CHEMISTRY

H. Alan Rowe, Department Head
(757) 823-2285

The Department of Chemistry provides the instruction necessary for the understanding of chemistry for students seeking the B.S. Degree with a major in Chemistry and supports undergraduate programs in other disciplines. The Department also provides research opportunities for students wishing to contribute to knowledge in areas of chemistry.

The Chemistry Department offers several chemistry based curricula choices leading to a B.S. degree in Chemistry: Chemistry, Chemistry with an emphasis in Pre-Medicine (not a degree in Pre-Medicine), Chemistry with an emphasis in Food Science/Nutrition, and the dual degree B.S. in Chemistry-M.S. in Materials Science curriculum. Students wishing to teach chemistry in secondary schools must earn a B.S. degree in the Chemistry curriculum and fulfill the requirements for the teacher Licensure Endorsement offered by the School of Education. The various curricula prepare graduates to continue their education in graduate or professional schools, or to obtain entry-level positions in industry, government, or education.

The objectives of the Department are:

1. To develop in students an appreciation of the scientific method and its use in the solution of chemical problems.
2. To develop the basic training in chemistry designed to meet the needs of students in pre-professional fields and professional fields.
3. To develop in students those qualities and abilities necessary for success in industry and in advanced degree institutions.
4. To offer sufficient specialized training beyond the generally recognized basic courses to enable a graduate with a bachelor's degree to enter directly into a professional career.

The Chemistry and the Chemistry- Pre-Medicine curricula are approved by the American Chemical Society.

CHEMISTRY CURRICULUM

First Year			CHM 332	Analytical Chemistry II	3
CHM 223	General Chemistry I	4	CHM 332L	Analytical Chemistry II Lab	2
CHM 224	General Chemistry II	4	CHM 345	Math Methods & Logic	3
CHM 221L	General Chemistry I Lab	1	CHM 351	Seminar or CHM 352	1
CHM 222L	General Chemistry II Lab	1	CHM 361	Physical Chemistry I	3
CSC 150	Computer Literacy or		CHM 362	Physical Chemistry II	3
CSC 261	Fortran Programming	3	CHM 363L	Physical Chemistry Lab	2
ENG 101	Communication Skills I	3	HIS XXX	History from the Core	3
ENG 102	Communication Skills II	3	SCM 285	Principles of Speech	3
HED 100	Personal & Communication Health	2	TOTAL		29 cr hrs
MTH 153	College Algebra & Trigonometry	3			
MTH 184	Calculus I	4	Fourth Year		
PED 100	Fundamentals of Fitness for life	1	Electives		4
TOTAL		29 cr hrs	Chemistry (Restricted Electives)*		6
			Cultural Elective from the Core		3
Second Year			Humanities from the Core		6
CHM 321	Organic Chemistry I	3	CHM 451	Seminar or CHM 452	1
CHM 322	Organic Chemistry II	3	CHM 473	Advanced Inorganic Chem	3
CHM 321L	Organic Chemistry I Lab	2	CHM 431	Biochemistry	3
CHM 331	Analytical Chemistry I	3	SOC 101	Introduction to Social Science	3
CHM 331L	Analytical Chemistry I Lab	2	CHM 497 or		
CSC 160	Visual Basic Programming or CSC 261	3	CHM 498	Introduction to Research	1
MTH 251	Calculus II	4	TOTAL		30 cr hrs
MTH 252	Calculus III	4			
PHY 152	General Physics	3	*Select 6 hours from 400 level Chemistry electives. Maximum of		
PHY 153	General Physics	3	3 total hours of research.		
PHY 152L	General Physics Lab	1	SUMMARY OF GRADUATION REQUIREMENTS		
PHY 153L	General Physics Lab	1	General Education		74
TOTAL		32 cr hrs	Major Requirements		4
			Electives		120 cr hrs
Third Year			TOTAL		
BIO 110	General Biology	4			
CHM 323L	Synthesis & Analysis in Organic Chemistry	2			

Teacher Licensure Endorsement

Students wishing to pursue a career in teaching must take the following steps:

1. Follow the curriculum for the liberal arts degree in Chemistry.
2. Use the elective hours for professional courses.
3. See the academic advisor in their major department.
4. See the academic advisor in the Department of Secondary Education and School Leadership in the Bozeman Education Building, Room 200.
5. Take the PRAXIS test and make a passing score. (See the School of Education PRAXIS coordinator, JBB 125.)
6. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours).

SED 201	American Schools and the Teaching Profession	SED 384	Teaching of Mathematics and Sciences in Secondary Schools
SED 233	Seminar in Assessment and Evaluation	SED 486	Educational Psychology and Behavior Management
SED 380	Foundations of Methods in Secondary Schools	SED 499	Directed Teaching and Seminar

CHEMISTRY PRE-MEDICINE CURRICULUM

First Year			Second Year		
CHM 221L	General Chemistry I	4	CHM 321	Organic Chemistry I	3
CHM 222L	General Chemistry II	4	CHM 322	Organic Chemistry II	3
CHM 221L	General Chemistry I Lab	1	CHM 321L	Organic Chemistry I Lab	2
CHM 222L	General Chemistry II Lab	1	CHM 331	Analytical Chemistry I	3
CSC 150	Computer Literacy or CSC 261	3	CHM 331L	Analytical Chemistry I Lab	2
ENG 101	Communication Skills I	3	CSC 160	Visual Basic Programming or CSC 261	3
ENG 102	Communication Skills II	3	MTH 251	Calculus II	4
HED 100	Personal & Community Health	2	MTH 252	Calculus III	4
MTH 153	College Algebra & Trigonometry	3	PHY 152	General Physics	3
MTH 184	Calculus I	4	PHY 153	General Physics	3
PED 100	Fundamentals of Fitness for Life	1	PHY 152L	General Physics Lab	1
FRS 100	Freshman Seminar	0	PHY 153L	General Physics Lab	1
TOTAL		29 cr hrs	TOTAL		32 cr hrs

Third Year

History from the Core	3
BIO 110 General Biology	4
CHM 323L Synthesis & Analysis in Organic Chemistry	2
CHM 332 Analytical Chemistry II	3
CHM 332L Analytical Chemistry II Lab	2
CHM 345 Math Methods and Logic	3
CHM 351 Seminar or CHM 352	1
CHM 361 Physical Chemistry I	3
CHM 362 Physical Chemistry II	3
CHM 363L Physical Chemistry Lab	2
SCM 285 Principles of Speech	3
TOTAL	29 cr hrs

Fourth Year

Biology Electives	7
Cultural Elective from the Core	3
Humanities from the Core	6
CHM 431 Biochemistry I	3
CHM 432 Biochemistry II	3
CHM 431L Biochemistry I Lab	2
CHM 432L Biochemistry II Lab	2
CHM 451 Seminar or CHM 452	1
CHM 473 Advanced Inorganic Chemistry	3
SOC 101 Social Science from the Core	3
TOTAL	33 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education	40
Major Requirements	80
Electives	3
TOTAL	123 cr hrs

CHEMISTRY: FOOD SCIENCE AND NUTRITION CURRICULUM**First Year**

CHM 221L General Chemistry I	4
CHM 221L General Chemistry Lab I	1
CHM 222L General Chemistry II	4
CHM 222L General Chemistry Lab II	1
CSC 150 Computer Literacy	3
ENG 101 Communication Skills I	3
ENG 102 Communication Skills II	3
FSN 101 Introduction to Dietetics & Food Science	2
FSN 102 Prof. Experiences Seminar	1
FSN 110 The Science of Human Nutrition	3
MTH 153 College Algebra & Trigonometry	3
MTH 184 Calculus I	4
PED 100 Fundamentals of Fitness for Life	1
TOTAL	33 cr hrs

Second Year

Humanities from the Core	6
BIO 310 General Microbiology	4
CHM 321 Organic Chemistry I	3
CHM 321L Organic Chemistry I Lab	2
CHM 322 Organic Chemistry II	3
CHM 323L Synthesis & Analysis in Organic Lab	2
CHM 331 Analytical Chemistry I	3
CHM 331L Analytical Chemistry I Lab	2
FSN 160 Food Cost Control	3
FSN 312 Chemical Foundations of Nutrition	3
TOTAL	31 cr hrs

Third Year

CHM 313 Biochemistry	3
CHM 313L Biochemistry Lab	1
CHM 332 Analytical Chemistry II	3
FSN 410 Nutrition in Aging	3

CHM 332L Analytical Chemistry II Lab	2
FSN 320 Food Service Administration	3
FSN 330 Scientific Food Development	3
FSN 330L Sciences Food Development Lab	1
FSN 340 Nutrition Education	3
PHY 152 General Physics	3
PHY 152L General Physics Lab	1
PHY 153 General Physics	3
PHY 153L General Physics Lab	1
SCM 285 Principles of Speech	3
TOTAL	33 cr hrs

Fourth Year

Cultural Elective	3
FSN 449 Nutrition in Sports	3
CHM 361 Physical Chemistry	3
CHM 363L Physical Chemistry Lab	2
FSN 356 Advanced Nutrition	3
FSN 426 Nutrition in Disease	3
FSN 426L Nutrition in Disease Lab	1
FSN 450 Professional Seminar	3
FSN 460 Quantity Food Production	3
FSN 484 Rural/Urban Nutrition	3
HIS 101 History of Civilization	3
SOC 101 Social Science	3
TOTAL	33 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education	40
School Requirement	0
Major Requirements	84
Elective	6
TOTAL	130 cr hrs

B.S. IN CHEMISTRY/ M.S. IN MATERIALS SCIENCE CURRICULUM

First Year			CHM 451	Seminar or CHM 452	1
CHM 223	General Chemistry I	4	CHM 473	Advanced Inorganic Chemistry	3
CHM 224	General Chemistry II	4	MATS 530	Materials Science	3
CHM 221L	General Chemistry I Laboratory	1	BIO 110	General Biology	4
CHM 222L	General Chemistry II Laboratory	1	PHY 356	Heat & Thermodynamics	3
CSC 160	Visual Basic Programming and/or CSC 261 and/or CSC 292	6	PHY 580	Quantum Mechanics for Mat. Science	3
ENG 101	Communication Skills I	3	TOTAL		32 cr hrs
ENG 102	Communication Skills II	3	*Select one from:		
HED 100	Personal & Community Health	2	HIS 100, 101, 102, or 103		
MTH 153	College Algebra & Trigonometry	3	**Select one from:		
MTH 184	Calculus I	4	HUM 210, 211, ENG 383, FIA 170, MUS 234		
PED 100	Fundamentals of Fitness for Life	1	***Select one from:		
TOTAL		32 cr hrs	HIS 335, 336, 370, 371, 377, ENG 383, PSY 340, SOC 237, POS 315, FIA 170, MUS 234		
Second Year			****Select one from:		
SCM 285	Principles of Speech	3	CHM 431, 432, 431L, 432L, 473L, 475, 476, 481, 461L, 462L, 478, CHM 397, 398, 497, 498		
CHM 321	Organic Chemistry I	3	SUMMARY OF REQUIREMENTS		
CHM 322	Organic Chemistry II	3	General Education		38
CHM 321L	Organic Chemistry I Lab	2	Major Requirements		88
CHM 331	Analytical Chemistry I	3	Electives		4
CHM 331L	Analytical Chemistry I Lab	2	TOTAL		130 cr hrs
MTH 251	Calculus II	4	Summer		
MTH 252	Calculus III	4	MATS 697 Research I		3
PHY 250	University Physics	4	TOTAL		3 cr hrs
PHY 251	University Physics	4	Fifth Year		
PHY 250L	University Physics Lab	1	MATS 533 Polymers and Polymer-based Composites		3
PHY 251L	University Physics Lab	1	Technical Elective		3
TOTAL		34 cr hrs	Technical Elective		3
Third Year			MATS 535 Electronic and Optical Materials		3
History from the Core*			MATS 575 Instrumentation for Materials		3
CHM 323L	Synthesis & Analysis in Organic Chemistry	2	Characterization		3
CHM 332	Analytical Chemistry II	3	MATS 799 Thesis Research		3
CHM 332L	Analytical Chemistry II Lab	2	Technical Elective		3
CHM 451	Seminar or CHM 452	1	TOTAL		21 cr hrs
CHM 361	Physical Chemistry I	3	Technical electives to be selected from:		
CHM 362	Physical Chemistry II	3	CHM 573 Advanced Inorganic Chemistry		3
CHM 363L	Physical Chemistry Lab	2	CHM633 Molecular Dynamics		3
CHM 345	Math Methods and Logic	3	CHM663 Atomic and Molecular Spectroscopy		3
MTH 372	Differential Equations	3	PHY 653 Solid State Physics		3
Humanities from the Core**		3	PHY 675 Electricity and Magnetism		3
SOC 101	Social Science from the Core	3	MATS 610 Special Topics I		3
TOTAL		31 cr hrs	MATS 710 Special Topics II		3
Fourth Year			GRAND TOTAL		153 cr hrs
Cultural Elective from the Core***					
Unrestricted Elective					
Humanities from Core**					
Restricted Chemistry Elective****					
CHM 545	Math Methods	3			

DEPARTMENT OF COMPUTER SCIENCE

Mou-Liang Kung, Department Head
(757) 823-9454

The Computer Science Program is designed to provide students with fundamental training in the theoretical and practical aspects of computer science. Coupled with the program's strong mathematics component, this training provides graduates with the necessary background for employment in a wide variety of computing fields or for a smooth entry into graduate level study.

A. Upon graduation, computer science students will be able to demonstrate knowledge and applications of the following:

1. The basic elements of computer theory.
2. Computer organization and operating systems.
3. Data communications and networks.
4. Programming design methods.
5. Basic elements of the analysis of algorithms.
6. Ethical decision-making.

B. Upon graduation, computer science students will be able to demonstrate the following skills:

1. Ability to express computer science-related topics orally.
2. Ability to express computer science-related topics in writing.

C. Upon graduation, computer science students will have experienced the following:

1. Work on multiple teams.

2. Software development.

In addition, the Department provides service courses to assist students of all majors in mastering fundamental computer concepts and a variety of programming languages.

The Department of Computer Science offers the B.S. Degree in Computer Science, which includes the following specialty areas:

- Computer Science (General Program)
- Computer Engineering
- Information Systems

General and engineering options are also available for students enrolled in the DNIMAS Program.

The program addresses a number of career opportunities within the curriculum. The Computer Engineering option is suitable for students who are interested in the design and implementation of hardware. The Information Systems option qualifies students for employment in business environments.

MINOR IN COMPUTER SCIENCE

A Computer Science Minor consists of the following 18 credit hours of required courses:

CSC 170	Computer Programming I	CSC 372	Data Structures
CSC 260	Computer Programming II	CSC 464	Operating Systems
CSC 268	Assembly Language Programming and Computer Organization	CSC elective at the 300 or 400 level	

GENERAL DEPARTMENT REQUIREMENTS

Computer Science majors must complete 120 credits to complete the B.S. degree. Additionally:

1. Students must meet prerequisites or their equivalents prior to enrolling in more advanced computer science courses.
2. Computer science majors must earn at least a "C" grade in all science, mathematics and computer science courses. In addition, majors with specialty in computer engineering must receive a "C" grade or better in all engineering courses, and majors with specialty in information systems must receive a "C" grade or better in all courses taken in the School of Business.
3. Computer science majors are not permitted to enroll in any course whose content is prerequisite, or assumed knowledge, for a higher level course that a student has already completed.
4. Computer science majors must also pass a comprehensive examination covering the content of the core courses through CSC 372.

The B.S. degree program in Computer Science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.

COMPUTER SCIENCE: GENERAL EMPHASIS CURRICULUM

First Year			Third Year		
FRS 100	Freshman Seminar	0	MTH 351	Probability and Statistics I	3
CHM 221,	221L or PHY 152, 152L or BIO 110			Humanities or Foreign Language	6
	Chemistry I and Lab; Physics I and			Cultural Elective	3
	Lab or General Biology	4	CSC 295	Java Applications Programming	3
CHM 222,	222L or PHY 153, 153L or BIO 160		CSC 361	Survey of Programming Languages	3
	or BIO 161 Chemistry II and Lab or		CSC 372	Data Structures	3
	Physics II and Lab or General		CSC 380	Software Engineering	3
	Zoology or General Botany	4		Computer Science Electives 300	
MTH 153	College Algebra & Trigonometry	3		level or above or CED 350 cooperative educ	6
MTH 184	Calculus I	4	TOTAL		30 cr hrs
ENG 101	Communication Skills I	3	Fourth Year		
ENG 102	Communication Skills II	3		Computer Science Electives 300	
PED 100	Fundamentals of Fitness for Life	1		level or above	6
HED 100	Personal & Community Health	2		Computer Science or Mathematics	
CSC 169	Introduction to Computer Science	3		Electives 300 level or above	6
CSC 170	Computer Programming I	3		Social Science Elective	3
TOTAL		30 cr hrs	CSC 430	Data Communication	3
Second Year			CSC 464	Operating Systems	3
Laboratory Science Elective (BIO 110, PHY 152,			CSC 468	Computer Architecture	3
or CHM 221 and the corresponding			CSC 498	Computer Science Seminar I	1
laboratory)		4	CSC 499	Computer Science Seminar II	2
MTH 251	Calculus II	4	Free Elective		3
MTH 372	Discrete Mathematical Structures	4	TOTAL		30 cr hrs
ENG 303	Technical Writing	3	SUMMARY OF GRADUATION REQUIREMENTS		
SCM 285	Principles of Speech	3		General Education Requirements	42
	Social Science Elective	3		Major Requirements	75
CSC 260	Computer Programming II	3		General Elective	3
CSC 268	Computer Organization and Assembly		TOTAL		120 cr hrs
	Language Programming	3			
CSC 292	Unix and C Programming	3			
TOTAL		30 cr hrs			

COMPUTER SCIENCE: COMPUTER ENGINEERING CURRICULUM

First Year			MTH 371	Discrete Mathematical Structures	4
FRS 100	Freshman Seminar	0	MTH 372	Differential Equations	3
BIO 110	or CHM 221 / CHM 211L	4	Humanities or Foreign Language		6
MTH 153	College Algebra & Trigonometry	3	CSC 292	Unix and C Programming	3
MTH 184	Calculus I	4	CSC 361	Survey of Programming Language	3
ENG 101	Communication Skills I	3	CSC 372	Data Structures	3
ENG 102	Communication Skills II	3	CSC 380	Software Engineering	3
PED 100	Fundamentals of Fitness for Life	1	TOTAL		32 cr hrs
HED 100	Personal & Community Health	2	Fourth Year		
	Social Science Elective	3	EEN 231	Digital Electronics Logic Design	3
CSC 169	Introduction to Computer Science	3	EEN Elective 300 level or above		3
CSC 170	Computer Programming I	3	Cultural Elective		3
TOTAL		29 cr hrs	Social Science Elective		3
Second Year			CSC 295	Java Applications Programming	3
EEN 201/201L	Elect Network Theory & Lab	4	CSC 430	Data Communications	3
PHY 250/250L and PHY 251/251L	University		CSC 464	Operating Systems	3
	Physics I and II	10	CSC 468	Computer Architecture	3
MTH 251	Calculus II	4	CSC 498	Computer Science Seminar I	1
MTH 252	Calculus III	4	CSC 499	Computer Science Seminar II	2
SCM 285	Principles of Speech	3	Computer Science Elective 300 level or above		3
CSC 260	Computer Programming II	3	TOTAL		122 cr hrs
CSC 268	Computer Organization and Assembly Language Programming	3	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL		31 cr hrs	General Education Requirements		42
Third Year			Major Requirements		80
EEN 301/30	Electronics I and Lab	4	TOTAL		122 cr hrs
MTH 351	Probability and Statistics	3			

COMPUTER SCIENCE: INFORMATION SYSTEMS CURRICULUM

First Year			Business Electives (see list below)		6
FRS 100	Freshman Seminar	0	CSC 295	Java Applications Programming	3
CHM 221,	221L or PHY 152, 152L or BIO 110		CSC 361	Survey of Programming Languages	3
	Chemistry I and Lab; Physics I		CSC 372	Data Structures	3
	and Lab or General Biology	4	CSC 380	Software Engineering	3
CHM 222,	222L or PHY 153, 153L or BIO 160 or		Computer Science Elective 300 level or above		
	BIO 161, Chemistry II and Lab		or CED 350 cooperative education		3
	or Physics II and Lab or General		TOTAL		30 cr hrs
	Zoology or General Botany	4			
MTH 153	College Algebra & Trigonometry	3	Fourth Year		
MTH 184	Calculus I	4	Free Electives		
ENG 101	Communication Skills I	3	Social Science Electives		
ENG 102	Communication Skills II	3	MSY 410	Systems Analysis	3
PED 100	Fundamentals of Fitness for Life	1	CSC 420	Database Principles and Design	3
HED 100	Personal & Community Health	2	CSC 422	Database Implementation	3
CSC 169	Introduction to Computer Science	3	CSC 430	Data Communications	3
CSC 170	Computer Programming I	3	CSC 464	Operating Systems	3
TOTAL		30 cr hrs	CSC 468	Computer Architecture	3
			CSC 498	Computer Science Seminar I	1
			CSC 499	Computer Science Seminar II	2
			TOTAL		30 cr hrs
Second Year			Business Electives		
Laboratory Science Elective (BIO 110, PHY 152, or CHM 221 and the corresponding laboratory)		4	ACC 201	Principles of Accounting I	
MTH 251	Calculus II	4	ACC 202	Principles of Accounting II	
MTH 372	Discrete Mathematical Structures	4	MGT 365	Organizational Behavior and Theory	
ENG 303	Technical Writing	3	MKG 366	Principles of Marketing	
SCM 285	Principles of Speech	3	DSC 370	Total Quality Management	
PSY 210	Introduction to Psychology	3			
CSC 260	Computer Programming II	3	SUMMARY OF GRADUATION REQUIREMENTS		
CSC 268	Computer Organization and Assembly Language Programming	3	General Education Requirements		
CSC 292	Unix and C Programming	3	Major Requirements		
TOTAL		30 cr hrs	Free Electives		
			TOTAL		
			120 cr hrs		
Third Year					
MTH 351	Probability and Statistics I	3			
Humanities or Foreign Language		6			

DEPARTMENT OF ENGINEERING

Christopher Washington, Department Head
(757) 823-2243

The Department of Engineering at Norfolk State University offers B.S. degrees in Electronics and Optical Engineering. The Department also offers M.S. degrees in Electronics and Optical Engineering. The Department of Engineering has an advisory board composed of national leaders from government, university and industry. The advisory board provides vision and insight for all departmental initiatives conducted by the faculty.

The Department of Engineering offers its students a variety of options for obtaining both the B.S. and M.S. degrees in a variety of research specialties. The B.S. and M.S. degree programs in Electronics Engineering will offer students several tracks for their specialties. These will include microelectronics, communications, and computer engineering. The B.S. degree program in optical engineering will allow students exciting opportunities to do research at major research facilities both nationally and internationally for academic credit. Areas of research include quantum optics, nano-technology, and opto-electronics.

In order to provide the best possible undergraduate education, the department embraces the standards established by the Accreditation Board for Engineering and Technology (ABET). Additionally, graduates of the department must:

- Be able to apply knowledge of mathematics, science, and engineering to solve problems in electronics, optical, and network engineering.
- Be able to design and conduct experiments related to engineering, as well as to analyze and interpret data.
- Be able to design a system, component, or process to meet desired needs in engineering.
- Be able to function on multi-disciplinary teams.
- Understand professional and ethical responsibility.
- Be able to communicate effectively.
- Understand the impact of engineering solutions in a global and societal context.

ELECTRONICS ENGINEERING CURRICULUM

The curriculum is designed to give students a thorough knowledge of the methods of design, application, and analysis of electronic systems. Although emphasis is placed on the basic fundamentals of Electronics Engineering, modern topics are covered. The goals are to produce graduates capable of performing well in both industry and in graduate school.

First Year			EEN 301L	Engineering Electronics I Lab	1
EEN 100	Introduction to Electronics Engineering	3	EEN 305	Signals and Systems I	3
EEN 101	Engineering Use of Computers	3	EEN 310	Engineering Electronics II	3
ENG 101	Communications Skills I	3	EEN 310L	Engineering Electronics Lab II	1
ENG 102	Communications Skills II	3	EEN 333	Digital Integrated Circuits	3
FRS 100	Freshmen Seminar	0	EEN 333L	Digital Integrated Circuits Lab	1
HED 100	Personal & Community Health	2	EEN 342	Electromagnetic Field Theory	3
MTH 184	Calculus I	4	EEN 351	Communications Engineering	3
MTH 251	Calculus II	4	EEN 331	Microprocessors	3
PED 100	Fundamentals of Fitness for Life	1	EEN 331L	Microprocessor Lab	1
PHY 250	University Physics Lecture	4	Engineering Elective (300 level or above)		3
PHY 250L	University Physics Lab	1	MTH 300	Linear Algebra	3
PHY 251	University Physics Lecture	4	TOTAL		34 cr hrs
PHY 251L	University Physics Lab	1			
TOTAL		33 cr hrs	Fourth Year		
Second Year			Cultural Elective		
	Social Science from the core	3	Social Science from core		
	Humanities from the core	3	EEN 401	Engineering Seminar	1
EEN 201	Electrical Network Theory I	3	EEN 411	Engineering Economics	3
EEN 201L	Electrical Network I Lab	1	EEN 471	Control Systems Analysis	3
EEN 202	Electrical Network Theory II	3	EEN 498	Senior Project (stage I)	3
EEN 202L	Electrical Network II Lab	1	EEN 499	Senior Project (stage II)	3
EEN 211	Material Science	3	Engineering Elective		3
EEN 212	Probability and Statistics	3	Technical Elective		3
EEN 231	Digital Logic Design	3	Unrestricted Elective		3
MTH 252	Calculus III	4	TOTAL		28 cr hrs
MTH 372	Differential Equations	3	SUMMARY OF GRADUATION REQUIREMENTS		
SCM 285	Principles of Speech	3	General Education Requirements		
TOTAL		33 cr hrs	Major Requirements		
Third Year			Electives		
	Humanities from the Core	3	TOTAL		128 cr hrs
EEN 301	Engineering Electronics I	3			

Technical elective may be chosen from 300 level courses in math, computer science, chemistry, physics or engineering.

OPTICAL ENGINEERING CURRICULUM

The curriculum is designed to give the student a thorough knowledge of the methods of design, application, and analysis of optical systems. Although emphasis is placed on the basic fundamentals of Optical Engineering, modern topics are covered. The goal is to produce graduates capable of performing well in both industry and in graduate school.

First Year			Third Year		
EEN 141	Engineering Use of Computers	3	Humanities from the Core		3
ENG 101	Communications Skills I	3	Engineering Elective		3
ENG 102	Communications Skills II	3	Social Science from the Core		3
FRS 100	Freshmen Seminar	0	EEN 342	Electromagnetic Field Theory	3
HED 100	Personal & Community Health	2	MTH 300	Linear Algebra	3
MTH 184	Calculus I	4	MTH 384	Math Modeling	3
MTH 251	Calculus II	4	OEN 320	Optical Systems Analysis	3
OEN 100	Introduction to Engineering	3	OEN 340	Laser & Photonics	3
PED 100	Fundamentals of Fitness for Life	1	OEN 340L	Laser & Photonics Lab	1
PHY 250	University Physics Lecture	4	OEN 360	Introduction to Optical Materials	3
PHY 250L	University Physics Lab	1	OEN 380	Introduction to Quantum Mechanics	3
PHY 251	University Physics Lecture	4	TOTAL		31 cr hrs
PHY 251L	University Physics Lab	1			
TOTAL		33 cr hrs	Fourth Year		
Second Year			Cultural Elective		3
Humanities from the core		3	Engineering Elective		3
EEN 257	Material Science	3	Elective		3
EEN 200	Elements of Electronics I	3	Social Science from core		3
MTH 252	Calculus III	4	EEN 442	Engineering Economics	3
MTH 372	Differential Equations	3	OEN 460	Optical Communications I	3
MTH 373	Advance Vector Calculus	3	OEN 460L	Optical Communications Lab I	1
OEN 200	Geometric & Instrumentation Optics I	3	OEN 461	Optical Communications II	3
OEN 200L	Geometric & Instrumentation Optics Lab I	1	OEN 461L	Optical Communications Lab II	1
OEN 201	Geometric & Instrumentation Optics II	3	OEN 490	Senior Seminar	1
OEN 201L	Geometric & Instrumentation Optics Lab II	1	OEN 498	Senior Project (stage I)	3
PHY 320	Waves	3	OEN 499	Senior Project (stage II)	3
SCM 285	Principles of Speech	3	TOTAL		30 cr hrs
TOTAL		33 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
			General Education Requirements		40
			Major Requirements		74
			Electives		3
			TOTAL		127 cr hrs

DEPARTMENT OF MATHEMATICS**Michael Keeve, Department Head****(757) 823-8820**

The Mathematics Department assists students of all majors in mastering the quantitative skills necessary for success in their various disciplines. The Department prepares students majoring in mathematics for careers in the mathematical sciences from both a theoretical and an applied viewpoint, providing simultaneous preparation for those who wish to pursue graduate study. The Department's specific goals are summarized as follows:

1. To assist students of all majors in mastering basic mathematical skills, maximizing their problem-solving skills, and acquiring an appreciation for the critical role of quantitative thinking in modern society.
2. To aid students in developing the mathematical and computational skills necessary for use in various quantitative fields such as engineering and the natural sciences, business and economics, and the vocational areas.
3. To prepare students for various career opportunities as mathematicians in the applied sciences.
4. To prepare secondary level mathematics teachers.
5. To help students develop the necessary background for further study at the graduate level.

FACILITIES

The Department maintains a fully equipped Mathematics Resource Center for students enrolled in entry level mathematics courses. In addition, the Department shares with the Computer Science Department a Microcomputer Laboratory.

THE MATHEMATICS CURRICULUM**General Department Requirements**

All students at Norfolk State University are required to complete the General Education Core in order to qualify for the Bachelor's Degree. Additionally, the Department requires that:

1. All majors must complete the prerequisites or their equivalents prior to enrolling in more advanced mathematics courses.
2. Mathematics majors must earn at least a grade of "C" in all mathematics and computer science courses and in certain other courses specified in the curriculum.
3. Mathematics majors must pass a comprehensive examination covering the content of the core mathematics courses.

Programs of Study

The Department of Mathematics offers the B.S. Degree in Mathematics. The curriculum emphasizes two areas: Applied Mathematics and Mathematics with Teacher Certification, for those seeking to teach mathematics in the public schools.

Applied Mathematics : This option provides a strong preparation in mathematics with applications in engineering and the physical sciences. Graduates in this program are qualified as mathematical scientists or engineers for opportunities in industry, government, or graduate school.

Teacher Certification: This program is designed to prepare students to teach mathematics at the secondary school level. Students must apply for admission to teacher education, and admission requirements include passing the PRAXIS I Examination. The Master of Arts in Teaching (MAT) and the Master of Arts in Urban Education (MASAC) degrees are offered through the School of Education with concentrations in mathematics. The School of Education also offers programs of certification to persons with degrees in any of the previously described sequences.

The department also offers:

Dual Degree Program: This program allows students to complete a primary major in one discipline and then complete a second/dual degree in mathematics.

Minor Degree Program: This program allows students to minor in mathematics. Students whose major is in the applied sciences or engineering typically choose the Mathematics Minor.

APPLIED MATHEMATICS CURRICULUM

First Year			HIS 1XX	History Elective	3
BIO 100	Biological Science	3	HUM 210	Humanities	3
BIO 100L	Biological Science Lab	1	HUM 211	Humanities	3
CSC 169	Introduction to Computer Science	3	MTH 331	Algebraic Structures	3
CSC 170	Computer Programming	3	MTH 351	Probability & Statistics I	3
ENG 101	Communications Skills	3	MTH 352	Probability & Statistics II	3
ENG 102	Communications Skills	3	SOC 101	Introduction to Social Sciences	3
HED 100	Personal & Community Health	2	TOTAL		30 cr hrs
MTH 170	Technology in the Math Curriculum	2	Fourth Year		
MTH 184	Calculus I	4	Applied Electives		9
MTH 251	Calculus II	4	Cultural Elective		3
PED 100	Physical Education	1	General Elective		3
PHY 152	General Physics I	3			
PHY 152L	General Physics I Lab	1			
TOTAL		33 cr hrs	MTH 401	Numerical Analysis I	3
Second Year			MTH 473	Introduction to Real Analysis	3
Computer Programming Electives (200 Level)		6	MTH 496	Mathematics Seminar	2
Science Elective (200 Level or above)		3	MTH 497	Mathematics Seminar	2
ENG 203	Advanced Communication Skills or ENG 303	3	SCM 285	Principles of Speech	3
MTH 252	Calculus III	4	TOTAL		28 cr hrs
MTH 300	Linear Algebra	3	SUMMARY OF GRADUATION REQUIREMENTS		
MTH 372	Differential Equations	3	General Education Requirements		40
MTH 373	Advanced Vector Calculus	3	Major Requirements		57
PHY 153	General Physics II	3	Restricted Electives		17
PHY 153L	General Physics II Lab	1	General Electives		6
TOTAL		29 cr hrs	TOTAL		120 cr hrs
Third Year			APPLIED ELECTIVES:		
Applied Electives		6	Note: Students will take 15 hours of applied electives as indicated.		
General Elective		3	Third Year: MTH 35X, MTH 382, MTH 384, PHY 3XX (6 hours)		
			Fourth Year: MTH 402, MTH 474, MTH 484, MTH 492, PHY 3XX, PHY 4XX, EEN 3XX, EEN 4XX (9 hours)		

MATHEMATICS: TEACHER CERTIFICATION CURRICULUM

First Year			Second Year		
BIO 100/100L	Biological Science + Lab	4	ENG 203	Advanced Communication Skills	3
CSC 160	BASIC Programming	3	HIS 1XX	History Elective	3
CSC 2XX	Computer Science Elective	3	HUM 210/211	Humanities	6
ENG 101/102	Communication Skills	6	MTH 242	History of Mathematics	3
HED 100	Personal & Community Health	2	MTH 252	Calculus III	4
MTH 170	Technology in the Math Curriculum	2	MTH 300	Linear Algebra	3
MTH 184	Calculus I	4	MTH 372	Differential Equations	3
MTH 251	Calculus II	4	SED 201	Amer. Schools & Teaching Profession	3
PED 100	Physical Education	1	SOC 101	Introduction to Sociology	3
PHY 152/152L	General Physics I + Lab	4	TOTAL		31 cr hrs
TOTAL		33 cr hrs			

Third Year			MTH 496,497 Mathematics Seminar	4
Cultural Elective	3		SCM 285 Principles of Speech	3
General Elective	3		SED 420 Educational Technology	3
MTH 311 Modern Geometry	3		SED 486 Educ. Psychology & Behavior Mgt	3
MTH 351 Probability & Statistics	3		SED 499/499P Directed Teaching/ Seminar	12
MTH 331 Algebraic Structures	3		TOTAL	28 cr hrs
MTH 310 Discrete Mathematics	3		Summary of Graduation Requirements	
MTH 3XX Mathematics Elective	3		General Education Requirements	40
SED 380 Foundations of Math in Sec. Schools	3		Major Requirements	45
SED 384 Teaching of Math in Sec. Schools	3		Professional Education Requirements	18
SED 405 Reading in the Content Areas	3		Student Teaching/Field Experiences	12
TOTAL	30 cr hrs		Restricted Electives	4
			General Electives	3
Fourth Year			Total for Bachelor of Science	122 cr hrs
MTH 4XX Mathematics Elective	3			

Recommended Mathematics Electives:

MTH 323	Number Theory	MTH 401	Numerical Analysis
MTH 352	Prob. & Stat. II	MTH 431	Abstract Algebra
MTH 373	Adv Vector Calc.	MTH 473	Real Analysis
MTH 384	Math Modeling		

Note: Students must take and pass the PRAXIS I Exam prior to taking 300 & 400 level SED courses. Students who have not passed the PRAXIS I must enroll in SED 233, Critical Thinking and Assessment.

Teacher Licensure Endorsement

Students wishing to pursue a career in teaching must take the following steps:

1. Follow the curriculum for the liberal arts degree in Mathematics.
2. Use the elective hours for professional courses.
3. See the academic advisor in their major department.
4. See the academic advisor in the Department of Secondary Education and School Leadership in the Bozeman Education Building, Room 200.
5. Take the PRAXIS test and make a passing score. (See the School of Education PRAXIS coordinator, JBB 125.)
6. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours).

SED 201	American Schools and the Teaching Profession	SED 384	Teaching of Mathematics and Sciences in Secondary Schools
SED 233	Seminar in Assessment and Evaluation	SED 486	Educational Psychology and Behavior Management
SED 380	Foundations of Methods in Secondary Schools	SED 499	Directed Teaching and Seminar

MATHEMATICS: DUAL DEGREE CURRICULUM

Description:

This sequence permits students to complete a primary major in one discipline and then to complete requirements for a second, "dual", degree in mathematics. Students could graduate with both degrees simultaneously or, if necessary, graduate with the primary degree in one semester and complete the remaining dual degree requirements within one year. The requirements for the dual degree include 30 semester credit hours of mathematics as outlined below. Students must complete a minimum of 30 credit hours of courses above the total hours required for the primary degree. Thus the minimum requirement for the two degrees is 150 credit hours.

Curriculum Outline:

I. COMPLETE PRIMARY DEGREE REQUIREMENTS (Minimum of 120 Semester Hours)

II. COMPLETE DUAL MATHEMATICS REQUIREMENTS (30 Semester Hours)

MTH 184	Calculus I	4	MTH 351	Probability & Statistics I	3
MTH 251	Calculus II	4	MTH 372	Differential Equations	3
MTH 252	Calculus III	4	MTH 373	Advanced Vector Calculus	3
MTH 300	Linear Algebra	3		(or MTH 310, Discrete Mathematics)	

Mathematics Electives:

(Take 3 hrs from: MTH 310, 331, 352, 382, 384; and take 3 hrs from 401, 431, 451, 473, 484.)

III. COMPLETE 30-HOUR MINIMUM REQUIREMENT

Take additional hours, if needed, to assure the completion of a minimum of 30 semester hours above the total hour requirement for the primary degree.

Total for Dual Degree: A minimum of 150 Hours

MINOR IN MATHEMATICS

Minor Requirements (16 hours)

I. Core (10 credit hours)

Course	Credit Hours
MTH 252 Calculus III	4
MTH 351 Probability & Statistics I	3
MTH 372 Differential Equations	3

II. Electives (6 credit hours)

(Choose any 2 courses from MTH 3XX or MTH 4XX)

Some suggestions are:

Course	Credit Hours
MTH 300 Linear Algebra	3
MTH 331 Abstract Algebra	3
MTH 352 Probability & Statistics II	3
MTH 373 Advanced Vector Calculus	3
MTH 382 Introduction to Applied Math	3
MTH 384 Mathematical Modeling	3
MTH 401 Numerical Analysis I	3

DEPARTMENT OF NURSING

Bennie L. Marshall, Department Head
(757) 823-9013

The Department of Nursing offers Associate of Science and Bachelor of Science Degree Programs in Nursing, which are fully accredited by the National League for Nursing Accrediting Commission and approved by the Virginia Board of Nursing. The Associate Degree Program prepares students as technical nurses able to assist individuals with self-care deficits associated with common recurring health problems. This program has two tracks: one for individuals without prior nursing experience and one for qualified licensed practical nurses (LPNs). The traditional track can be completed in two academic years and a summer session. Qualified LPNs can complete the nursing courses within two semesters. The Bachelor of Science (BSN) degree is designed as an upper-level program for individuals who have associate degrees or diplomas in nursing, the second degree track is for individuals who possess a non-nursing baccalaureate degree, or for qualified licensed practical nurses desiring the BSN. Graduates are prepared as generalists in the practice of professional nursing. Upon graduation from the pre-licensure programs, individuals are eligible to take the National Council Licensing Examination (NCLEX-RN) for Registered Nurses.

The Virginia Board of Nursing has the authority to deny, revoke, or suspend a license issued, or to otherwise discipline a licensee upon proof that the licensee has violated any of the provisions of a specified Code of Virginia. Individuals with criminal records may be denied licensure and should contact the Virginia Board of Nursing for further information.

ASSOCIATE DEGREE PROGRAM**Admission Criteria**

Admission to the Associate Degree Nursing sequence is competitive. Recommendations to the Departmental Admissions Committee are based upon completion of the following minimal criteria:

1. Admission to the Department of Nursing is an independent process that begins after official acceptance to the University. Acceptance to the University is complete only when the student has received an official letter of acceptance from the University's Admissions Office. Persons admitted to the University no later than December 1st will be given priority admission; the final deadline for admission for the Fall semester is March 1.
2. Two units of Mathematics, including one unit of algebra and one unit of general mathematics, and two units of science, including one unit of biology and one unit of chemistry at the high school level or higher. A minimum grade of "C" is required in each course. Biology and chemistry courses must be current within ten years.

A copy of high school and/or college transcript(s) must be mailed with application to the Department of Nursing.

Persons applying who received a GED Certificate must provide proof of having obtained a "C" or better in Biology, Chemistry, and Algebra at the high school or college level. Evidence must be provided prior to admission to the nursing sequence.

3. Maintenance of a cumulative grade point average of "C" (2.50) or better in high school or college work. The cumulative average for transfer students is determined by averaging all previous college work, and is inclusive of the most recent grades.
4. Mathematics and English classes will depend on SAT/ACT scores, high school GPAs and the Math placement test.
5. Pre-nursing students are required to obtain a recommendation from their pre-nursing advisor relative to their readiness for admission to the nursing sequence.

Students who have not met the criteria listed above, who have repeated support science courses, or who have had multiple withdrawals from support science courses will not be recommended to the nursing sequence.

6. Other requirements include: CPR (cardio-pulmonary resuscitation) certification, liability insurance, Hepatitis B series, Varicella Titer or vaccine, PPD, and criminal background checks. If PPD is positive, then it must be followed with an annual chest x-ray.

Associate Degree Program Policies

Specific policies related to grading, promotion, and retention in the program are delineated in the Associate Degree Student Handbook, published annually and distributed when students begin their associate degree nursing courses.

Criteria for Readmission

Readmission is competitive and is granted on a space available basis. A nursing student may not continue in the program if he/she fails a total of two nursing courses or fails the same nursing course twice. The student must wait two (2) years before reapplying to the Nursing Sequence. The final decision to grant readmission to the nursing program rests with the Department Chairperson.

ADVANCED PLACEMENT FOR THE ASSOCIATE DEGREE PROGRAM

Advanced placement examinations are offered for selected courses based on the applicant's nursing qualifications. To qualify to take the examinations, the applicant must be admitted to the Department of Nursing. Nursing qualifications refer to persons falling into the following categories:

1. L.P.N.'s/L.V.N's;
2. Students who have completed two years of baccalaureate nursing education;
3. Students who have completed one year of diploma or associate degree nursing education.

Procedure for Advanced Placement and Readmission

1. Applicants seeking advanced placement and readmission must first meet the admission requirements listed earlier in the Catalog.
2. Applicants seeking advanced placement or readmission to Nursing 150 and 160 will be required to do the following satisfactorily:
 - a. Perform an on-campus laboratory skills test for advanced placement or for readmission, which will consist of two (2) technical skills;
 - b. Calculate and administer correctly parenteral injections (I.M. and S.Q) to individuals throughout the life span.
3. Failure to complete the above will result in said applicant being denied advanced placement or readmittance.
4. To receive advanced placement in the curriculum, applicants must validate previous knowledge through one or a combination of the following mechanisms:
 - a. satisfactory completion of AD or BS nursing course(s) from an NLN-accredited institution within the past 5 years;
 - b. satisfactory completion of NLN Mobility I examination(s);
 - c. satisfactory completion of the NUR 153 advanced placement examination.

BACHELOR'S DEGREE PROGRAM

BACCALAUREATE DEGREE PROGRAM POLICIES

Specific policies related to grading, promotion, and retention in the program are delineated in the Baccalaureate Degree Student Handbook, published annually and distributed when students begin their baccalaureate degree nursing courses.

UPPER-LEVEL BSN PROGRAM

Admission to the upper-level B.S. Program in Nursing is competitive and open to all qualified applicants. The minimal admission requirements are:

1. Minimum grade point average of 2.0 in college work.
2. A grade of "C" or better in all previous nursing and science courses.
3. Licensure as a registered nurse in the Commonwealth of Virginia.
4. Receipt of official transcript(s) from previously attended college(s) or School of Nursing.
5. Completion of prerequisite courses or credit by examination (CLEP, ACT-PEP).
6. Evidence of a physical examination performed within the last 12 months.
7. Evidence of current liability insurance.
8. Current CPR Certification (BLS-C).
9. Criminal background checks.

PREREQUISITE COURSES

Mathematics (Math 105)	3	Introductory Sociology	3
Computer Concepts	3	Human Anatomy & Physiology	8
English Composition	6	Microbiology	4
General Psychology	3	Lower-Level Nursing Courses	30
Human Growth & Development or Child P	3	TOTAL	63 cr hrs

SECOND DEGREE TRACK BACCALAUREATE PROGRAM**Admission Criteria**

Admission to the B.S.N. Program - Second-degree pathway for college graduates is competitive and open to all qualified applicants. The minimal admission requirements are as follows:

1. Completion of undergraduate or higher degree.
2. Admission to the University by December 1 for summer session, and June 1, for January session.
3. A cumulative grade point average of 2.5 in the applicant's prior degree and 2.0 or "C" in the following courses: Anatomy and Physiology, biological sciences, and Chemistry.
4. Receipt of official transcript(s) from previously attended college(s).
5. Completion of prerequisite courses or credit by examination (CLEP, ACT-PEP).
6. Evidence of a physical examination performed within the last 12 months.
7. Evidence of current liability insurance.
8. Current CPR certification.
9. Criminal background checks.

PREREQUISITE COURSES

Communication Skills	9	Chemistry	4	Statistics	3
Foreign Language	3	Computer Concepts	3	SUBTOTAL FROM GEN. ED.:	51-55
Humanities	3	Social Sciences/		TRANS MAJOR CREDITS	30
African-American Perspectives	3	General Psychology	3		
Natural Sciences		Human Growth & Development or		SUBTOTAL FROM GEN. ED.	
Anatomy and Physiology	4-8	Child Psychology	3	AND MAJOR:	81-85
Biological Sciences	4	Sociology	3		
Mathematics	3	History	3		

LPN - BSN: AN ACCELERATED CURRICULAR TRACK FOR L.P.N.'s**Admission Criteria**

Admission into the LPN/BSN track is competitive and open to qualified students. The minimal admission criteria are:

1. Completion of 73 semester hours in prerequisite courses or credit by examination (CLEP, ACT-PEP);
2. Admission to the University by December 1 (priority admission) with deadline of March 1 for summer session, and June 1, for January session.
3. A cumulative grade point average of 2.5, and 2.0 in the following courses: Anatomy and Physiology, Biological Science, Chemistry and Pathophysiology;
4. Receipt of official transcript(s) from previously attended college(s) and practical nursing program;
5. Evidence of a physical examination performed within the last 12 months;
6. Evidence of current liability insurance;
7. Current CPR certification;
8. Current license to practice as a licensed practical (vocational) nurse in the Commonwealth of Virginia;
9. Criminal background checks

PREREQUISITE COURSES

Communication Skills	9	Social Sciences	
Foreign Language/Humanities	3	General Psychology	3
Humanities	3	Human Growth & Development or	
African-American Perspectives	3	Child Psychology	3
		Sociology	3
Natural Sciences		History	3
Anatomy & Physiology	8	American Public Policy or Economics	3
Biological Sciences	4	Statistics	3
Mathematics	3		
Chemistry	4	Electives	9
Computer Concepts	3	Restricted: must be from Nursing	3
Pathophysiology	3	Free	6
		TOTAL	73 cr hrs

NURSING ASSOCIATE DEGREE CURRICULUM

First Year			Second Year		
1st Semester			1st Semester		
FRS 100	Freshman Seminar	0	BIO 163	Microbiology for Health Sciences	4
BIO 165	Human Anatomy & Physiology	4	NUR 275	Clinical Nursing II	9
ENG 101	Communication Skills I	3	SOC 110	Introduction to Sociology	3
NUR 150	Fundamental Concepts of Nursing*	4	TOTAL		16 cr hrs
NUR 150L	Fundamental Concepts of Nursing Lab	3			
NUR 153	Fundamental Pharmacological Skills	3			
TOTAL		17 cr hrs	2nd Semester		
			CSC 150	Computer Literacy	3
2nd Semester			NUR 272	Contemporary Trends in Nursing Practice	1
BIO 166	Human Anatomy & Physiology	4	NUR 285	Clinical Nursing III	4
NUR 160	Clinical Nursing I**	4	NUR 285L	Clinical Nursing III Lab	5
NUR 160L	Clinical Nursing I Lab	5	NUR 287	Seminar	2
PSY 210	General Psychology	3	TOTAL		15 cr hrs
TOTAL		16 cr hrs			
			* NUR 150 satisfies requirements for HED 100 and PED 100		
			** NUR 160 satisfies requirements for humanities		
Summer Session			SUMMARY OF GRADUATION REQUIREMENTS		
ENG 102	Communication Skills II	3	General Education Requirements		30
PSY 228	Human Growth & Development		Major Requirements		40
or PSY 220		3	TOTAL		70 cr hrs
TOTAL		6 cr hrs			

LPN TO ADN: AN ASSOCIATE DEGREE TRACK FOR LPNs - Option I Curriculum Track

(Three Semesters & One Summer Session - 16 Months)

Advanced Placement 16 cr hrs

Spring Semester					
FRS 100	Freshman Seminar	0	NUR 275	Clinical Nursing II	4
BIO 165	Human Anatomy & Physiology	4	NUR 275L	Clinical Nursing II Lab	5
ENG 101	Communication Skills I	3	PSY 215	Human Growth & Development or PSY 220	3
PSY 210	General Psychology	3	TOTAL		18 cr hrs
SOC 110	Introduction to Sociology	3			
TOTAL		13 cr hrs	Spring Semester		
			BIO 163	Microbiology for Health Sciences	4
Summer Session			NUR 272	Contemporary Trends	1
BIO 166	Human Anatomy & Physiology	4	NUR 285	Clinical Nursing III	4
NUR 199	LPN-RN Bridge	3	NUR 285L	Clinical Nursing III Lab	5
TOTAL		7 cr hrs	NUR 287	Seminar	2
			TOTAL		16 cr hrs
Fall Semester			SUMMARY OF GRADUATION REQUIREMENTS		
CSC 150	Computer Literacy	3	General Education Requirements		30
ENG 102	Communication Skills II	3	Major Requirements		40
			TOTAL		70 cr hrs

LPN TO ADN: AN ASSOCIATE DEGREE TRACK FOR LPNs - Option II Curriculum Track

(Four Semesters 24 Months)

Advanced Placement 16 cr hrs

Fall Semester			Fall Semester		
FRS 100	Freshman Seminar	0	BIO 163	Microbiology for the Health Sciences	4
BIO 165	Human Anatomy & Physiology	4	SOC 110	Introductory to Sociology	3
CSC 150	Computer Literacy	3	NUR 275	Clinical Nursing II	4
ENG 101	Communication Skills I	3	NUR 275L	Clinical Nursing II Lab	5
PSY 210	General Psychology	3	TOTAL		16 cr hrs
TOTAL		13 cr hrs	Spring Semester		
			NUR 272	Contemporary Trends	1
Spring Semester			NUR 285	Clinical Nursing III	4
BIO 166	Human Anatomy & Physiology	4	NUR 285L	Clinical Nursing III Lab	5
ENG 102	Communication Skills II	3	NUR 287	Seminar	2
PSY 215	Human Growth and Development or PSY 220	3	TOTAL		12 cr hrs
NUR 199	LPN-RN Bridge	3			
TOTAL		13 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
			General Education Requirements		30
			Major Requirements		40
			TOTAL		70 cr hrs

NURSING UPPER LEVEL BACCALAUREATE PROGRAM**Junior Year****First Semester**

Foreign Language/Humanities	3
BIO 320 Pathophysiology	3
CHM 100 Chemistry: Man and Environment	3
CHM 100L Chemistry Lab	1
PSY 270 Statistics or SOC 355	3
SCM 285 Principles of Speech	3
TOTAL	16 cr hrs

Second Semester

African-American Perspective	3
Elective (300-400 Level)	3
Humanities Elective	3
ECN 211 Principles of Economics or POS 230	3
HIS 100 History of Civilization or HIS 101, 102, or 103	3
TOTAL	15 cr hrs

NUR 418 Conceptual Models for Nursing	3
NUR 454 Group Interventions	3
NUR 461 Nursing Research Dimensions	3
TOTAL	15 cr hrs

Second Semester

NUR 435 Providing Complex Nursing Systems for Families & Groups	3
NUR 435L Providing Complex Nursing Systems for Families & Groups Lab	5
NUR 462 Nursing Leadership & Management	3
NUR 470 Seminar on Professional Development	3
NUR 499 Nursing Elective	2
TOTAL	16 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirement	62
Major Requirements	63
TOTAL	125 cr hrs

Senior Year**First Semester**

NUR 321 Multicultural/Bio Ethics	3
NUR 415 Health Assessment*	3

*RNs may take NUR 415 prior to being admitted to the nursing program. If the RN matriculates in the program, the credits will be applied to the degree.

NURSING SECOND-DEGREE BACCALAUREATE PROGRAM**Summer Session**

NUR 415 Health Assessment	3
NUR 418 Conceptual Models for Nursing	3
NUR 362L Essentials of Nursing Lab*	2
NUR 362 Essentials of Nursing*	2
TOTAL	10 cr hrs

Fall Semester

NUR 321 Multiculturalism/Bio Ethics	3
NUR 419 Providing Nursing Systems for Individuals and Small Groups*	5
NUR 419L Providing Nursing Systems for Individuals and Small Groups Lab*	5
NUR 444 Planning Nursing Systems for Adults	3
TOTAL	16 cr hrs

Spring Semester

NUR 429 Providing Nursing Systems for Individuals and Large Groups*	3
NUR 429L Providing Nursing Systems for Individuals and Large Groups Lab*	5
NUR 454 Group Interventions	3
NUR 461 Nursing Research Dimensions	3
NUR 462 Nursing Leadership and Management	3
TOTAL	17 cr hrs

Summer Session

NUR 470 Seminar on Professional Development	3
NUR 475 Nursing Process Seminar*	3
TOTAL	6
TOTAL SEMESTER HOURS	49 cr hrs
TOTAL DEGREE HOURS	134 cr hrs

SECOND-DEGREE BACCALAUREATE PROGRAM EVENING AND WEEKEND**Spring Semester**

NUR 418 Conceptual Models for Nursing	3
NUR 415 Health Assessment	3
NUR 362 Nursing Essentials*	2
NUR 362L Nursing Essentials Lab*	2
TOTAL	10 cr hrs

Summer Semester

NUR 419E Providing Nursing Systems for Individuals and Small Groups*	2
NUR 419G Providing Nursing Systems for Individuals and Small Groups Lab*	2
NUR 321 Multiculturalism/Bio Ethics	3
TOTAL	7 cr hrs

Fall Semester

NUR 419F Providing Nursing Systems for Individuals and Small Groups*	3
NUR 419H Providing Nursing Systems for Individuals and Small Groups Lab*	3
NUR 444 Planning Nursing Systems for Adults*	3
NUR 462 Nursing Research Dimension	3
TOTAL	12 cr hrs

Spring Semester

NUR 429A Providing Nursing Systems for Individuals and Large Groups*	2
NUR 429C Providing Nursing Systems for Individuals and Large Groups Lab*	3
NUR 454 Group Interventions	3
NUR 462 Nursing Leadership Management	3
TOTAL	11 cr hrs

Summer Semester

NUR 429B Providing Nursing Systems for Individuals and Large Groups*	1
NUR 429D Providing Nursing Systems for Individuals and Large Groups Lab*	2
NUR 470 Seminar on Professional Development	3
TOTAL	6 cr hrs

Post Summer

NUR 475 Nursing Process Seminar*	3
TOTAL SEMESTER HOURS	49 cr hrs
TOTAL HOURS FOR DEGREE	120 cr hrs

LPN - BSN CURRICULUM**Summer Session**

NUR 418	Conceptual Models for Nursing	3
NUR 415	Health Assessment	3
NUR 362L	Essentials of Nursing Laboratory*	2
NUR 362	Essentials of Nursing Skills and Related Concepts*	2
TOTAL		10 cr hrs

Fall Semester

NUR 321	Multiculturalism/Bio Ethics	3
NUR 419	Providing Nursing Systems for Individuals and Small Groups*	5
NUR 419	Providing Nursing Systems for Individuals and Small Groups Lab*	5
NUR 444	Planning Nursing Systems for Adults*	3
TOTAL		16 cr hrs

Spring Semester

NUR 429	Providing Nursing Systems for Individuals and Large Groups*	3
NUR 429L	Providing Nursing Systems for Individuals and Large Groups Lab*	5
NUR 454	Group Inventions	3
NUR 461	Research Dimensions in Nursing	3
NUR 462	Nursing Leadership and Management	3
TOTAL		17 cr hrs

Summer Session

NUR 475	Nursing Process Seminar*	3
NUR 470	Seminar in Professional Development	3
TOTAL		6 cr hrs

TOTAL SEMESTER HOURS	49 cr hrs
TOTAL HOURS FOR DEGREE	122 cr hrs

*Courses are to be taken only by students in the second-degree program. All other courses are taken with students enrolled in the upper-level BSN program.

DEPARTMENT OF PHYSICS

Milton W. Ferguson, Department Head
(757) 823-8909

The Department of Physics provides the instruction necessary for the understanding of physics and earth science for students in this department and for other departments of the University. The Department also provides the research basis for students wishing to contribute to knowledge in the areas mentioned.

The Department offers the B.S. degree in Physics. Its graduates may enter occupations in industry, government, and education. Many graduates continue their education in graduate or professional schools. Students in other departments may elect to minor in either physics or astronomy.

The Minor in Astronomy is an ideal complementary minor primarily for students majoring in mathematics, engineering or the sciences. All science students are invited to complete the astronomy minor. Students majoring in Biology, Chemistry, Computer Science, Mathematics and Physics are the main target for this minor.

The Department also offers graduate study courses leading to the Master of Science degree in Materials Science. An undergraduate student may also elect to pursue a five-year dual degree: B.S. in Physics and M.S. in Materials Science.

The objectives of the Department are:

1. To develop in students an appreciation of the scientific method and its use in the solution of physical problems.
2. To develop the basic training in physics designed to meet the needs of students in pre-professional fields and professional fields.
3. To develop in students those qualities and abilities necessary for success in industry and advanced degree institutions.
4. To offer sufficient specialized training beyond the generally recognized basic courses to enable a graduate with a bachelor's degree to enter directly into a professional career.

PHYSICS CURRICULUM**First Year**

FRS 100	Freshmen Seminar	0
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
HIS 10X	Social Science/History Electives	3
MTH 184	Calculus I	4
MTH 251	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 160	University Physics I	4
PHY 160L	University Physics Lab I	1
PHY 161	University Physics II	4
PHY 161L	University Physics Lab II	1
TOTAL		30 cr hrs

Second Year

	Cultural Elective	3
	Humanities Elective from core	3
	Elective (unrestricted)	3
CSC 169	Introduction to Computer Science	3
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
PHY 241	Physics Seminar	1
PHY 260	University Physics III	4
PHY 345	Mathematical Methods for Physical Science I	3
PHY 350	Modern Physics	3
PHY 351	Concepts in Modern Physics	1
TOTAL		31 cr hrs

Third Year			Fourth Year		
CHM 221	General Chemistry I	3	Elective (Unrestricted)		10
CHM 221L	General Chemistry Lab I	1	Humanities Elective from core		3
CHM 222	General Chemistry II	3	PHY 356	Thermodynamics	3
CHM 222L	General Chemistry Lab II	1	PHY 468	Optics	3
PHY 365	Mechanics I	3	PHY 475	Electricity & Magnetism II	3
PHY 366	Mechanics II	3	PHY 480	Quantum Mechanics II	3
PHY 375	Electricity & Magnetism I	3	PHY 498	Senior Project I	1
PHY 380	Quantum Mechanics I	3	PHY 499	Senior Project II	2
PHY 399	Advanced Lab	2	TOTAL		28 cr hrs
PHY 445	Mathematical Methods for Physical Sciences II	3	SUMMARY OF GRADUATION REQUIREMENTS		
SCM 285	Principles of Speech	3	General Education Requirements		40
SOC 101	Social Science	3	Major Requirements		73
TOTAL		31 cr hrs	Electives		7
			TOTAL		120 cr hrs

Teacher Licensure Endorsement

Students wishing to pursue a career in teaching must take the following steps:

1. Follow the curriculum for the B.S. degree in Physics.
2. Use the elective hours for professional courses.
3. See the academic advisor in their major department.
4. See the academic advisor in the Department of Secondary Education and School Leadership in the Bozeman Education Building, Room 200.
5. Take the PRAXIS test and make a passing score. (See the School of Education PRAXIS coordinator, JBB 125.)
6. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours).

SED 201	American Schools and the Teaching Profession	SED 486	Educational Psychology and Behavior
SED 233	Seminar in Assessment and Evaluation		Management
SED 380	Foundations of Methods in Secondary Schools	SED 488	School/Community Relations
SED 420	Educational Technology	SED 499	Directed Teaching and Seminar

FIVE-YEAR DUAL DEGREE: B.S. PHYSICS/MS. MATERIALS SCIENCE CURRICULUM

First Year			Third Year		
FRS 100	Freshmen Seminar	0	Cultural Elective**		3
CSC 169	Intro. To Computer Science	3	Elective (unrestricted)		1
ENG 101	Communication Skills I	3	Restricted Math Elective*		6
ENG 102	Communication Skills II	3	PHY 365	Mechanics I	3
HED 100	Personal and Community Health	3	PHY 375	Electricity and Magnetism I	3
HIS 10X	Social Science/History Elective	3	PHY 356	Thermodynamics	3
MTH 184	Calculus I	3	PHY 366	Mechanics II	3
MTH 251	Calculus II	3	PHY 380	Quantum Mechanics I	3
PED 100	Fundamentals of Fitness for Life	1	PHY 399	Advanced Laboratory	2
PHY 160	University Physics I	4	Fourth Year		
PHY 160L	University Physics I Lab	1	Cultural Elective from the Core***		3
PHY 161	University Physics II	4	Unrestricted Elective		3
PHY 161L	University Physics II Lab	1	Humanities from Core**		3
TOTAL		32 cr hrs	Restricted Chemistry Elective****		3
Second Year			CHM 545	Math Methods	3
CHM 221	General Chemistry I	3	SCM 285	Principles of Speech	3
CHM 221L	General Chemistry I Lab	1	SOC 101	Social Science	3
CHM 222	General Chemistry II	3	TOTAL		33 cr hrs
CHM 222L	General Chemistry II Lab	1	Summer		
EEN 309	Engineering Electronics	3	PHY 397	Research (to fulfill elective requirement)	3
ENG 203	Advanced Communication Skills	3	TOTAL		3
ENG 383	African-American Literature	3	Fourth Year		
MTH 252	Calculus III	3	CHM 545	Math Methods	3
MTH 372	Differential Equations	3	MATS 530	Materials Science	3
PHY 241	Physics Seminar	1	MATS 533	Polymers and Composites	3
PHY 320	Waves	3	HUM 210	Humanities or HUM 211	3
PHY 350	Modern Physics	3			
PHY 351	Experimental Concepts in Modern Physics	2			
TOTAL		32 cr hrs			

PHY 468	Optics	3	MATS 797	Research	3
PHY 475	Electricity and Magnetism II	3	MATS 710	Special Topics	3
PHY 480	Quantum Mechanics II	3	MATS 799	Thesis Preparation	3
PHY 497	Research (to fill elective requirement)	3	PHY 653	Solid State Physics	3
PHY 498	Senior Project I	1	PHY 675	Electricity/Magnetism	3
PHY 499	Senior Project II	2	TOTAL		27 cr hrs
PHY 580	Quantum Mechanics for Mat. Sci	3	GRAND TOTAL		160 cr hrs
TOTAL		30 cr hrs			

Summer

MATS 697	Research	3
TOTAL		3 cr hrs

*Restricted Math Elective to be selected from the following:
MTH 255, 471, 472, 474, 481, 482, 484, or CHM 345

Fifth Year

CHM 573	Advanced Inorganic Chemistry	3
MATS 575	Instrumentation	3
CHM 663	Atomic and Molecular Spectroscopy	3
CHPH 600	Seminar	3

**Cultural Elective to be selected from the following: FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371, HIS 377, POS 315, PSY 340, or SOC 237.		
CHM663	Atomic and Molecular Spectroscopy	3
PHY 653	Solid State Physics	3
PHY 675	Electricity and Magnetism	3
MATS 610	Special Topics I	3
MATS 710	Special Topics II	3
GRAND TOTAL		153 cr hrs

MINOR IN PHYSICS**CORE REQUIREMENT**

PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
TOTAL		9 cr hrs

UPPER DIVISION COURSES:

PHY 350	Modern Physics	3
TOTAL		3 cr hrs

And any two of the following:

PHY 365	Physical Mechanics I	3
PHY 366	Physical Mechanics II	3
PHY 375	Electricity and Magnetisms I	3
PHY 475	Electricity and Magnetisms II	3
PHY 380	Quantum Mechanics I	3
PHY 480	Quantum Mechanics II	3
TOTAL		18 cr hrs

MINOR IN ASTRONOMY

The Minor in Astronomy is an ideal complementary minor primarily for students in two general categories.

- Students currently majoring in engineering or the sciences.
- Students who have taken the introductory Math and Physics courses required of engineering and science majors, but have since changed their majors.

While all science students are invited to complete the astronomy minor, students who are not required to complete an introductory sequence of Physics courses as part of their major, may find scheduling more difficult. Students majoring in Biology, Chemistry, Computer Science, Mathematics and Physics are the main target for this minor.

Requires a minimum number of 18 credits

PHY 152	General Physics I	3
PHY 153	General Physics II	3
AST 201	Astronomy	3
TOTAL		9 cr hrs

And at least three from the following courses:

AST 301	Methods of Observational Astronomy	3
AST 302	Astrobiology	3
AST 303	Intro. To Astrophysics	3
AST 401	Stellar Astrophysics	3
TOTAL		12 cr hrs

DEPARTMENT OF TECHNOLOGY

Carray Banks, Jr., Department Head
(757) 823-8712

The Department offers degrees in the following program areas: B.S. degree in Building Construction Technology, Design Technology, Computer Technology, Electronics Technology and Technology Education, A.S. Degree in Architectural Drafting, and a certificate in Industrial Management.

The mission of the Department of Technology is to provide programs and services to prepare graduates for a variety of responsible technological and/or technical management positions in industry, business, government, and educational enterprises. The Department commits to the responsibility of preparing students in quality industrial technology programs for careers in architectural drafting, CAD operators, estimators, planning officers, computer integrated design technology, manufacturing technology, industrial management technology, computer technology and electronic technology. The Department also prepares technology education teachers in accordance with VA licensure requirements

ARCHITECTURAL DRAFTING

The Architectural Drafting Curriculum is designed to provide students with a technical education that will prepare them to work as semi-professionals immediately upon completion of the program. Graduates may fill such typical positions as: Architectural Draftsman, Mechanical Draftsman, Civil Draftsman, Technical Representative, Technical Salesperson, or CAD Operators.

ARCHITECTURAL DRAFTING CURRICULUM A. S. DEGREE

First Year			BCT 262	Methods of Building Construction	3
FRS 100	Freshman Seminar	0	BCT 263	Fundamentals of Surveying	3
BCT 162	Materials of Construction	3	BCT 264	Intermediate Surveying	3
CSC 150	Computer Literacy	3	BCT 265	Architectural Details	3
ENG 101	Communication Skills I	3	BCT 266	Architectural Drafting	3
ENG 102	Communications Skills II	3	IMT 205	Industrial Safety/Management	3
HED 100	Personal & Community Health	2	IMT 244	Indust. Specifications & Tech Documentatior	3
HIS 100	History or Civilization	3	PHY 152	General Physics	3
BCT 170	Fund of Masonry	3	PHY 152L	General Physics Lab	1
MTH 151	College Algebra	3	TOTAL		31 cr hrs
MTH 153	College Algebra/Trigonometry	3	SUMMARY OF GRADUATION REQUIREMENTS		
PED 100	Fundamentals of Fitness for Life	1	General Education Requirements		22
TMD 150	Engineering Graphics	3	Major Requirements		24
TMD 151	Introduction to CAD	3	Other Requirements		18
TOTAL		33 cr hrs	TOTAL		64 cr hrs
Second Year			CED 350, 450 Cooperative Education (Optional 3 cr. hrs. each)		
Elective		3			
BCT 260	Building Codes & Specification	3			

BUILDING CONSTRUCTION TECHNOLOGY

The Building Construction Technology program is designed to provide men and women with current technical/management competencies needed for technical and supervisory roles in residential, industrial, civil, and commercial construction industries.

BUILDING CONSTRUCTION TECHNOLOGY CURRICULUM B.S. DEGREE

First Year			Third Year		
FRS 100	Freshman Seminar	0	BCT 363	Methods of Building Construction II	3
BCT 162	Materials of Construction	3	BCT 364	Steel Structures	3
CSC 150	Computer Literacy	3	BCT 370	Cost Estimates	3
ENG 101	Communication Skills I	3	CHM 119	General Chemistry	3
ENG 102	Communication Skills II	3	CHM 119L	General Chemistry Lab	1
HED 100	Personal and Community Health	2	HIS 335	African-American History or Cultural Elective	3
HIS 100	History of Civilization	3	HUM 210	Humanities	3
IMT 205	Industry Safety & Management	3	IMT 244	Indust. Specifications & Tech Documentation	3
MTH 151	College Algebra	3	MTH 184	Calculus	4
MTH 153	College Algebra & Trigonometry	3	TMD 151	Introduction to CAD	3
PED 100	Fundamentals of Fitness for Life	1	TMD 345	Mechanics II: Study of Materials	3
SOC 101	Introduction to Social Science	3	TMD345L	Mechanics Lab: Property of Materials	1
TMD 150	Engineering Graphics	3	TOTAL		33 cr hrs
TOTAL		33 cr hrs			
Second Year			Fourth Year		
Elective		3	BCT 376	Soil Mechanics	3
BCT 260	Building Codes & Specifications	3	Humanities Electives		3
BCT 262	Methods of Building Construction I	3	BCT 462	Problem Analysis and Planning	3
BCT 263	Fundamentals of Surveying	3	BCT 464	Organization and Supervision of Construction	3
BCT 264	Intermediate Surveying	3	BCT 466	Structural Planning and Design	3
BCT 265	Architectural Details	3	CIT 280	Computer Programming or CSC 170	3
BCT 266	Architectural Drafting	3	IMT 420	Labor and Industrial Relations	3
FNC 281	Legal Environment of Business	3	SCM 285	Principles of Speech	3
PHY 152	General Physics	3	TOTAL		24 cr hrs
PHY 152L	General Physics Lab	1	SUMMARY OF GRADUATION REQUIREMENTS		
TMD 225	Mechanics I: Statistics	3	General Education Requirements		40
ENG 299	Writing Competency Exam	0	Major Requirements		45
TOTAL		31 cr hrs	Other Requirements		36
CED 350, 450, Cooperative Education (Optional 3 cr. hrs. each)			TOTAL		121 cr hrs

ELECTRONIC TECHNOLOGY

The Electronic Technology program is designed to provide men and women with technical-management competencies needed for professional positions in scientific, technical, and management applications of instrumentation, industrial control, and communications as applied to the industrial setting.

ELECTRONIC TECHNOLOGY CURRICULUM B.S. DEGREE

First Year			Second Year		
FRS 100	Freshman Seminar	0	CSC 150	Computer Literacy	3
ELT 111	Basic Electronics	3	ELT 211	Electronic Instruments/Measurements	3
ELT 111L	Basic Electronics Lab	1	ELT 213	Semiconductor Electronics	3
ELT 113	Intermediate Electronics	3	ELT 213L	Semiconductor Elect. Lab	1
ELT 113L	Intermediate Electronics Lab	1	ELT 215	Circuit Analysis	3
ENG 101	Communication Skills I	3	ITM 147	Introduction to Manufacturing Processes	3
ENG 102	Communication Skills II	3	IMT 205	Industrial Safety & Management	3
HED 100	Personal and Community Health	2	MTH 184	Calculus I	4
HIS 100	History of Civilization	3	PHY 152	General Physics	3
MTH 151	College Algebra	3	PHY 153	General Physics	3
MTH 153	College Algebra & Trig.	3	PHY 152L	General Physics Lab	1
PED 100	Fundamentals of Fitness for Life	1	ENG 299	Writing Competency Exam	0
TMD 150	Engineering Graphics	3	TOTAL		30 cr hrs
TOTAL		29 cr hrs	CED 350, 450, Cooperative Education (Optional 3 cr. hrs. each)		

Third Year			Fourth Year		
Elective		3	Elective		3
CHM 119	General Chemistry for Non-Science Majors	3	Humanities Elective		3
CHM 120	General Chemistry for Non-Science Majors	3	ELT 412	Electronic Communication	3
CHM 119L	General Chemistry Lab	1	ELT 413	Microwaves	3
CIT 280	Computer Programming or CSC 170	3	ELT 415	Electronic Design & Application	3
ELT 310	Digital Electronics	3	ELT 415L	Electronic Design & Application Lab	1
ELT 310L	Digital Electronics Lab	1	HIS 335	African American History or other Cultural Elective.	3
ELT 313	Industrial Electronics	3	IMT 410	First-Line Supervision & Foremanship	3
ELT 313L	Industrial Electronics Lab	1	IMT 445	Statistical Quality Control	3
HUM 210	Humanities	3	SCM 285	Principles of Speech	3
IMT 244	Indust. Specifications & Tech Documentation	3	TOTAL		28 cr hrs
SOC 101	Introduction to Social Science	3	SUMMARY OF GRADUATION REQUIREMENTS		
TMD 151	Introduction to CAD	3	General Education Requirements		40
TOTAL		33 cr hrs	Major Requirements		36
			Other Requirements		44
			TOTAL		120 cr hrs

TIDEWATER COMMUNITY COLLEGE AND NORFOLK STATE UNIVERSITY ARTICULATION AGREEMENT

ELECTRONIC TECHNOLOGY CURRICULUM - LEADING TO THE BACHELOR OF SCIENCE DEGREE

Third Year					
Humanities Elective		3	CHM 120	General Chemistry for Non Science Majors	3
Social Science Elective		3	CHM 120L	General Chemistry Lab	1
CIT 280	Computer Programming or CSC 170	3	ELT 413	Microwaves	3
ELT 211	Electronic Instruments and Measurements	3	ELT 415	Electronic Design & Application	3
ELT 313	Industrial Electronics	3	ELT 415L	Electronic Design & Application Lab	1
ELT 313L	Industrial Electronics Lab	1	IMT 410	First -Line Supervision & Foremanship	3
HIS 335	African American History	3	IMT 445	Statistical Quality Control	3
IMT 205	Industrial Safety & Management	3	SCM 285	Principles of Speech	3
TMD 150	Engineering Graphics	3	SOC 101	Introduction to Social Science	3
TMD 151	Introduction to CAD	3	TOTAL		32 cr hrs
TOTAL		28 cr hrs	SUMMARY OF GRADUATION REQUIREMENTS		
			General Education Requirements		18
			Major Requirements		14
			Other Requirements		28
			TOTAL		60 cr hrs
Fourth Year					
Electives		3			
Humanities Elective		3			
CHM 119	General Chemistry for Non Science Majors	3			

COMPUTER TECHNOLOGY

The Computer Technology program is designed to provide students with technical management oriented competencies related to electronics and computer hardware-software applications and aspects of industrial management and human relations to cope effectively with industrial problems.

**COMPUTER TECHNOLOGY CURRICULUM
B.S. DEGREE**

First Year			Second Year		
FRS 100	Freshman Seminar	0	CHM 119	General Chemistry for Non Science Majors	3
CSC 150	Computer Literacy	3	CHM 119L	General Chemistry Lab	1
ELT 111	Basic Electronics	3	CIT 280	Computer Programming or CSC 170	3
ELT 111L	Basic Electronics Lab	1	CIT 290	Digital Logic I	3
ELT 113	Intermediate Electronics	3	ELT 213	Semiconductor Electronics	3
ELT 113L	Intermediate Electronics Lab	1	ELT 213L	Semiconductor Electronics Lab	1
ENG 101	Communication Skills I	3	ELT 215	Circuit Analysis	3
ENG 102	Communication Skills II	3	TMD 151	Introduction to CAD	3
HED 100	Personal and Community Health	2	IMT 205	Industrial Safety & Management	3
TMD 150	Engineering Graphics	3	TMD 251	Advanced CAD	3
ITM 147	Introduction to Manufacturing Process		MTH 184	Calculus I	4
	or TMD 145 Engineering		ENG 299	Writing Competency Exam	0
	Materials Technology	3	TOTAL		30 cr hrs
MTH 151	College Algebra	3	CED 350, 450 Cooperative Education (Optional 3 cr. hrs each)		
MTH 153	College Algebra & Trigonometry	3			
PED 100	Fundamentals of Fitness for Life	1			
TOTAL		32 cr hrs			
Third Year			Fourth Year		
CIT 305	Computer Diagnostics and Repair	3	Elective		3
CIT 305L	Computer Diagnostics and Repair Lab	1	CIT 432	Computer Interface & Peripheral Devices	3
CIT 335	Programmable Logic Controllers (PLC's)	3	CIT 434	Computer Networks Technology	3
CIT 339	Digital Logic II	3	CIT 450	Senior Project/Seminar	2
CIT 430	Microprocessors	3	ELT 412	Electronics Communication	3
HIS 335	African American History or other Cultural Elective.	3	HIS 100	History of Civilization	3
HUM 210	Humanities	3	HUM 211	Humanities	3
IMT 244	Indust. Specifications & Tech Documentation	3	IMT 410	First Line Supervision and Foremanship	3
PHY 152	General Physics	3	IMT 445	Statistical Quality Control	3
PHY 152L	General Physics Lab	1	TOTAL		26 cr hrs
SCM 285	Principles of Speech	3	SUMMARY OF GRADUATION REQUIREMENTS		
SOC 101	Introduction to Social Science	3	General Education Requirements		40
TOTAL		32 cr hrs	Major Requirements		56
			Other Requirements		24
			TOTAL		120 cr hrs

DESIGN TECHNOLOGY (MECHANICAL)

The Design Technology (Mechanical) program is designed to provide students with technical-management oriented competencies needed for entry level roles in materials testing, detailing, product design, machine design, or quality control in manufacturing industries.

The Industrial Management Certificate is designed to provide graduates with broad technical and managerial competencies needed to develop technical analysis solutions to industrial problems in design and implementation of systems involving the use of human, material, energy, informational, and financial resources in industry, business, and governmental settings. Students take a series of on-line courses in which a certificate is granted upon completion of six (6) upper-level Industrial Management courses.

**DESIGN TECHNOLOGY CURRICULUM (MECHANICAL)
B.S. DEGREE**

First Year			Second Year		
FRS 100	Freshman Seminar	0	PHY 152L	General Physics Lab	1
CSC 150	Computer Literacy	3	TMD 225	Mechanics I: Statics	3
ENG 101	Communication Skills I	3	TMD 227	Dynamics	3
ENG 102	Communication Skills II	3	TMD 252	Tool Design	3
HED 100	Personal and Community Health	2	ENG 299	Writing Competency Exam	0
HIS 100	History of Civilization	3	TOTAL		29 cr hrs
TMD 145	Engineering Materials Technology	3	CED 350, 450 Cooperative Education (Optional 3 cr. hrs. each)		
TMD 150	Engineering Graphics	3			
ITM 147	Introduction to Manufacturing Processes	3			
MTH 151	College Algebra	3	Third Year		3
MTH 153	College Algebra & Trigonometry	3	Elective*	General Chemistry I	3
PED 100	Fundamentals of Fitness for Life	1	CHM 221	General Chemistry I Lab	1
TOTAL		30 cr hrs	CHM 221L	Humanities	3
			HUM 210	Industrial Safety & Management	3
Second Year			IMT 205	Computer Num. Control & CAM	3
CIT 280	Computer Programming or CSC 170	3	ITM 353	Principles of Speech	3
TMD 151	Introduction to CAD	3	SCM 285	Introduction to Social Science	3
IMT 244	Indust. Specifications & Tech Documentation	3	SOC 101	Mechanics II: Strength of Materials	3
ITM 246	Principles of Manufacturing or TMD 251	3	TMD 345	Mechanics II Lab: Properties of Materials	1
MTH 184	Calculus I	4	TMD 345L	Fluid Mechanics	3
PHY 152	General Physics	3	TMD 348	Machine Design	3
			TMD 355		3
			TOTAL		32 cr hrs

Fourth Year		TMD 448	Thermodynamics	3
Elective*	2	TMD 450	Instrumentation	3
Humanities Elective	3	TMD 455	Mechanical Design	3
HIS 335		TOTAL		29 cr hrs
			other Cultural Elec.	3
IMT 340	3	SUMMARY OF GRADUATION REQUIREMENTS		
IMT 410	3	General Education Requirements		40
IMT 445	3	Major Requirements		49
ITM 453	3	Other Requirements		31
		TOTAL		120 cr hrs

TIDEWATER COMMUNITY COLLEGE
AND NORFOLK STATE UNIVERSITY ARTICULATION AGREEMENT

DESIGN TECHNOLOGY CURRICULUM (MECHANICAL) - LEADING TO THE BACHELOR OF SCIENCE DEGREE

Third Year		Fourth Year		
Humanities Elective	3	Electives		3
Social Science Elective	3	Humanities Electives		3
CHM 221	3	IMT 205	Industrial Safety & Management	3
CHM 221L	1	IMT 410	First Line Supervision. & Foremanship	3
CIT 280	3	IMT 445	Statistical Quality Control	3
HIS 335	3	ITM 453	Robotics & Computer Integrated	
ITM 353			Manufacturing Systems	3
		SOC 101	Introduction to Social Science	3
SCM 285	3	TMD 448	Thermodynamics	3
TMD 345	3	TMD 450	Instrumentation	3
TMD 345L	1	TMD 455	Mechanical Design	3
TMD 348	3	TOTAL		30 cr hrs
TMD 355	3			
ENG 299	0	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL	32 cr hrs	General Education Requirements		22
		Major Requirements		25
		Other Requirements		15
		TOTAL		62 cr hrs

SPECIAL ACADEMIC PROGRAMS

DOZORETZ NATIONAL INSTITUTE FOR MINORITIES IN APPLIED SCIENCES
(857) 823-2511

The Dozoretz National Institute for Mathematics and Applied Sciences (DNIMAS) was established in December, 1985. Its goal is to address the severe shortage of minority scientists by producing graduates who are capable of successfully completing graduate studies in the basic and applied sciences, and of entering occupations in industry, government, and education. Graduates of the Institute will also be capable of entering medical or other professional schools. Successful completion of the DNIMAS program results in a Bachelor of Science in Biology, a Bachelor of Science in Chemistry, a Bachelor of Science in Computer Science, a Bachelor of Science in Mathematics, or a Bachelor of Science in Physics.

The DNIMAS program is unique. All of its students are supported by full, four-year scholarship/grant aid. It represents a major commitment by Norfolk State University to provide the best possible education in the sciences for highly qualified and motivated students. The program features: a three week, pre-matriculation summer session, intensive science curricula, reserved microcomputer labs available for student use, research internships, field trips, projects, career counseling, and seminars.

ADMISSION

Students are admitted to the DNIMAS Program from high school for the Fall of each academic year. Applications are accepted for early decision on or before November 30 of the preceding year. The deadline for applications for regular admission is January 31. Applications to the DNIMAS program may be obtained by writing or calling:

Director of DNIMAS
Norfolk State University
700 Park Avenue
Norfolk, VA 23504

Students in the DNIMAS program may matriculate in one of the following curricula. For details on these curricula and course descriptions, see the departmental descriptions in this catalog.

BIOLOGY (DNIMAS)**First Year**

APS 110	Applied Sciences seminar	1
APS 111	Applied Sciences seminar	1
BIO 110H	General Biology	4
BIO 160H	General Zoology	4
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II	4
CHM 222L	General Chemistry II Lab	1
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Analytic Geometry/Calculus	4
MTH 251H	Analytic Geometry/Calculus	4
PED 100	Fundamentals of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

Social Science Elective		3
APS 210	Applied Science Seminar	1
APS 211	Applied Science Seminar	1
BIO 161	General Botany	4
BIO 278	Cell Biology	4
BIO 310	General Microbiology	4
CHM 321	Organic Chemistry I	3
CHM 321L	Organic Chemistry I Lab	2
CHM 322	Organic Chemistry II	3
CHM 322L	Organic Chemistry II Lab	2
CSC 169	Introduction to Computer Science	3
HED 100	Personal & Community Health	2
SCM 285H	Principles of Speech	3
TOTAL		35 cr hrs

Third Year

APS 310	Applied Sciences seminar	1
APS 311	Applied Sciences seminar	1
BIO 270	Comparative Anatomy or BIO 263	4
	Biology Elective	4
BIO 362	Histology and Micro Technique	4
CHM 431	General Biochemistry I	3
CHM 431L	General Biochemistry I Lab	2
CHM 432	General Biochemistry II	3
CHM 432L	General Biochemistry II Lab	2
CSC 200	Advanced Computer Concepts	3
PHY 250A	University Physics	4
PHY 250L	University Physics Lab	1
PHY 251A	University Physics	3
PHY 251L	University Physics Lab	1
TOTAL		35 cr hrs

Fourth Year

ENG 203/30	Advanced Communication Skills	3
	Biology Elective	4
	Humanities Elective/MUS 301*	3
APS 410	Applied Sciences seminar	1
BIO 351	Principles of Genetics	4
BIO 364	Seminar/Colloquium	1
BIO 459	General Physiology	4
BIO 474	Molecular Biology	3
BIO 495	Biostatistics	4
BIO 497	Introduction to Research	2
TOTAL		29 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

TOTAL	134 cr hrs
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*Select from HUM 210, MUS 301, FIA 301, ENG 207

BIOLOGY (PRE-PROFESSIONAL - DNIMAS)**First Year**

APS 110	Applied Sciences seminar	1
APS 111	Applied Sciences seminar	1
BIO 110H	General Biology	4
BIO 160H	General Zoology	4
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II	4
CHM 222L	General Chemistry II Lab	1
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Analytic Geometry/Calculus	4
MTH 251H	Analytic Geometry/Calculus	4
PED 100	Fundamentals of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

APS 210	Applied Science Seminar	1
APS 211	Applied Science Seminar	1
Social Science Elective		3
BIO 161	General Botany	4
BIO 310	General Microbiology	4
BIO 278	Cell Biology	4
CHM 321	Organic Chemistry I	3
CHM 321L	Organic Chemistry I Lab	2
CHM 322	Organic Chemistry II	3
CHM 322L	Organic Chemistry II Lab	2
CSC 169	Introduction to Computer Science	3
HED 100	Personal & Community Health	2
SCM 285H	Principles of Speech	3
TOTAL		35 cr hrs

Third Year

APS 310	Applied Sciences seminar	1
APS 311	Applied Sciences seminar	1
BIO 253	Human Physiology	3
BIO 272	Human Anatomy	4
BIO 351	Principles of Genetics	4
CHM 431	General Biochemistry I	3
CHM 431L	General Biochemistry Lab	2
CHM 432	General Biochemistry II	3
CHM 432L	General Biochemistry Lab	2
PHY 250A	University Physics	4
PHY 250L	University Physics Lab	1
PHY 251A	University Physics	4
PHY 251L	University Physics Lab	1
TOTAL		33 cr hrs

Fourth Year

ENG 203/30	Advanced Communication Skills	3
	Humanities Elective*	3
APS 410	Applied Sciences seminar	1
BIO 351	Principles of Genetics	4
BIO 364	Hist/Micro technique	4
BIO 364	Seminar/Colloquium	1
	Biology Elective	4
BIO 474	(472) Molecular Biology/Cell Structure	3
BIO 495	Biostatistics	3
BIO 497	Introduction to Research	2
CSC 200	Advanced Computer Concepts	3
TOTAL		31 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

TOTAL	136 cr hrs
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CHEMISTRY (DNIMAS)**First Year**

APS 110	Applied Sciences seminar	1
APS 111	Applied Sciences seminar	1
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II	4
CHM 222L	General Chemistry II Lab	1
CSC 169	Introduction to Computer Science	3
CSC 200	Advanced Computer Concepts	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

Humanities or Social Science Elective		3
APS 210	Applied Science Seminar	1
APS 211	Applied Science Seminar	1
CHM 321	Organic Chemistry I	3
CHM 321L	Organic Chemistry I Lab	2
CHM 322	Organic Chemistry II	3
CHM 331	Analytical Chemistry I	3
CHM 331L	Analytical Chemistry I Lab	2
MTH 252	Calculus III	4
PHY 250A	University Physics I	4
PHY 250L	University Physics I Lab	1
PHY 251A	University Physics II	4
PHY 251L	University Physics II Lab	1
SCM 285H	Principles of Speech	3
TOTAL		35 cr hrs

Third Year

Restricted Chemistry Elective*		3
APS 310	Applied Sciences seminar	1
APS 311	Applied Sciences seminar	1
APS 350	Scientific Instrumentation	3
BIO 110H	General Biology	4
CHM 323L	Synth. & Anal. in Organic	2
CHM 332	Analytical Chemistry II	3
CHM 332L	Analytical Chemistry II Lab	2
CHM 345	Math & Logic in the Physical Sciences	3
CHM 351	Seminar or CHM 352	1
CHM 361	Physical Chemistry I	3
CHM 362	Physical Chemistry II	3
CHM 363L	Physical Chemistry Lab	2
CHM 397	Research or CHM 398	1
TOTAL		32 cr hrs

Fourth Year

Fourth Year		
Electives		6
Humanities Elective		3
Restricted Chemistry Elective*		3
Social Science Elective		3
APS 410	Applied Sciences seminar	1
CHM 451	Seminar or CHM 452	1
CHM 473	Advanced Inorganic Chemistry	3
CHM 431	Biochemistry	3
CHM 497	Research or 498	1
ENG 203/303	Advanced Communication Skills	3
TOTAL		27 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

TOTAL	129 cr. hrs
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* Select 6 hrs from: CHM 397, 398, 473L, 431L, 432, 432L, 461L, 462L, 475, 476, 481, 497, 498 (Max of 1 elective hr. of research)

CHEMISTRY - PRE-MEDICINE (DNIMAS)**First Year**

APS 110	Applied Sciences seminar	1
APS 111	Applied Sciences seminar	1
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II	4
CHM 222L	General Chemistry II Lab	1
CSC 169	Introduction to Computer Science	3
CSC 200	Advanced Computer Concepts	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

APS 210	Applied Sciences Seminar	1
APS 211	Applied Sciences Seminar	1
CHM 321	Organic Chemistry I	3
CHM 321L	Organic Chemistry I Lab	2
CHM 322	Organic Chemistry II	3
CHM 331	Analytical Chemistry I	3
CHM 331L	Analytical Chemistry I Lab	2
MTH 252	Calculus III	4
PHY 250A	University Physics	4
PHY 250L	University Physics Lab	1
BIO 110H	General Biology	4
PHY 251A	University Physics	4
PHY 251L	University Physics Lab	1
SCM 285H	Principles of Speech	3
TOTAL		36 cr hrs

Third Year

Humanities Elective		3
APS 310	Applied Sciences seminar	1
APS 311	Applied Sciences seminar	1
	Biology Elective	4
CHM 323L	Synth. & Anal. in Organic	2
CHM 332	Analytical Chemistry II	3
CHM 332L	Analytical Chemistry II Lab	2
CHM 345	Math & Logic in the Physical Sciences	3
CHM 351	Seminar or CHM 352	1
CHM 361	Physical Chemistry I	3
CHM 362	Physical Chemistry II	3
CHM 363L	Physical Chemistry Lab	2
CHM 397	Research or CHM 398	1
CHM 473	Advanced Inorganic Chemistry	3
TOTAL		32 cr hrs

Fourth Year

Biology Electives	3
ENG 203/303Advanced Communication Skills	3
Social Science Elective/Humanities	6
APS 410 Applied Sciences seminar	1
CHM 431 Biochemistry I	3
CHM 431L Biochemistry I Lab	2
CHM 432 Biochemistry II	3
CHM 432L Biochemistry II Lab	2
CHM 451 Seminar or CHM 452	1
CHM 497 Research or CHM 498	1
TOTAL	25 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS

TOTAL	128 cr hrs
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COMPUTER SCIENCE (DNIMAS)**First Year**

APS 110	Applied Sciences seminar	1
APS 111	Applied Sciences seminar	1
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II	4
CHM 222L	General Chemistry II Lab	1
CSC 169	Introduction to Computer Science	3
CSC 170	Computer Programming I	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

Humanities Elective		3
APS 210	Applied Sciences Seminar	1
APS 211	Applied Sciences Seminar	1
CSC 260	Computer Programming II	3
CSC 268	Computer Organization and Assembly Language Programming	3
CSC 270	Discrete Structures	3
CSC 295	Java Applications Programming	3
MTH 252	Calculus III	4
PHY 250A	University Physics	4
PHY 250L	University Physics Lab	1
PHY 251A	University Physics	4
PHY 251L	University Physics Lab	1
SCM 285H	Speech/Scientific Communication	3
TOTAL		34 cr hrs

Third Year

Computer Science Elective		3
(300 level or above)		
Restricted Elective		
(ECN 211 or ECN 212)		3
Restricted Elective (Business or Economics)		
(300 or level or above)		3
Social Science Elective		3
APS 310	Applied Sciences Seminar	1
APS 311	Applied Sciences Seminar	1
APS 350	Scientific Instrumentation	3
CSC 372	Data Structures	3
CSC 361	Survey of Programming Language	3
CSC 468	Computer Architecture	3
MTH 300	Linear Algebra	3
MTH 351	Probability & Statistics I	3
TOTAL		32 cr hrs

Fourth Year

Foreign Language Elective		3
ENG 203/303 Advanced Communication Skills		3
Computer Science Elective (300 level or above)		3
APS 410	Applied Sciences seminar	1
CSC 430	Data Communication	3
CSC 464	Operating Systems	3
CSC 470	Artificial Intelligence or CSC 369 or 496	3
CSC 380	Software Engineering or CSC 480	3
CSC 498	Computer Science Seminar	1
CSC 499	Computer Science Seminar	2
MTH 384	Math Modeling or MTH 352 or MTH 481	3
TOTAL		28 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS**TOTAL 128 cr hrs****COMPUTER SCIENCE/ENGINEERING (DNIMAS)****First Year**

APS 110	Applied Science Seminar	1
APS 111	Applied Science Seminar	1
CHM 223A/	224A General Chemistry I, II	8
CHM 221L/	222L General Chemistry Lab	2
CSC 169	Introduction to Computer Science	3
CSC 170	Computer Programming I	3
ENG 101H/	102H Communication Skills I, II	6
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
HED 100	Personal and Community Health	2
PED 100	Fund. of Fitness for Life	1
TOTAL		35 cr hrs

Second Year

APS 210	Applied Science Seminar	1
APS 211	Applied Science Seminar	1
CSC 260	Computer Programming II	3
CSC 270	Discrete Structures	3
CSC 268	Computer Organization and Assembly Language	3
MTH 252H	Calculus III	4
MTH 300	Linear Algebra	3
PHY 250A/	251A University Physics	8
PHY 250L/	251L University Physics Laboratory	2
SCM 285H	Speech/Scientific Communication	3
Humanities Elective		3
TOTAL		34 cr hrs

Third Year

APS 310	Applied Science Seminar	1
APS 311	Applied Science Seminar	1
CSC 295	Java Applications Programming	3

CSC 361	Survey of Programming Language	3
CSC 380	Software Engineering or CSC 360 or CSC 480	3
CSC 372	Data Structures	3
MTH 351	Probability and Statistics	3
ECN 211	Principles of Economics	3
EEN 230	Electrical Network Theory	3
EEN 231	Electrical Network Theory Lab	1
EEN 309	Engineering Electronics I	3
EEN 311	Engineering Electronics I Lab	1
Cultural Elective		3
ENG 203/	303 Advanced Communication Skills	3
TOTAL		34 cr hrs

Fourth Year

APS 410	Applied Science Seminar	1
EEN 455	Control Systems Analysis or EEN 452 Communications Systems II, or EEN 480	6
CSC 468	Computer Architecture	3
CSC 470	Artificial Intelligence or	
CSC 369	Theory of Computation or CSC 496	
	Compile Construction	3
CSC 430	Data Communications	3
CSC 498	Computer Science Seminar I	1
CSC 499	Computer Science Seminar II	2
EEN 444	Digital Electronics Logic Design	3
EEN 445	Digital Electronics Logic Design	1
Restricted Business or Economics Elective		
(ACC 201 or ECN 3XX or DSC 3XX or ENT 3XX)		3
Social Science Elective		3
TOTAL		29 cr hrs

SUMMARY OF GRADUATION REQUIREMENTS**TOTAL 133 cr hrs**

APPLIED MATHEMATICS (DNIMAS)

First Year			Third Year		
APS 110	Applied Sciences seminar	1	Mathematics Elective (MTH 311 or higher)		3
APS 111	Applied Sciences seminar	1	Mathematics Elective (MTH 431 or higher)		3
CHM 223A	General Chemistry I	4	Social Sciences Elective		3
CHM 221L	General Chemistry I Lab	1	APS 310	Applied Sciences seminar	1
CHM 224A	General Chemistry II	4	APS 311	Applied Sciences seminar	1
CHM 222L	General Chemistry I Lab	1	APS 350	Scientific Instrumentation	3
CSC 169	Introduction to Computer Science	3	ENG 303	Professional & Technical Writing	3
CSC 200	Advanced Computer Concepts	3	MTH 351	Probability & Stats. I	3
ENG 101H	Communication Skills I	3	MTH 352	Probability & Stats. II	3
ENG 102H	Communication Skills II	3	MTH 471	Advanced Calculus I	3
HED 100	Personal & Community Health	2	MTH 472	Advanced Calculus II	3
MTH 184H	Calculus I	4	SCM 285H	Speech/Scientific Community	3
MTH 251H	Calculus II	4	TOTAL		32 cr hrs
PED 100	Fundamentals of Fitness for Life	1			
TOTAL		35 cr hrs	Fourth Year		
Second Year			Free Electives		3
Foreign Language Electives		6	Mathematics Electives		
Free Electives		3	(MTH 431 or higher)		6
APS 210	Applied Sciences Seminar	1	Social Science Electives		3
APS 211	Applied Sciences Seminar	1	APS 410	Applied Sciences seminar 7	1
MTH 252H	Calculus III	4	MTH 382	Introduction to Applied Mathematics	3
MTH 300	Linear Algebra	3	MTH 401	Numerical Analysis I	3
MTH 372	Differential Equations	3	MTH 402	Numerical Analysis II	3
MTH 384	Math Modeling and Simulation	3	MTH 484	Topics in Applied Mathematics	3
PHY 250A	University Physics	4	MTH 496	Mathematics seminar	2
PHY 250L	University Physics Lab	1	MTH 497	Mathematics seminar	2
PHY 251A	University Physics	4	TOTAL		29 cr hrs
PHY 251L	University Physics Lab	1	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL		34 cr hrs	TOTAL		130 cr hrs

PHYSICS (DNIMAS)

First Year			Third Year		
APS 110	Applied Sciences seminar	1	Social Science Elective		3
APS 111	Applied Sciences seminar	1	APS 310	Applied Sciences seminar	1
CSC 169	Introduction to Computer Science	3	APS 311	Applied Sciences seminar	1
ENG 101H	Communication Skills I	3	CHM 223A	General Chemistry I	4
ENG 102H	Communication Skills II	3	CHM 221L	General Chemistry I Lab	1
MTH 184H	Calculus I	4	CHM 224A	General Chemistry II	4
MTH 251H	Calculus II	4	CHM 222L	General Chemistry II Lab	1
PED 100	Fundamentals of Fitness for Life	1	CHM 345	Math Methods for the Physical Sciences	3
PHY 250A	University Physics	4	PHY 356	Heat & Thermodynamics	3
PHY 250L	University Physics Lab	1	PHY 365	Mechanics I	3
PHY 251A	University Physics	4	PHY 366	Mechanics II	3
PHY 251L	University Physics Lab	1	PHY 375	Electricity & Magnetism I	3
TOTAL		30 cr hrs	PHY 380	Quantum Mechanics I	3
Second Year			TOTAL		33 cr hrs
CSC 292	UNIX and C Programming	3	Fourth Year		
Humanities Elective		3	Free Electives		3
APS 210	Applied Sciences Seminar	1	Humanities Elective		3
APS 211	Applied Sciences Seminar	1	Mathematics Elective (MTH 471 or MTH 481)		3
APS 350	Scientific Instrumentation	3	Mathematics Elective (MTH 472, 474 or 484)		3
EEN 309	Electronic Circuits	3	Social Science Elective		3
HED 100	Personal and Community Health	2	APS 410	Applied Sciences seminar 7	1
MTH 252	Calculus III	4	PHY 399	Advanced Laboratory	2
MTH 372	Differential Equations	3	PHY 468	Optics	3
PHY 241	Physics Seminar	1	PHY 475	Electricity & Magnetism II	3
PHY 320	Waves	3	PHY 480	Quantum Mechanics II	3
PHY 350	Modern Physics	3	PHY 499	Senior Project	1
PHY 351	Experimental Concepts in Modern Physics	2	TOTAL		28 cr hrs
SCM 285H	Speech/Scientific Communication	3	SUMMARY OF GRADUATION REQUIREMENTS		
TOTAL		35 cr hrs	TOTAL		126 cr hrs

NAVAL SCIENCE**Capt. John Brown****Naval Reserve Officer Training Corps****(757) 823-8895**

The primary mission of the Department of Naval Science is to provide professional and leadership instruction to students who desire to serve as commissioned officers in the United States Navy or Marine Corps. Participation in the NROTC Program is voluntary, and any student who meets the qualifications is eligible to participate.

The NROTC Program consists of two courses of instruction: the four- year program and the two-year program. Both apply to scholarship and non-scholarship (college program) students.

The four-year program is divided into a two-year basic course and a two- year advanced course. The basic course (NSC 101, 102, 201, 202 and accompanying naval laboratory sessions) is normally pursued by NROTC midshipmen during their freshman and sophomore years. While most freshmen begin the basic course during the fall semester, it is possible to enter the program at the beginning of the spring semester. The advanced course (NSC 301, 302, 401, 402 and accompanying naval laboratory sessions) is normally pursued during the junior and senior years. Students seeking a commission in the Marine Corps or Marine Corps Reserve substitute NSC 310, 410, and two approved elective courses for NSC 301, 302, 401, and 402.

Scholarship recipients supplement classroom instruction with at-sea training the summer between their junior and senior years. Similarly, Marine Corps option students attend the six-week Marine Officer Candidate School at Quantico, Virginia, the summer between their junior and senior years.

The two-year NROTC Program is extended to students who do not participate in NROTC during their freshman and sophomore years and who meet the program requirements. Applications to join must be submitted early in the spring semester of the sophomore year. For students accepted into this program, a six-week summer training period at the Naval Science Institute (NSI) in Newport, Rhode Island, following their sophomore year, replaces the Basic course segment of the four-year program. Students successfully completing summer training enroll in the Advanced course for their junior and senior years.

REQUIREMENTS FOR FORMAL ENROLLMENT IN NROTC

1. Be a citizen of the United States.
2. Be physically qualified under standards prescribed by the Department of the Navy.
3. Be accepted by the University as a full-time enrolled student.
4. Be at least 17 years of age and not have reached 27 years of age by 30 June of the year you graduate. (Scholarship)
5. Be at least 17 years of age and not have reached 27 years of age by 30 June of the year you graduate. (College Program)
6. Possess a satisfactory record of moral integrity, maintain high standards of performance in academic and extracurricular activities, and manifest potential officer characteristics.
7. Have no moral obligation or personal convictions that prevent you from conscientiously bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic.

PARTICIPATION REQUIREMENTS

Students enrolling in the Basic course of instruction during their freshman year incur no military obligation. Those in the Advanced course must agree to serve a specific active duty period.

All College Program students may compete for three and two-year NROTC scholarships. NROTC scholarships pay for tuition, books, laboratory fees, and other required fees, except room and board. Additionally, scholarship students receive a monthly stipend of \$200 (tax free). For specific information and requirements, contact the Department of Naval Science.

Advanced course students in the College Program (non-scholarship) are entitled to subsistence pay at the rate of \$250 FR SO, \$300 JR and \$350 SR per month for each month of the school year, not to exceed 20 months maximum. While engaged in summer cruise training, all students receive one half of the basic pay of an Ensign.

Nursing program students participate in NROTC drill labs, classes as indicated below, and summer training. Those who complete the nursing program and naval science requirements are commissioned as Ensigns in the Navy Nurse Corps.

First Year			NSC 310	Evolution of Warfare (Marine Option Only)	3
NSC 101*	Naval Orientation	2			
NSC 111	Naval Laboratory I	1	NSC 311	Naval Laboratory V	1
NSC 112	Naval Laboratory II	1	NSC 312	Naval Laboratory VI	1
NSC 102*	Seapower & Maritime Affairs/HIS 380	3	TOTAL		11 cr hrs
TOTAL		7 cr hrs			
Second Year			Fourth Year		
NSC 201	Naval Ship Systems I (Engineering)	3	NSC 401*	Leadership & Management	3
NSC 202	Naval Ship Systems II (Weapons)	3	NSC 402*	Leadership and Ethics	3
NSC 211	Naval Laboratory III	1	NSC 410	Amphibious Warfare (Marine Option Only)	3
NSC 212	Naval Laboratory IV	1	NSC 411	Naval Laboratory VII	1
TOTAL		8 cr hrs	NSC 412	Naval Laboratory VIII	1
			TOTAL		11 cr hrs
Third Year					
NSC 301	Navigation and Naval Operations I	3			
NSC 302	Navigation and Naval Operations II	3			

This Department does not offer a major course program.

*Indicates courses required for NROTC nursing college program and scholarship students.

ETHELYN R. STRONG SCHOOL OF SOCIAL WORK**Marvin D. Feit, Dean****Margaret D. Kerekes, Assistant Dean****(757) 823-8668**

The Ethelyn R. Strong School of Social Work provides social work education through its BSW, MSW, DSW and continuing education programs.

The School's mission is to provide social work education which prepares students with competence to develop and deliver services that strengthen and/or empower individuals, families, groups, organizations, and communities. Such practice fosters meaningful interaction between people and their environments and contributes to the alleviation of the social structural causes and consequences of poverty and oppression, and thereby increase the prospect of community well being. This mission combines the profession's philosophical foundations with the purpose and mission of Norfolk State University as a historically Black university in an evolving global community.

The School and its programs emphasize the values of social justice, social responsibility and respect for human rights, dignity, and diversity. There is a special commitment to the affirmation of the strengths of diversity of all populations. The School is especially committed to address the strengths and challenges which African American communities experience.

The focus at the BSW level is on the preparation of all students for a generalist approach to the first level of professional practice. Beginning level practitioners with a generalist perspective and knowledge of social systems recognize that the target for change may not only be the individual, but may be one or more of the social systems that comprise the individual's environment.

ACCREDITATION

The School of Social Work is accredited by the Council on Social Work Education which accredits programs at the BSW and MSW levels.

ORGANIZATION OF THE SCHOOL

The School is administered by the Dean. The Assistant Dean is responsible for administrative matters. The BSW Program Director is responsible for the BSW Program. The MSW Program Director is responsible for the MSW Program Curriculum. The Director of the DSW Program is responsible for the DSW Program.

DEGREES OFFERED

BSW, MSW and DSW

ADMISSION REQUIREMENTS

BSW applicants must meet University requirements for admission. After successfully completing the first two years of pre-social work course requirements, students must apply for Candidacy for the BSW degree. Candidacy is the official application process for admission to the professional phase of the Social Work Program. Candidacy requirements are:

1. Student must have completed the first two years of General Education and pre-social work requirements. Social work required courses are considered part of the major, and are designated for social work majors only except for SWK 200 Introduction to Social Work. Student must have a minimum cumulative grade point average of 2.0 on the 4.0 scale (an overall average of C or better).
2. Student must complete and submit all candidacy application materials to the Director of the Baccalaureate Social Work Program.
3. Student must not have repeated a required social work course more than once.
4. Continued matriculation at the professional level of the Baccalaureate Program requires that the student:
 - a) Maintain an overall GPA of 2.0 or better.
 - b) Maintain an average of 2.5 GPA in major courses.
 - c) Must have earned a grade of C or better in designated courses as enumerated in the Social Work Curriculum.
 - d) Complete degree requirements in accordance with the University Catalog and School of Social Work Field Manual.

GENERAL EDUCATION REQUIREMENTS

The School follows University requirements for the general education core of 40 hours.

ASSESSMENT REQUIREMENT

Social Work majors are required to complete the competency based assessment requirements, as set forth by the Social Work Program and the University. Also, students are required to meet state competency mandates.

BACCALAUREATE SOCIAL WORK

Carrie R. Waites, Baccalaureate Program Director
(757) 823-8122

The undergraduate Social Work Program comprises two phases: Pre Social Work Education and Professional Social Work Education. The professional social work phase begins in the junior year and combines academic course work and field practicum. The baccalaureate social work (BSW) degree is conferred on undergraduates who complete all of the academic requirements of the program and of Norfolk State University. This degree is recognized as the first professional level of social work practice. Certain criteria are, therefore, established for admission to and continued matriculation in the professional program.

GOALS

The goals of the BSW Program are:

1. To prepare the student for employment as a beginning professional social work practitioner utilizing a generalist approach.
2. To prepare student to work differentially with diverse populations with a special commitment to the affirmation of the unique diversity of African Americans.
3. To teach students to competently develop and deliver direct services that strengthens and/or empower individuals, families, groups, organizations, and communities.
4. To provide students with a foundation of values and ethics which guide professional practice.
5. To provide content about the interaction of people and their environments that contributes to the alleviation of the causes and consequences of poverty and oppression.
6. To introduce students to a variety of modes of learning which will enhance life-long professional development.

SOCIAL WORK CURRICULUM**PRE SOCIAL WORK REQUIREMENTS**

First Year			Second Year		
FRS 100	Freshman Seminar	0	SWK 200	Introduction to Social Work	3
PED 100	Fundamentals of Fitness for Life	1	HUM 210	Humanities**	3
HED 100	Personal and Community Health	2	HUM 211	Humanities**	3
ENG 101	Communication Skills I***	3	XXX XXX	Restricted Elective (Natural Science)	3
ENG 102	Communication Skills II***	3	ECN211	Prin. of Eco.	3
BIO 105/105L	or BIO 165/165L	4	SWK 220	Human Behavior & Social Environment I	3
MTH 105	Intermediate Algebra	3	PSY 280	Abnormal Psychology***	3
CSC 150	Computer Literacy***	3	POS 231	American State & Local Government***	3
PSY 210	Introduction to Psychology***	3	SCM 285	Principles of Speech	3
SOC 110	or SOC 101 ***	3	SWK 207	Social Welfare Policies & Services I	3
HIS 100	or HIS 101 HIS 102, or HIS 103	3	TOTAL		30 cr hrs
Restrictive Elective *		2			
TOTAL		30 cr hrs			

PROFESSIONAL SOCIAL WORK REQUIREMENTS

Third Year			Fourth Year		
Cultural Perspective		3	Optional Electives	6	
SWK 309	Human Behavior and Social Environment I	3	Social Work Electives	6	
SWK 312	Introduction to Generalist Practice	3	SWK 318	Generalist Practice: Groups, Organizations and Communities	3
SWK 300	Social Welfare Policy and Services II	3	SWK 416	Generalist Practice: Evaluation	3
SWK 313	Generalist Practice: Individuals & Families	3	SWK 490	Practicum Seminar I	1
SWK 319	Human Behavior and Social Environment III	3	SWK 491	Practicum Seminar II	1
SOC 331	Social Psychology	3	SWK 495	Practicum in Social Work I	5
SOC 344	Methods of Social Research***	3	SWK 496	Practicum in Social Work II	5
SOC 355	Elementary Social Stastics ***	3	TOTAL		30 cr hrs
SWK XXX	Social Work Elective	3			
Total		30 cr hrs			

*Logic, Philosophy, Problem Solving Cluster (i.e. LOG 210, Logic: Critical Thinking)

**FIA 201, Basic Art Appreciation or MUS 301, Music Appreciation

***Minimum grade of C required in all Social Work courses and those with *** beside them.

****Cultural Perspective ****(Select one) - HIS 335, HIS 336, HIS 370, *HIS 371, PSY 340, SOC 237

*****Restricted Elective (Natural Sciences) - CHM 100, PHY 100, SCI 100, Astronomy, Geology, Oceanography, Meteorology

SUMMARY OF GRADUATION REQUIREMENTS

General Education Requirements	40
Major Requirements	72
Electives	8
TOTAL	120 cr hrs

COURSE DESCRIPTIONS

Course descriptions are notated with the following abbreviations and can be found on the subsequent pages listed in alphabetical order.

Accounting (ACC)	p. 124	Humanities (HUM)	p. 144
Administrative Systems Management (ASM)	p. 124	Industrial Education (IED)	p. 144
Astronomy (AST)	p. 124	Industrial Management Technology (IMT)	p. 144-145
Biology (BIO)	p. 124-127	Interdisciplinary Studies (INT)	p. 145
Building Construction/Technology (BCT)	p. 127	Japanese (JPN)	p. 145
Business Administration (BAD)	p. 127	Journalism (JRN)	p. 145
Chemistry (CHM)	p. 127-129	Latin (LAT)	p. 145
Communication Sciences and Disorders (CSD)	p. 129	Management (MGT)	p. 146
Computer Information Technology (CIT)	p. 129-130	Management Information Systems (MSY)	p. 146
Computer Science (CSC)	p. 130-131	Manufacturing Technology (ITM)	p. 146
Cooperative Education (CED)	p. 131	Marketing (MKG)	p. 146-147
Criminal Justice (CJS)	p. 131	Mass Communications (MCM)	p. 147-148
Decision Sciences (DSC)	p. 131	Mathematics (MTH)	p. 148-149
Design Technology - Mechanical (TMD)	p. 131-132	Medical Technology (MDT)	p. 149-150
Economics (ECN)	p. 132	Military Science (MIS)	p. 150
Electronics Technology (ELT)	p. 132-133	Music (MUS)	p. 150-153
Elementary Education (EED)	p. 133	Naval Science (NSC)	p. 153
Engineering (EEN)	p. 133-134	Nursing (NUR)	p. 153-154
English (ENG)	p. 134-135	Optical Engineering (OEN)	p. 154-155
Entrepreneurial Studies (ENT)	p. 135-136	Physical Education (PED)	p. 155-156
Exercise Science (EXS)	p. 136	Physics (PHY)	p. 156-157
Fashion Design/Merchandising (FDM)	p. 136-137	Political Science (POS)	p. 157-158
Finance (FNC)	p. 137	Psychology (PSY)	p. 158-159
Fine Arts (FIA)	p. 137-139	Religion (REL)	p. 159
French (FRN)	p. 139-140	Earth Science (SCI)	p. 159
Funeral Services (FNS)	p. 140	Secondary Education and Leadership (SED)	p. 159
General Studies (FRS/GST)	p. 140	Social Work (SWK)	p. 159-160
Geography (GEO)	p. 140	Sociology (SOC)	p. 160-161
German (GRM)	p. 140	Spanish (SPN)	p. 161-162
Health Education (HED)	p. 141	Special Education (SPE)	p. 162-163
Health Information Management (HIM)	p. 141	Speech Communication (SCM)	p. 163
Health Related Professions (HRP)	p. 141	Swahili (SWA)	p. 163
Health Services Management (HSM)	p. 141-142	Technology Education (TED)	p. 163-164
History (HIS)	p. 142-143	Theatre (DRM)	p. 164
Hotel and Restaurant Management (HRM)	p. 143-144	Urban Planning (URP)	p. 164-165

ACCOUNTING - ACC

201 **Three Credits**
PRINCIPLES OF ACCOUNTING I
PREREQUISITE: Sophomore Standing
 Study of the fundamental principles and concepts of accounting used in the preparation of financial statements. Emphasis on service and merchandising companies.

202 **Three Credits**
PRINCIPLES OF ACCOUNTING II
PREREQUISITE: ACC 201
 Continuation of ACC 201. Emphasis on accounting for partnerships and corporations, long-term debt, analysis of financial statements, statement of cash flows, and introduction to management accounting.

301 **Three Credits**
INTERMEDIATE ACCOUNTING I
PREREQUISITE: ACC 202
 Rigorous study of the methodology and underlying theory of financial accounting. In-depth analysis of valuation alternatives and their effect on income measurement.

302 **Three Credits**
INTERMEDIATE ACCOUNTING II
PREREQUISITE: ACC 301
 Continuation of ACC 301. In-depth study of the accounting theory and principles surrounding the valuation of accounts in the financial statement.

315 **Three Credits**
FEDERAL INCOME TAX I
PREREQUISITE: ACC 202
 Study of the basic concepts of federal income taxation and related reporting requirements. Emphasis on the taxation of individuals.

316 **Three Credits**
FEDERAL INCOME TAX II
PREREQUISITE: ACC 315
 Study of the basic concepts of federal income taxation and related reporting requirements as they apply to partnerships and corporations. Emphasis on the formation, operation, dissolution and reorganization of corporations.

325 **Three Credits**
MANAGERIAL ACCOUNTING
PREREQUISITES: ACC 202; MSY 284
 Focuses on the uses of accounting information in industry, government, and not-for-profit organizations. Topics concentrate on the underlying conceptual framework of management accounting, the role of accounting in management planning and control, and the usefulness of accounting data for evaluating the results of operations and in the various decision making processes. (Not available for credit for accounting majors).

330 **Three Credits**
ACCOUNTING SYSTEMS
PREREQUISITES: ACC 301; MSY 284
 Study of current techniques of processing and utilizing accounting data for information systems. Emphasis on internal control and reporting in a computerized accounting environment.

361 **Three Credits**
FINANCIAL STATEMENT ANALYSIS
PREREQUISITES: FNC 360; ACC 202; MSY 284
 Study of the methods and tools of analysis and interpretation of financial statements. Emphasis on financial analysis techniques.

411 **Three Credits**
INTERMEDIATE ACCOUNTING III
PREREQUISITE: ACC 302
 Continuation of ACC 302. Emphasis on the accounting literature and the concepts of accounting theory.

412 **Three Credits**
ADVANCED ACCOUNTING
PREREQUISITE: ACC 411
 Accounting for partnerships, home offices, branches, combinations, and consolidations. Emphasis on foreign currency translation and other aspects of international accounting.

413 **Three Credits**
COST ACCOUNTING
PREREQUISITES: ACC 202; MSY 284
 Study of cost accounting systems, product costing, and inventory valuation. Emphasis on the uses of accounting data as an aid in managerial planning and control.

414 **Three Credits**
AUDITING
PREREQUISITES: ACC 302; MSY 284
 Rigorous study of the examination of financial statements by independent auditors within the framework of generally accepted accounting principles using generally accepted auditing standards.

415 **Three Credits**
ADVANCED COST ACCOUNTING
PREREQUISITE: ACC 413
 Continuation of ACC 413. Focuses on capital budgeting, inventory control, cost allocation, segmented statements, decentralization, and accounting systems.

416 **Three Credits**
INTERNAL AUDITING
PREREQUISITES: ACC 302, 330
 Concerns the independent appraisal function within an organization to examine and evaluate its activities. Emphasis on internal controls and on compliance with applicable laws, regulations, and policies.

418 **Three Credits**
GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING
PREREQUISITE: ACC 302
 Theory and application of accounting within governmental and not-for-profit organizations, including fund allocations.

420 **Three Credits**
SELECTED TOPICS IN ACCOUNTING
PREREQUISITE: ACC 302
 Topics covered give additional consideration to selected accounting problems. Current accounting issues are examined.

455 **Three Credits**
THEORY OF ACCOUNTING
PREREQUISITE: ACC 302
 Thorough study and review of accounting literature and pronouncements of rule-making organizations. Financial Accounting Standards Board Statements explored in depth. Current issues and developments are also studied.

ADMINISTRATIVE SYSTEMS MANAGEMENT - ASM

101 **One Credit**
KEYBOARDING FOR INFORMATION PROCESSING
 Introduction to keyboarding that covers the basic techniques needed to key alphabetically and numerically. Develop the basic skills required to collect, use, and store information via a standard keyboard on a microcomputer.

110 **Three Credits**
KEYBOARDING II
PREREQUISITES: Key a minimum of 25 words a minute and pass the department CBE for ASM 101
 Emphasis on the development of techniques, mastery of the keyboard, composing, and preparation of business correspondence, manuscripts, and tables.

210 **Three Credits**
KEYBOARDING III
PREREQUISITE: ASM 110 or advanced placement
 Continued keyboarding/formatting/editing skills for a variety of office simulations, applying production skills for simulation, and making decisions about execution of jobs/simulations without direct supervision. Speed and accuracy are stressed.

230 **Three Credits**
OFFICE COMMUNICATIONS
PREREQUISITE: ENG 102 or equivalent
 Communication theory and practice that includes grammar mechanics, speaking to large and small groups, listening, composing messages, writing reports, and communicating with other cultures and nationalities. Includes hands-on experience with the Internet and presentation software programs.

244 **Three Credits**
WORD/INFORMATION PROCESSING AND DESKTOP PUBLISHING
PREREQUISITES: ASM 110; MSY 184 or departmental permission
 Overview of office systems within contemporary organizations, emphasizing principles and processes, people, and productivity. Major technology that supports information creation, manipulation, and distribution. Focuses on document production using specified software programs. Accurate production is stressed. Includes an introduction to desktop publishing.

324 **Three Credits**
BUSINESS SYSTEMS AND PROCEDURES
PREREQUISITE: ASM 110, 244 or department permission
 Analysis of the components of an office information system. Emphasis on managerial techniques and strategies for controlling effective and efficient information flow, to analyze, design and implement proposed systems. Includes multimedia presentations, integration, and use of business microcomputer software.

330 **Three Credits**
BUSINESS COMMUNICATIONS
 Techniques for writing management-oriented internal and external communications. Emphasis on theory, planning, oral and written presentations, audience perceptions, data organization, media selection, preparation techniques for business letters, and an overview of reports. Includes hands-on experience with the Internet and presentation software.

499 **Three Credits**
SPECIAL SEMINAR IN BUSINESS SUBJECTS
PREREQUISITES: SED 201, 233, 380; all freshman and sophomore level courses, and the teacher's examination for licensure requirements
 Instructional systems and materials for teaching business, office technology, and computer-related subjects.

ASTRONOMY - AST

201 **Three Credits**
GENERAL ASTRONOMY
PREREQUISITE: PHY 152
 General overview of the astronomical sciences at the college physics level. The night sky, the Earth-Moon system, the solar system, the Milky Way galaxy, the system of galaxies and Cosmology. Instructional methods include lectures, multimedia presentations and exercises.

301 **Three Credits**
METHODS IN OBSERVATIONAL ASTRONOMY
PREREQUISITE: AST 201
 Observational techniques of optical astronomy. The celestial sphere, naked-eyed observation and celestial system of coordinates. The use of the telescope and its auxiliary equipment. Observation of the sun, moon, planets and deep-sky objects. Astrometry, photometry and spectroscopy using CCD cameras.

302 **Three Credits**
ASTROBIOLOGY
PREREQUISITE: AST 201
 Study of origin and evolution of life on earth, exploration of the solar system, and probability of life in the solar system, in the universe, and communication with extra-terrestrial life.

303 **Three Credits**
INTRODUCTION TO ASTROPHYSICS
PREREQUISITES: PHY 153; AST 201 or equivalents
 Overview of physical fundamentals of astrophysics. Introduction to modern physics: special relativity, quantum mechanics, nuclear physics and statistical mechanics. Covers the context of practical application into introductory astrophysics topics. Instructional methods will include lectures, multi-media presentations and exercises.

401 **Three Credits**
STELLAR ASTROPHYSICS
PREREQUISITE: AST 303
 Intermediate level study of the physics of stars, the sun, stellar models, origin and evolution, nucleosynthesis, and last stages in stellar evolution. Formulates a simplify computer model of a star.

BIOLOGY - BIO

100 **Three Credits**
BIOLOGICAL SCIENCE
PREREQUISITES: ENG 101; MTH 103
COREQUISITE: BIO 100L
 Study of the general principles and problems of biology, with special emphasis on the human organism, including anatomy, physiology growth, reproduction, and inheritance. The evolution and diversity among living things are discussed from an ecological perspective.

100L **One Credit**
BIOLOGICAL SCIENCE LABORATORY
COREQUISITE: BIO 100
 Practical approach to understanding the nature of science. The exercises on cells, tissues, and organ systems are designed to help students understand the human systems.

105 HUMAN BIOLOGY COREQUISITE: BIO 105L Survey of the structure and function of the human body and the human life cycle with particular focus on reproduction, growth, and development.	Three Credits	258 GENERAL ENTOMOLOGY PREREQUISITE: BIO 160 COREQUISITE: BIO 258L or Consent of Chair Study of the basic morphology, physiology, ecology, and economic importance of insects.	Three Credits	271L ECOLOGY LABORATORY PREREQUISITES: BIO 160; 161 COREQUISITE: BIO 271 or Consent of Chair Composition and distribution of biotic communities, emphasizing interrelationships of organisms and their physical environment with application to current environmental problems.	One Credit
105L HUMAN BIOLOGY LABORATORY COREQUISITE: BIO 105 Laboratory includes dissection of preserved animals/structures, models and microscopic observations, slide/videotapes, computer-simulated dissections and experiments, and hands-on experiments.	One Credit	258L GENERAL ENTOMOLOGY LABORATORY PREREQUISITE: BIO 160 COREQUISITE: BIO 258 or Consent of Chair Demonstrates the basic morphology, physiology, ecology, and economic importance of insects.	One Credit	272 HUMAN ANATOMY PREREQUISITE: BIO 110 COREQUISITE: BIO 272L or Consent of Chair Study of the basic structure of organs and organ systems of the body.	Three Credits
110 GENERAL BIOLOGY COREQUISITE: BIO 110L or Consent of Chair Survey of basic concepts and principles with emphasis at the molecular and cellular levels of biological systems. Includes contemporary genetics, metabolism, and organ systems of representative plants and animals.	Three Credits	260 TAXONOMY OF THE VASCULAR PLANTS PREREQUISITE: BIO 161 COREQUISITE: BIO 260L or Consent of Chair Study of nomenclature, identification, and phylogenetic relationship of vascular plants. Field trip requirements: development of a project for preserving and identifying vascular plants.	Three Credits	272L HUMAN ANATOMY LABORATORY PREREQUISITE: BIO 110 COREQUISITE: BIO 272 or Consent of Chair Study of the basic structure of organs and organ systems of the body.	One Credit
110L GENERAL BIOLOGY LABORATORY COREQUISITE: BIO 110 or Consent of Chair Survey of basic concepts and principles with emphasis at the molecular and cellular levels of biological systems. Includes contemporary genetics, metabolism, and organ systems of representative plants and animals.	One Credit	260L TAXONOMY OF THE VASCULAR PLANTS LABORATORY PREREQUISITE: BIO 161 COREQUISITE: BIO 260 or Consent of Chair Identification of local plants and plant preservation techniques.	One Credit	274 PLANT MORPHOLOGY PREREQUISITE: BIO 161 COREQUISITE: BIO 274L or Consent of Chair Comparative survey of typical representatives of the plant kingdom with description of form and structure, reproductive processes (normal life cycles), and phylogenetic relationships of the principal plant groups.	Three Credits
160 GENERAL ZOOLOGY PREREQUISITE: BIO 110 COREQUISITE: BIO 110L or Consent of Chair Biological concepts of animal life, including morphology, taxonomy, life histories, reproduction and distribution.	Three Credits	262 NATURAL HISTORY COREQUISITE: BIO 262L or Consent of Chair Survey of the principal plant and animal kingdom representatives with emphasis on recognition of some common types, their ecological association, classification, and distribution. (Requirements: field trips, a paper, and development of a project on identification of organisms collected).	One Credit	274L PLANT MORPHOLOGY LABORATORY PREREQUISITE: BIO 161 COREQUISITE: BIO 274 or Consent of Chair Laboratory focuses on comparative surveys of typical representatives of the plant kingdom with description of form and structure, reproductive processes (normal life cycles), and phylogenetic relationships of the principal plant groups.	One Credit
160L GENERAL ZOOLOGY LABORATORY PREREQUISITE: BIO 110 COREQUISITE: BIO 160 or Consent of Chair Biological concepts of animal life, including morphology, taxonomy, life histories, reproduction and distribution.	One Credit	262L NATURAL HISTORY LABORATORY COREQUISITE: BIO 262 or Consent of Chair Survey of the principal plant and animal kingdom representatives with emphasis on recognition of some common types, their ecological association, classification, and distribution. (Requirements: field trips, a paper, and development of a project on identification of organisms collected).	Two Credits	276 INVERTEBRATE ZOOLOGY PREREQUISITE: BIO 160 COREQUISITE: BIO 276L or Consent of Chair Development, morphology, comparative anatomy, phylogeny, classification and physiology of invertebrates.	Three Credits
161 GENERAL BOTANY PREREQUISITE: BIO 110 COREQUISITE: BIO 161L or Consent of Chair Introductory study of the basic principles of botany, including comparative studies on morphology, physiology, genetics, ecology, and economic uses of major plants.	Three Credits	263 VERTEBRATE EMBRYOLOGY PREREQUISITE: BIO 160 COREQUISITE: BIO 263L or Consent of Chair Study of the mechanics of development, including the origin of gametes, fertilization, organogenesis, and morphogenesis of early development of the frog, chick, pig, and man.	Three Credits	276L INVERTEBRATE ZOOLOGY LABORATORY PREREQUISITE: BIO 160 COREQUISITE: BIO 276 or Consent of Chair Laboratory focuses on the development, morphology, comparative anatomy, phylogeny, classification and physiology of invertebrates.	One Credit
161L GENERAL BOTANY LABORATORY PREREQUISITE: BIO 110 COREQUISITE: BIO 161 or Consent of Chair Introductory study of the basic principles of botany, including comparative studies on morphology, physiology, genetics, ecology, and economic uses of major plants.	One Credit	263L VERTEBRATE EMBRYOLOGY LABORATORY PREREQUISITE: BIO 160 COREQUISITE: BIO 263 or Consent of Chair Laboratory study of the mechanics of development, including the origin of gametes, fertilization, organogenesis, and morphogenesis of early development of the frog, chick, pig, and man.	One Credit	278 CELL BIOLOGY PREREQUISITES: BIO 160; 161; CHM 222; 222L COREQUISITE: BIO 278L or Consent of Chair Study of intracellular mechanisms and the influence of such processes on the cell and its extracellular environment.	Three Credits
163 MICROBIOLOGY FOR THE HEALTH SCIENCES COREQUISITE: BIO 163L or Consent of Chair General survey of microorganisms that cause human diseases. The mechanisms of body defense and immunity to infectious agents are discussed.	Three Credits	270 COMPARATIVE ANATOMY OF VERTEBRATES PREREQUISITE: BIO 160 COREQUISITE: BIO 270L or Consent of Chair Study of the classification, morphology, and anatomy of vertebrates, including the functions of their organs and organ systems.	Three Credits	278L CELL BIOLOGY LABORATORY PREREQUISITES: BIO 160; 161; CHM 221/ 221L; CHM 222/ 222L COREQUISITE: BIO 278 or Consent of Chair Study of intracellular mechanisms and the influence of such processes on the cell and its extracellular environment.	One Credit
163L MICROBIOLOGY FOR THE HEALTH SCIENCES LABORATORY COREQUISITE: BIO 163 or Consent of Chair Study of culture methods, microscopic sterilization, and aseptic techniques.	One Credit	270L COMPARATIVE ANATOMY OF VERTEBRATES LABORATORY PREREQUISITE: BIO 160 COREQUISITE: BIO 270 or Consent of Chair Study of the classification, morphology, and anatomy of vertebrates, including the functions of their organs and organ systems.	One Credit	310 GENERAL MICROBIOLOGY PREREQUISITES: BIO 160 or BIO 161; CHM 221/ 221L and CHM 222/ 222L COREQUISITE: BIO 310L or Consent of Chair Introduction to the microbes, including bacteria, molds, yeasts, and viruses. Investigation of fundamental concepts of microorganisms, including nutrition, ecology, and physiology; principles of sterilization and methods of control of microorganisms; their economic importance.	Three Credits
165, 166 HUMAN ANATOMY AND PHYSIOLOGY COREQUISITES: BIO 165L, 166L One-year course consisting of an integrated study of the structure and function of the human body: BIO 165 is a lecture series on cells through the four major tissues, and BIO 166 presents lecture topics on the structure and function of organs and organ systems. (Must be taken in sequence).	Three Credits Each	271 ECOLOGY PREREQUISITES: BIO 160; 161 COREQUISITE: BIO 271L or Consent of Chair Composition and distribution of biotic communities, emphasizing interrelationships of organisms and their physical environment with application to current environmental problems.	Three Credits	310L GENERAL MICROBIOLOGY LABORATORY PREREQUISITES: BIO 160 or 161; CHM 221/ 221L and CHM 222/ 222L COREQUISITE: BIO 310 or Consent of Chair Introduction to the microbes, including bacteria, molds, yeasts, and viruses. Investigation of fundamental concepts of microorganisms, including nutrition, ecology, and physiology; principles of sterilization and methods of control of microorganisms; their economic importance.	One Credit
165L, 166L HUMAN ANATOMY AND PHYSIOLOGY LABORATORY PREREQUISITES: BIO 165; 166 or Concurrent Emphasis on teaching aids such as computed managed instructions and hands-on experience with animal tissues.	One Credit Each	271 ECOLOGY PREREQUISITES: BIO 160; 161 COREQUISITE: BIO 271L or Consent of Chair Composition and distribution of biotic communities, emphasizing interrelationships of organisms and their physical environment with application to current environmental problems.	Three Credits	310L GENERAL MICROBIOLOGY LABORATORY PREREQUISITES: BIO 160 or 161; CHM 221/ 221L and CHM 222/ 222L COREQUISITE: BIO 310 or Consent of Chair Introduction to the microbes, including bacteria, molds, yeasts, and viruses. Investigation of fundamental concepts of microorganisms, including nutrition, ecology, and physiology; principles of sterilization and methods of control of microorganisms; their economic importance.	One Credit
253 HUMAN PHYSIOLOGY PREREQUISITE: BIO 272 or Consent of the Instructor Survey of the integration of functions in the human body, noting their structural relationships.	Three Credits				

BIOLOGY - BIO (continued)**320 Three Credits**
PATHOPHYSIOLOGY
PREREQUISITES: BIO 165 and 166

Introduction to the study of the normal physiology of various systems of the human body and how alterations in structure and function can initiate the onset of disease. Inherent in this course is a study of the adaptive capacity of the human body.

330 Three Credits
REVIEW OF HUMAN ANATOMY, PHYSIOLOGY AND MICROBIOLOGY FOR HEALTH PROFESSIONS

PREREQUISITES: BIO 166 and 163

COREQUISITE: BIO 330L or Consent of Chair

Study of the structure and function of the human body.

330L One Credit
REVIEW OF HUMAN ANATOMY, PHYSIOLOGY AND MICROBIOLOGY FOR HEALTH PROFESSIONS LABORATORY

PREREQUISITES: BIO 166 and 163

COREQUISITE: BIO 330 or Consent of Chair

Current practices of sterilization, aseptic techniques, cultural methods, principles of host defense mechanisms, and infectious disease processes.

350 Three Credits
PARASITOLOGY

PREREQUISITE: BIO 110

COREQUISITE: BIO 350L or Consent of Chair

Study of symbiotic relationships between representatives that are dependent upon a symbiont and the clinical and pathological implications inherent in such a relationship.

350L One Credit
PARASITOLOGY LABORATORY

PREREQUISITE: BIO 110

COREQUISITE: BIO 350 or Consent of Chair

Inquiry based application of the clinical and pathological implications of inherent relationships established between symbionts.

351 Three Credits
PRINCIPLES OF GENETICS

PREREQUISITES: BIO 160 and 161; CHM 222

COREQUISITE: BIO 351L or Consent of Chair

Introductory course dealing with the principles of heredity and variation in plants and animals, including man.

351L One Credit
PRINCIPLES OF GENETICS LABORATORY

PREREQUISITES: BIO 160 and 161; CHM 222

COREQUISITE: BIO 351 or Consent of Chair

Introductory genetic labs are designed to provide exercises that deal with the principles of heredity and variation in plants and animals, including man.

362 Three Credits
HISTOLOGY AND MICRO TECHNIQUE

PREREQUISITES: BIO 160 and 161

COREQUISITE: BIO 362L or Consent of Instructor

Study of the structure and properties of cells, the cellular relationships to the main type of tissues and histology of organs; the principles and methods of preparation of plant and animal tissues, and some techniques in histochemistry.

362L One Credit
HISTOLOGY AND MICRO TECHNIQUE LABORATORY

PREREQUISITES: BIO 160 and 161

COREQUISITE: BIO 362 or Consent of Instructor

Study of the structure and properties of cells, the cellular relationships to the main type of tissues and histology of organs; the principles and methods of preparation of plant and animal tissues and some techniques in histochemistry.

364 One Credit
SEMINAR AND COLLOQUIUM IN BIOLOGY

PREREQUISITE: Junior or Senior Standing or Consent of Instructor

Consideration of current research and development in biology, including reviews, reports, and discussions of investigations reported in scientific journals.

400 Three Credits
FORENSIC MOLECULAR BIOLOGY

PREREQUISITE: Junior or Senior Standing or Consent of Instructor

Designed to provide students with the scientific background and hands-on experience on the molecular aspects of DNA forensics. Protocols and procedures currently used in DNA forensic tests will be performed, including DNA isolation from various sample sources, gel electrophoresis, PCR, STR analysis, and data interpretation. Relevant scientific journals will be consulted and articles discussed.

400L One Credit
FORENSIC MOLECULAR BIOLOGY LAB

Experiment of DNA forensic tests on current protocols and procedures, including DNA isolation from various sample sources, gel electrophoresis, PCR, STR analysis, and data interpretation.

452 Two Credits
BIOLOGICAL INSTRUMENTAL TECHNIQUES

PREREQUISITES: CHM 221/ 221L and CHM 222/ 222L

Training and practice in various bio-instrumental techniques, including statistical analysis of data, respirometry, photo microscopy, spectrophotometry, chromatography, electrophoresis, and physiological measurements.

457 Two Credits
EVOLUTION

PREREQUISITE: BIO 351 or Consent of Instructor

Discussion and lectures on the organic evolution of plants and animals.

459 Three Credits
GENERAL PHYSIOLOGY

PREREQUISITES: 16 semester hours of Biology and Organic Chemistry

COREQUISITE: BIO 459L or Consent of Chair

Discusses fundamental principles and properties of physiological processes common to animals.

459L One Credit
GENERAL PHYSIOLOGY LABORATORY

PREREQUISITES: 16 semester hours of Biology and Organic Chemistry

COREQUISITE: BIO 459L or Consent of Chair

Demonstrates fundamental principles and properties of physiological processes common to animals.

461 Three Credits
PLANT PHYSIOLOGY

PREREQUISITES: BIO 161; CHM 322, 322L

COREQUISITE: BIO 461L or Consent of Instructor

Consideration of the physicochemical factors involved in plant growth with special emphasis on synthesis, water economy, transpiration, energy transfers, mineral nutrition, regulation, and the red, far-red reactions of phytochrome of seed plants.

461 One Credit
PLANT PHYSIOLOGY LABORATORY

PREREQUISITES: BIO 161; CHM 322, 322L

COREQUISITE: BIO 461 or Consent of Instructor

Consideration of the physicochemical factors involved in plant growth with special emphasis on synthesis, water economy, transpiration, energy transfers, mineral nutrition, regulation, and the red, far-red reactions of phytochrome of seed plants.

469 Three Credits
BIOCHEMISTRY

PREREQUISITES: CHM 222 or equivalent

COREQUISITE: BIO 461 or Consent of Instructor

Biochemical analysis of cellular function and consideration of the implications of the properties of cells, including the cell and its organization, protein structure and specificity, biochemistry of lipids, carbohydrates, and nucleic acids; regulation of cell metabolism; cellular basis of hormone cation, and biochemical aspects of synthesis.

469L One Credit
BIOCHEMISTRY LABORATORY

PREREQUISITE: CHM 222 or equivalent

COREQUISITE: BIO 461L or Consent of Instructor

Designed to analyze biochemical properties of protein structure and specificity, biochemistry of lipids, carbohydrates, and nucleic acids; regulation of cell metabolism; cellular basis of hormone cation, and biochemical aspects of synthesis.

472 Three Credits
CELL STRUCTURE AND FUNCTION

PREREQUISITES: BIO 160, 161; CHM 222, 222L

Introduction to biochemistry, cellular metabolism, and cellular ultrastructure as they relate to cell function.

474 Three Credits
MOLECULAR BIOLOGY

PREREQUISITES: BIO 310; CHM 222 and 222L

Semi-quantitative introduction to chemical, physical or molecular aspects of biology. It is believed that through an interdisciplinary approach, science majors in general are given a firm background on which to build, and the course also enables students to acquire a fairly detailed understanding of biological phenomena.

474L Two Credits
MOLECULAR BIOLOGY LABORATORY

PREREQUISITE: Consent of the Instructor

Introduction to the basic techniques in Recombinant DNA which encompasses the principles and practical aspects of

molecular techniques through discussions, demonstrations, and hands-on experience, covering isolation of DNA, restriction endonuclease digestion, gel-electrophoresis, transformation of competent cells, nick translation, southern and northern blots, and DNA sequencing.

480 Four Credits
INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY

PREREQUISITES: CHM 322, 322L

Multi-disciplinary course designed to focus on the importance of the electric approach to environmental toxicological studies. Examine the sources and types of environmental toxicant, the levels and modes of exposure, and their significant toxic hazard in the work place, the household, and the general environment.

482 Four Credits
EPIDEMIOLOGY

PREREQUISITE: BIO 310

Basic principles and methods of Epidemiology and the application to communicable and noncommunicable diseases, community health, and health services research. Reviews observational and experimental study design; methods and data analysis; and various indices of assessing morbidity, mortality, and population dynamics.

487 Three Credits
ECOLOGICAL TOXICOLOGY

PREREQUISITE: BIO 271

COREQUISITE: BIO 487L or Consent of Chair

Study of the commonly used pesticides, their toxicity and implications for man and environment.

487L One Credit
ECOLOGICAL TOXICOLOGY LABORATORY

PREREQUISITE: BIO 271

COREQUISITE: BIO 487 or Consent of Chair

Studies the use of pesticides, their toxicity and implications for man and environment.

490 Three Credits
IMMUNOLOGY OF TOXINS

PREREQUISITE: BIO 310

COREQUISITE: BIO 490L or Consent of Chair

Introduction to the specific and non-specific host mechanisms of defense as well as the humoral and cellular reactions.

490L One Credit
IMMUNOLOGY OF TOXINS LABORATORY

PREREQUISITE: BIO 310

COREQUISITE: BIO 490 or Consent of Chair

Special emphasis on the immune response of animals to infectious agents, microbial toxins, and environmental toxins.

492 Four Credits
PRINCIPLES OF GENETIC TOXICOLOGY

PREREQUISITES: BIO 351; CHM 322 and 322L

General principles of toxicology as they relate to adverse genetic effects of environmental agents. Basic mechanism of action, including the molecular and chemical basis, for mutagenic effects. Techniques for the detection and characterization of chemical mutagen will be included in the laboratory demonstrations.

494 Three Credits
MEDICAL ENTOMOLOGY

PREREQUISITE: BIO 160

COREQUISITE: BIO 494L or Consent of Chair

Study of the taxonomy, morphology, behavior, and relationships of arthropods of medical importance, and arthropod-borne human diseases.

494L One Credit
MEDICAL ENTOMOLOGY LABORATORY

PREREQUISITE: BIO 160

COREQUISITE: BIO 494 or Consent of Chair

Emphasis on the epidemiological aspects of the disease and the biological, chemical, and integrated methods of control of the arthropods.

495 Four Credits
BIOSTATISTICS

PREREQUISITES: BIO 110; MTH 153

Introduction to statistical methods of health sciences. The principles underlying basic methods of statistical analysis are examined, including elementary concepts of probability, descriptive statistics, and statistical estimation and testing. Special emphasis on the problems of interpreting data from experimental and observation studies.

496 Four Credits
SPECIAL PROBLEMS IN TOXICOLOGY

PREREQUISITES: BIO 495; CHM 322 and 322L

Discussion and practical work sessions concerning the development of ideas and activities for specific experimental studies. The specific features include conversance with

current methodology, initiation of independent and original protocols as a toxicological tool.

497 Two Credits

INTRODUCTION TO RESEARCH

PREREQUISITE: Junior or Senior Standing

Introduction to independent experimental work under the guidance of staff members. Provisions for Honors and undergraduate research participation projects and investigations.

499 Three Credits

TISSUE AND CELL CULTURE

PREREQUISITE: Consent of Instructor

COREQUISITE: BIO 499L

Study of the basic protocols currently employed in the initiation and maintenance of cell lines for in vitro studies, including cell structure, cell types and tissues, behavior of cells in culture, and environmental factors that modulate cell growth.

499L One Credit

TISSUE AND CELL CULTURE LABORATORY

PREREQUISITE: Consent of Instructor

COREQUISITE: BIO 499

Experience in fundamental aspects of handling cell lines.

500 Three Credits

BIOLOGICAL ASPECTS OF AGING

Study designed for gerontology students concerning the scientific basis of the causes, effects, mechanisms, and functions of growing old.

501 Three Credits

HISTORY OF BIOLOGICAL CONCEPTS

PREREQUISITES: BIO 110 and BIO 474

Study of significant developments in the field of biology that influenced modern biological concepts. Discoveries and their impact on technological advances are discussed.

502 Three Credits

MODERN BIOLOGY

PREREQUISITES: BIO 110 or equivalent, and CHM 321, 322

Fundamental concepts of biology at the organismal, cellular, and molecular levels. Emphasis on molecular biology of cell function and organization; topics include animal cells, assembly cell structure, principles and mechanisms of inheritance, the conformations and dynamics of nucleic acids and their interactions with proteins, and molecular and cell biology of growth regulation.

510 Three Credits

EXPERIENCE IN BIOLOGY

PREREQUISITES: BIO 110 and BIO 501

Theory and practice of selected biological and biochemical techniques of current importance to molecular biology including a coordinated succession of experiments employing modern laboratory tools to examine significant biological problems.

520 Three Credits

SPECIAL PROBLEMS IN BIOLOGY:

PREREQUISITE: BIO 110

Discusses the central problems of current biology research in such areas as molecular biology, virology, immunology, microbiology

BUILDING CONSTRUCTION/ TECHNOLOGY - BCT

162 Three Credits

MATERIALS OF CONSTRUCTION

Survey on construction materials, their characteristics, advantages, and limitations. Emphasis on the use of these materials in various building systems, including costs and durability.

260 Three Credits

BUILDING CODES AND SPECIFICATIONS

Emphasis on regional and national building codes, history of building regulations, zoning and its influence on construction and business, including specifications and accepted on costs, and durability.

262 Three Credits

METHODS OF BUILDING CONSTRUCTION I

Emphasis on the design planning and methods of sewage and electrical systems, as well as local and national building codes and techniques.

263 Three Credits

FUNDAMENTALS OF SURVEYING

Principles and practices of using basic surveying instruments, error analysis, and note keeping. (Meets 4 hrs. per week)

264 Three Credits

INTERMEDIATE SURVEYING

PREREQUISITE: BCT 263

Practice of obtaining horizontal, vertical, and angular measurements; azimuths and bearing; traverse surveys and computations; triangulation of ordinary precision; stadia; land area calculation, and construction surveys. (Meets 4 hrs. per week)

265 Three Credits

ARCHITECTURAL DETAILS

PREREQUISITE: TMD 150

Study of building construction components for residential buildings and light commercial construction. (Meets 6 hrs. per week)

266 Three Credits

ARCHITECTURAL DRAFTING

Study of building construction drawings for residential buildings and light commercial construction. (Meets 6 hrs. per week)

363 Three Credits

METHODS OF BUILDING CONSTRUCTION II

PREREQUISITE: BCT 262

Comprehensive study of building construction techniques in the construction industry. Emphasis on residential and commercial type structures. Field trips are included.

364 Three Credits

STEEL STRUCTURES

PREREQUISITES: TMD 345 and 345L

Theory and practice in the design and fabrication of structural steel in conformance with current codes and practices. (Meets 4 hrs. per week.)

367 Three Credits

CONCRETE STRUCTURES

PREREQUISITES: TMD 345 and 345L

Theory and practice in the design of concrete structures in conformance with current codes and practices

368 Three Credits

TIMBER STRUCTURES

PREREQUISITES: TMD 345 and 345L

Theory and practice in the design and fabrication of structural timber in conformance with current codes and practices.

370 Three Credits

COST ESTIMATES AND QUALITY CONTROL I

PREREQUISITE: BCT 266

Surveys methods of taking quantities from plans, preparation of unit price and lump sum estimates for structural units, including material, expediting, job supervision, site selection, and progress charts and graphs.

372 Three Credits

BUILDING CONSTRUCTION PRACTICES

Designed to provide practical experiences using the latest techniques in working with masonry, wood, electrical, plumbing, steel and concrete structures.

376 Three Credits

SOIL MECHANICS

COREQUISITE: BCT 376L

Study of the engineering properties of soil and how those properties affect behavior, such as the movement of water through soil, including ground water contamination, stresses in a soil mass, volume change, shear strength, subsurface investigations and lateral earth pressure.

376L One Credit

SOIL MECHANICS LABORATORY

COREQUISITE: BCT 376

Study of the skills necessary to perform soils testing.

462 Three Credits

PROBLEM ANALYSIS AND PLANNING

PREREQUISITES: BCT 260 and 370

Consideration given to individual problem solving and analysis in specialized areas.

464 Three Credits

ORGANIZATION AND SUPERVISION OF CONSTRUCTION

PREREQUISITE: BCT 462

Study of construction methods and organization; layout and planning; material requisitioning and progress scheduling, including basic training in estimating quantities of materials from plans and specifications, approximate cost data, fixed and operating cost in major construction works.

466 Three Credits

STRUCTURAL PLANNING AND DESIGN

PREREQUISITE: BCT 462

Comprehensive study of construction documents for group project, including preparation of working drawings, specifications, scheduling and cost estimates for project. (Meets 6 hrs. per week.)

BUSINESS ADMINISTRATION - BAD

175 Three Credits

INTRODUCTION TO BUSINESS

Introduction to the world of business and the integrative nature of business activities, business topics germane to both corporate and entrepreneurial environment, including the impact of globalization. Emphasis on the decision making process in various interdepartments business functional areas

184 Three Credits

ESSENTIALS OF MICROCOMPUTING

Overview of computer information systems that introduces computer hardware, software, procedure, and explores their integration and application in business. The fundamentals of computer problem solving, programming in higher-level programming language and microcomputer software packages are discussed and applied.

450 One Credit

BUSINESS SEMINAR

PREREQUISITE: Junior or Senior Standing

Discusses special topics in business and modern business practices in seminar form. Speakers from corporate and academic world present seminars. Library research and attendance to seminars required.

CHEMISTRY - CHM

100 Three Credits

CHEMISTRY: MAN AND ENVIRONMENT

PREREQUISITES: ENG 101; MATH 103

COREQUISITE: CHM 100L

Survey of the principles and application of chemistry, designed for non-science major with limited background in science and mathematics. Includes topics in general, organic, and biochemistry designed to aid the student in understanding the chemical factors in our technological society.

100L One Credit

CHEMISTRY: MAN AND ENVIRONMENT LABORATORY

COREQUISITE: CHM 100

Introduction to laboratory techniques in chemistry.

110 Three Credits

BASIC CONCEPTS IN CHEMISTRY

Introduction to the basic concepts necessary for an understanding of chemistry. These fundamental concepts are the foundation for this course and are more fully developed in later chemistry courses. Designed for students with no chemistry background.

119, 120 Three Credits

GENERAL CHEMISTRY FOR NON-SCIENCE MAJORS

COREQUISITES: CHM 119L, 120L

Development of the principles of chemistry in such a way that delivers the important role of chemistry in daily living. Must be taken in sequence. (For non-science majors).

119L, 120L One Credit Each

GENERAL CHEMISTRY LABORATORY

COREQUISITES: CHM 119, 120

Study of the basic laboratory methodology in the form of experiments which relate to technology and daily experiences. Must be taken in sequence.

200 Three Credits

CHEMISTRY FOR LIFE

PREREQUISITE: High School Chemistry or CHM 100

COREQUISITE: CHM 200L

Survey of the principles and applications of chemistry designed to emphasize the relationship of chemistry to life. Includes a brief review of general chemistry, a survey of organic and biochemistry, and applications of chemistry to life processes and environmental studies.

200L One Credit

CHEMISTRY FOR LIFE LABORATORY

COREQUISITE: CHM 200

Laboratory demonstrates concrete examples of the concepts.

CHEMISTRY – CHM (continued)

215, 216 **Three Credits Each**
CHEMISTRY
COREQUISITE: CHM 215L, 216L
 Study of the main concepts of general, organic, and biological chemistry. Designed for health science students whose curricula require only one year of chemistry.

215L, 216L **One Credit Each**
CHEMISTRY LABORATORY
COREQUISITE: CHM 215, 216
 Introduction to laboratory techniques in chemistry.

221, 222 **Three Credits Each**
GENERAL CHEMISTRY I, II
COREQUISITES: MTH 153; CHM 221L, 222L
 Emphasis on theoretical principles necessary for an understanding of the nature of matter and the physical and chemical changes which it undergoes. High school chemistry not required but desirable. Good understanding of algebra desirable. Must be taken in sequence.

221L, 222L **One Credit Each**
GENERAL CHEMISTRY LABORATORY I, II
COREQUISITES: CHM 221, 222, 223, and 224
 Experimental chemistry utilizing methods of separation, identification, and purification of mixtures. Emphasis on thermochemical and chemical equilibrium concepts through analysis of experimental data. Must be taken in sequence.

223, 224 **Four Credits Each**
GENERAL CHEMISTRY I, II
PREREQUISITE/COREQUISITE: MTH 153
 General Chemistry for chemistry majors, emphasizing theoretical principles necessary for understanding the nature of matter and the changes it undergoes. High school chemistry or its equivalent is desirable. Good algebra skills are required because of the quantitative nature of much of the work. Includes problem-solving practice and inclusion of special chemistry topics.

312 **Three Credits**
INTRODUCTION TO ORGANIC CHEMISTRY
PREREQUISITE: CHM 222 or 120
 Study of organic nomenclature, structure of organic compounds, the classes of organic compounds, and the reactions of organic molecules.

312L **One Credit**
ORGANIC CHEMISTRY LABORATORY
PREREQUISITE: CHM 222L or 120L
COREQUISITE: CHM 312
 Introduction to the techniques of purification, synthesis, and analysis used in the study of organic chemical reactions. Material is chosen to illustrate reactions and theoretical material presented in CHM 312.

313 **Three Credits**
INTRODUCTION TO BIOCHEMISTRY
PREREQUISITE: CHM 312
COREQUISITE: CHM 313L
 Introduction to the structure of molecules in biochemical systems and the reactions involved in their metabolism.

313L **One Credit**
BIOCHEMISTRY LABORATORY
PREREQUISITE: CHM 312L
COREQUISITE: CHM 313
 Introduction to biochemical techniques, including spectroscopic analysis, study of enzyme activity, and isolation and characterization of classes of biomolecules.

321, 322 **Three Credits Each**
ORGANIC CHEMISTRY I, II
PREREQUISITE: CHM 222 or 224
COREQUISITES: CHM 321L, 322L
 Introduction to the chemistry of carbon-containing compounds, with emphasis on the relationship between the structure of organic molecules and their chemical reactions. Designed for science majors, including pre-medicine. Must be taken in sequence.

321L, 322L **Two Credits Each**
ORGANIC CHEMISTRY LABORATORY I, II
PREREQUISITE: CHM 222L
COREQUISITE: CHM 321, 322
 Laboratory course designed to teach modern laboratory procedures and techniques and to illustrate the reactions and theoretical material presented in CHM 321, 322. Must be taken in sequence.

323L **Two Credits**
SYNTHESIS AND ANALYSIS IN ORGANIC CHEMISTRY
PREREQUISITE: CHM 321L
COREQUISITE: CHM 322

Study of techniques of modern organic synthesis and the analysis of reactions and reaction products with emphasis on modern laboratory techniques, including chromatography and spectroscopic analysis. For chemistry majors (others by permission of the instructor).

331 **Three Credits**
ANALYTICAL CHEMISTRY I
PREREQUISITES: CHM 222 or 224; MTH 153
COREQUISITE: CHM 331L

Study of volumetric and gravimetric methods of analysis with emphasis on chemical equilibrium, including acid-base, precipitation, oxidation-reduction, and complex metric methods of analysis.

331L **Two Credits**
ANALYTICAL CHEMISTRY I LABORATORY
COREQUISITE: CHM 331

Practice of volumetric and gravimetric methods of analysis, including the use of instruments such as pH meters and electroanalyzers.

332 **Three Credits**
ANALYTICAL CHEMISTRY II
PREREQUISITE: CHM 331; PHY 152
COREQUISITE: CHM 322L

Study of instrumental methods of analysis, including electrochemical, spectroscopic, chromatographic, thermal, and kinetic methods.

332L **Two Credits**
ANALYTICAL CHEMISTRY II LABORATORY
PREREQUISITE: CHM 331L
COREQUISITE: CHM 332

Methods of analysis employing electrochemical techniques, spectrophotometer, chromatograph, microprocessor analyzers, and thermal analyzers.

345 **Three Credits**
MATHEMATICAL METHODS & LOGIC FOR THE PHYSICAL SCIENCES
PREREQUISITE: MTH 252

Application of differential equations, vector analysis, determinants and functions to problems encountered in the physical sciences. Emphasis on practical problem-solving skills.

351, 352 **One Credit Each**
SEMINAR
 Presentation and discussion of current topics in all areas of chemistry. Required of Junior chemistry majors.

361, 362 **Three Credits Each**
PHYSICAL CHEMISTRY I, II
PREREQUISITES: MTH 251; PHY 153 for CHM 361; MTH 252 for CHM 362
COREQUISITES: CHM 331, 345; MTH 252

Quantitative study of the structure and physical properties of matter including study of the laws governing chemical interaction and the foundations upon which these laws. Covers energy changes accompanying physical and chemical changes. Must be taken in sequence.

363L **Two Credits**
PHYSICAL CHEMISTRY LABORATORY
COREQUISITE: CHM 361, 362

Typical physicochemical measurements which seek to refine computational skills and experimental techniques. Instrumentation associated with spectroscopy, kinetics, macromolecular characterization regularly employed.

370 **Three Credits**
INDUSTRIAL CHEMISTRY
PREREQUISITE: Approval of the Chemistry Department
 Seminars supervised by visiting industrial chemists as well as the departmental faculty, including internship for cooperative training at an industrial chemical company with co-op assignment opportunities.

397, 398 **One Credit Each**
INTRODUCTION TO RESEARCH
PREREQUISITE: Approval of the Instructor
 Investigation of current problems in chemistry, supervised by one of the members of the Chemistry Department. (5 hours lab per week required for one semester credit hour.)

431, 432 **Three Credits Each**
BIOCHEMISTRY I, II
PREREQUISITES: CHM 322, 362

In-depth study of the reactions occurring in living systems, designed for science majors (especially students intending advanced study in the health sciences). Topics include

molecular architecture, molecular energetics, interactions of biomolecules, intermediary metabolism, mass transport in biological systems, and molecular genetics.

431L, 432L **Two Credits Each**
BIOCHEMISTRY LABORATORY I, II
PREREQUISITE: CHM 322L or CHM 323L

Emphasis on the procedures and operations of modern instrumentation used for isolation, purification, and study of biomolecules including modern chromatography techniques, gel and paper electrophoreses, ultra centrifugation, spectroscopic techniques, etc. Techniques are applied to isolation of enzymes, other proteins, nucleic acids, and the study of enzyme kinetics and enzyme-catalyzed reactions in several systems.

433 **Three Credits**
PATHOLOGICAL BIOCHEMISTRY
PREREQUISITE: CHM 432

Study of the biochemical principles and mechanisms as they apply to the disease state.

451, 452 **One Credit Each**
SEMINAR
 Presentation and discussion of current topics in all areas of chemistry. Required of all senior chemistry majors.

461L **Two Credits**
CHROMATOGRAPHY
PREREQUISITE: CHM 332L
 Problem solving in separation of mixtures using gas, liquid, column and thin-layer chromatography.

462L **Two Credits**
SPECTROSCOPY
PREREQUISITE: CHM 332L
 Problem solving in molecular spectroscopy using common techniques in infrared spectroscopy, nuclear magnetic spectroscopy, and ultraviolet-visible spectroscopy.

471 **Three Credits**
TOXICOLOGY
PREREQUISITE: CHM 322 or Permission of the Instructor
 Survey of effects of poisons, including study of dose-response phenomena, the nature of toxic effects, and the absorption, distribution, metabolism, and excretion of toxic materials.

473 **Three Credits**
ADVANCED INORGANIC CHEMISTRY
PREREQUISITE/ COREQUISITE: CHM 362
 Study of chemical bonding, molecular structure, coordination compounds, and descriptive inorganic chemistry.

473L **Two Credits**
ADVANCED INORGANIC CHEMISTRY LABORATORY
PREREQUISITE: CHM 332L
 Techniques for synthesis and characterization of transition metal coordination complexes. Utilize methods such as ion exchange chromatography, molar conductivity, electronic absorption, infrared, and nuclear magnetic resonance spectroscopy. The format is that of a unified project rather than a series of separate, unrelated experiments.

475 **Three Credits**
ADVANCED ORGANIC CHEMISTRY
PREREQUISITE: CHM 322

In-depth study of organic reaction mechanisms with emphasis on physical measurements as a means of determining structure and mechanisms. The course is designed for students planning advanced study in chemistry, biology, or medical sciences.

476 **Three Credits**
QUALITATIVE ORGANIC ANALYSIS
PREREQUISITE: CHM 322L or CHM 323L
 Introduction to a wider range of laboratory techniques and consideration of classical wet analysis.

477 **Three Credits**
SCIENTIFIC COMMUNICATION
 Comprehensive survey of scientific literature with emphasis on personal record-keeping, writing strategies, and appropriate writing styles for scientific writing. This class is open to all seniors interested in improving their writing skills.

478 **Three Credits**
INTRODUCTION TO INORGANIC SPECTROSCOPY
 Introduction to the basic theories of structural methods (spectroscopy) in Inorganic Chemistry. Topics include Nuclear Magnetic Resonance Spectroscopy; Electron Spin and Nuclear Quadrupole Resonance Spectroscopy; Mossbauer Spectroscopy; Mass Spectroscopy; and Diffraction Methods.

481/482 **Three Credits**
SPECIAL TOPICS IN CHEMISTRY
PREREQUISITE: Approval of Chemistry Department
 Emphasis on modular topics including modern chemical bonding, stereochemistry, spectroscopy, ionization equilibrium, macromolecule, acid-base chemistry, organic and inorganic nomenclature, kinetics, advanced analytical techniques, etc. Strongly encouraged for senior chemistry majors following qualifying examinations at the end of the junior year.

497, 498 **One Credit Each**
INTRODUCTION TO RESEARCH
PREREQUISITE: Approval of the Instructor Involved
 Investigation of current problems in chemistry supervised by one of the Chemistry Department instructors. (5 hours per week).

COMMUNICATION SCIENCES AND DISORDERS PROGRAM - CSD

101 **Three Credits**
ORAL COMMUNICATION ENHANCEMENT
 Orientation course introduces students to various methods and techniques for improving their oral communication (speech) and listening skills. Emphasis on reading and writing skills. Students' speech-language patterns and hearing acuity are professionally assessed by certified speech-language pathologists and audiologists.

116 **One Credit**
ORIENTATION TO COMMUNICATION SCIENCES AND DISORDERS
 Introduction to the professions of speech-language pathology and audiology with emphasis on the role of the American Speech-Language-Hearing Association and its code of ethics; certification procedures and professional nomenclature. Study of various speech-language and hearing disorders, including a discussion of academic and research aspects of speech-language pathology and audiology. (web-based course).

211 **Three Credits**
PHONETICS
PREREQUISITES: ENG 101, 102 (with grades of C or better)
 Scientific study of English speech sounds, production, reception and symbolic use, including transcribing words and sentences with use of phonetics.

212 **Three Credits**
SPEECH AND LANGUAGE DEVELOPMENT
PREREQUISITES: ENG 101, 102
 Study of the normal processes of speech and language development with emphasis on language universals and the linguistic systems of sound patterns, word combining, meanings and intentionality. Examines relationship between cognition and language. The latter portion of the course introduces students to some aspects of disordered speech and language development.

213 **One Credit**
USE OF COMPUTERS AND OTHER INSTRUMENTATION IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: CSC 150 (or equivalent course) and CSD 116 (with grades of C or better).
 Study of basic electronics, computer hardware design and software programs germane to the fields of speech-language pathology and audiology.

218 **Three Credits**
ANATOMY AND PHYSIOLOGY OF THE SPEECH MECHANISM
PREREQUISITE: BIO 105, or 165 (with grade of C or better)
 Study of the basic structure of the organs that function in the production of speech with emphasis on the processes of respiration, phonation, resonance, and articulation, including neurological aspects of speech and language production. (web-based course).

311 **Three Credits**
METHODS AND MATERIALS IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: CSD 116, 212 (with grades of C or better).
 Introduction to contemporary diagnostic and therapeutic methods and materials used by speech-language pathologists and audiologists in schools, hospitals, clinics and rehabilitation settings. Requirements include construction of a "functional workbook (kit)" consisting of diagnostic and therapy materials, clinical activities, and tests, and

demonstration of the use of their materials in clinical practicum activities.

312 **Three Credits**
PHONOLOGICAL, ARTICULATORY AND RELATED LANGUAGE DISORDERS
PREREQUISITES: CSD 116, 211 and 212 (with grades of C or better).
 Comprehensive study of the phonological and articulatory processes of speech, and associative disorders of oral language. Students are required to administer and interpret the results of various tests (i.e., phonological, articulation, oral language, etc.). In addition, students observe diagnostic and therapy procedures conducted by certified speech-language pathologists working with speech-impaired children and adults

313 **Three Credits**
INTRODUCTION TO AUDIOLOGY AND HEARING SCIENCES
PREREQUISITES: MTH 105; BIO 105 or 165 (with grades of C or better).
 Emphasis on the anatomy and physiology of the hearing mechanism and the disorders that can affect it. Basic audiometric techniques and procedures are taught, as well as the interpretation of hearing test results.

315 **Three Credits**
NEUROGENIC AND OTHER ORGANIC COMMUNICATIONS DISORDERS
PREREQUISITES: CSD 116, 218, 312 (with grades of C or better).
 Introduction to the basics of neurology as they pertain to the communication processes. Overview of common neurogenic disorders of communication, including aphasia, apraxia, dysarthria, dementia and other linguistic disorders associated with traumatic brain injury, aging, substance abuse, etc.

320 **Three Credits**
VOICE AND SPEECH SCIENCES
PREREQUISITES: MTH 105; BIO 105 or 165; CSD 116, 218 (with grades of C or better)
 Study of the human voice and speech production processes. The physics of sound are explored, as well as the respiratory, laryngeal, resonatory and articulatory aspects of voice and speech. Diagnostic and treatment procedures for voices and speech disorders are also reviewed. Opportunities to conduct supervised field research activities are provided.

413 **Three Credits**
RESEARCH METHODS IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: MTH 250; ENG 303 (with grades of C or better).
 Independent research on a topic selected by the student and approved by the student's departmental advisor and completed under the guidance of that advisor. Study of the appropriate methods and procedures for data collection, analysis, interpretation and reporting. Students are expected to approach this course with the intention of formally presenting (e.g., professional conference) and/or publishing (e.g., professional publication) their research findings.

414 **Three Credits**
VOICE AND FLUENCY DISORDERS
PREREQUISITES: CSD 116, 212, 320 (with grades of C or better).
 Introduction to the etiological, evaluative or diagnostic, and therapeutic procedures used with persons with voice disorders and various types of verbal dysfluency behaviors.

415 **Three Credits**
CLINICAL PROCEDURES IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: CSD 116, 312, 311, and 313 (with grades of C or better)
 Study of the philosophy underlying clinical procedures for speech-language pathology. Current methods used in speech-language pathology for observing communication behaviors, recording data, establishing effective reinforcement techniques, and therapeutic routines are explored. Students are expected to accumulate 15-20 hours of supervised clinical observations to satisfy the preliminary requirements for ASHA certification.

416 **Three Credits**
REHABILITATION OF HEARING DISORDERS
PREREQUISITE: CSD 313 (with grades of C or better)
 Current procedures in aural rehabilitation, including speech reading, hearing conservation, hearing aid selection and auditory training are studied for both the hard of hearing and deaf populations from both habilitative and rehabilitative perspectives. (web-based course.)

417 **Three Credits**
CLINICAL PRACTICUM IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: CSD 315, 414, and 415 (with grades of C or better)
 Clinical Practicum provides majors who have satisfactorily completed all academic prerequisites experience in offering direct supervised clinical services to persons with speech, language and/or hearing disorders. These services are rendered primarily through the NSU Speech, Language and Hearing Center located on campus, although external practicum experiences may also be available. Majors refine their therapeutic skills, as well as report writing skills for diagnostic reports, initial therapy plans, daily therapy plans, and progress reports. Interviewing and counseling procedures are reviewed. Students are expected to accumulate 20-30 hours of supervised clinical observations to satisfy the preliminary requirements for ASHA certification.

418 **One Credit**
SEMINAR TOPICS IN COMMUNICATION SCIENCES AND DISORDERS
PREREQUISITES: CSD 116 and 415 (with grades of C or better).
 Seminars on subjects pertaining to current issues facing speech-language pathologists and/or audiologists are presented. Subjects for discussion and presentation are introduced through collaboration between students and instructors. (web-based course.)

COMPUTER INFORMATION TECHNOLOGY - CIT

204 **Three Credits**
DIGITAL LOGIC
PREREQUISITES: ELT 212, 212L
COREQUISITE: CIT 204L
 Study of combinational logic and sequential logic. Combinational logic includes number systems, Boolean algebra, Karnaugh maps, truth tables, coding, switching circuits analysis and design. sequential logic portion includes flip flops, latches, sequential circuit analysis and design, counters, and shift registers

204L **One Credit**
DIGITAL LOGIC LAB
PREREQUISITES: ELT 212, 212L
COREQUISITE: CIT 204
 Practical experience in designing, building, and testing digital circuits and methods.

304 **Three Credits**
DIGITAL SYSTEM DESIGN
PREREQUISITES: CIT 204, 204L
COREQUISITE: CIT 304L
 Study of the building blocks of digital system design: encoders, decoders, comparators, multiplexers, demultiplexers, adders, subtractors, arithmetic logic unit, programmable logic devices and an introduction to microprocessors.

304L **One Credit**
DIGITAL SYSTEM DESIGN
PREREQUISITES: CIT 204, 204L
COREQUISITE: CIT 304
 Practical experience in building, and testing digital systems and methods with emphasis on programmable logic devices programming and applications

305 **Three Credits**
COMPUTER ORGANIZATION
PREREQUISITES: CSC 150; CIT 204, 204L
 Study of microcomputer operating systems with emphasis on MS-DOS, utility and diagnostic software, virus protection, preventative maintenance data protection and recovery computer architecture and design.

305L **One Credit**
COMPUTER ORGANIZATION LAB
PREREQUISITES: CSC 150; CIT 204, 204L
 Practical experience in DOS commands, windows, utility and diagnostic software and data protection and recovery.

315 **Three Credits**
MICROPROCESSORS
PREREQUISITES: CIT 204, 204L; CIT305
 Study of the microprocessor as a programmable device. The 80286, 80386 and 80486 microprocessors will be examined with primary emphasis on the 80286. Examination of the instruction set to program the microprocessor is covered, and applications using the assembler program will be studied.

COMPUTER INFORMATION TECHNOLOGY - CIT (continued)

334 Three Credits ELECTRO-MECHANICAL COMPONENTS PREREQUISITES: CIT 150; ELT 113

Introduction to drive relays, cam-operated switchers, electro-mechanical clutches, feeding mechanisms, recording-writing mechanisms, accumulating mechanisms, control and timing of electro-mechanical systems.

335 Three Credits PROGRAMMABLE LOGIC CONTROLLERS (PLC's) PREREQUISITE: MTH 153

Introduction to electrical control devices, control diagrams, and programmable logic controllers (PLC's) with emphasis on PLC programming and analysis.

432 Three Credits COMPUTER INTERFACES AND PERIPHERAL DEVICES PREREQUISITES: CIT 304, 304L, 315

Study of computer interfaces and peripheral devices, the microprocessor, and the programming/operation of the numeric co-processor, which provide an understanding of applications such as control systems, video graphics, and computer-aided design (CAD) with emphasis on The Advanced Intel Microprocessor Family.

434 Three Credits COMPUTER NETWORKS TECHNOLOGY PREREQUISITE: CIT 305 or Instructor's approval

Introduction to the administration of local area networks with emphasis on management users of workstation and other system resources, including the Internet and internets using other techniques.

499 Three Credits SENIOR PROJECT PREREQUISITES: CIT 314, 314L; Senior standing

Selection and completion of a project under faculty supervision conducted as an individual or small-group design project, including determining customer requirements, considering design alternatives, issuing a formal project proposal, and implementing the proposal. Software scheduling tools are used extensively. The course concludes with a report and demonstration of functionality of individual hardware and software design blocks. Projects are common problems graduates must solve in their field of employment.

COMPUTER SCIENCE - CSC

150 Three Credits COMPUTER CONCEPTS AND APPLICATIONS

Introduction to computers and information processing. Primary emphasis is placed on three standard applications: Word Processing, Spreadsheet, and Data Base. Extensive laboratory assignments and hands-on exercises using the microcomputer laboratory are mandatory.

151 Four Credits INTERNETWORKING I PREREQUISITE: Basic computer literacy, and awareness of the Internet. (Network Certification Course)

Study of network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards.

152 Four Credits INTERNETWORKING II PREREQUISITE: CSC 151 (Network Certification Course)

Study of initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Develop skills on how to configure a router, managing Cisco IOS Software, configuring routing protocol on routers, and set the access lists to control the access to routers.

160 Three Credits VISUAL BASIC PROGRAMMING PREREQUISITE: High School Algebra

Introduction to problem analysis and Visual Basic Programming. Emphasis on the orderly analysis of a problem and the programming and testing of that problem.

169 Three Credits INTRODUCTION TO COMPUTER SCIENCE PREREQUISITE: High School Algebra

Study of the fundamental concepts of the discipline with emphasis on information representation, algorithms and

problem solving, computer hardware and software, data representation and the impact of computers in society.

170 Three Credits COMPUTER PROGRAMMING I PREREQUISITES: MTH 151 or equivalents; CSC 169

Introduction to programming and problem solving in an object-oriented language with emphasis on basic programming constructs, arrays, debugging, software engineering practices, and the fundamentals of file handling.

192 One Credit INTRODUCTION TO THE INTERNET PREREQUISITE: Any computer literacy course

Introduction to the concepts, software, data, and issues associated with the use of networked information. Internet topics include local network access, electronic mail, transferring files from other network sites, network news, and network hypermedia (World Wide Web and Netscape).

195 Three Credits INTERNET PROGRAMMING WITH JAVA PREREQUISITES: CSC 192

Introduction to high level internet programming techniques and Java with emphasis on internet programming basics for creating static Web pages and dynamic Web pages in HTML and XML through the addition of scripts. Utilize the latest java Development Kit to create Java applets and stand alone Java applications for the Internet deployment.

200 Three Credits ADVANCED COMPUTER CONCEPTS PREREQUISITE: Any computer literacy course

Advanced study of electronic research and presentations, utilizing the Internet and World Wide Web. Primary emphasis on E-Mail, Search Engines, News Groups, and Presentation Tools. Extensive laboratory assignments and hands-on exercises using the microcomputer laboratory are mandatory. A formal presentation using presentation tools is required.

251 Four Credits INTERNETWORKING III PREREQUISITE: CSC 152

Study of advanced IP addressing techniques (Variable Length Subnet Masking (VLSM)), intermediate routing protocols (RIP v2, single-area OSPF, EIGRP), command-line interface configuration of switches, Ethernet switching, Virtual LANs (VLANs), Spanning Tree Protocol (STP), and VLAN Trunking Protocol (VTP).

252 Four Credits INTERNETWORKING IV PREREQUISITE: CSC 251

Introduction to advanced IP addressing techniques (Network Address Translation (NAT), Port Address Translation (PAT), and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management, and introduction to optical networking.

260 Three Credits COMPUTER PROGRAMMING II PREREQUISITE: CSC 170

Introduction to data structures, algorithms and building objects. Topics include linked lists, stacks and queues, recursion and binary trees.

268 Three Credits COMPUTER ORGANIZATION & ASSEMBLY LANGUAGE PROGRAMMING PREREQUISITE: CSC 260

Study of transistor concepts, leading to digital logic circuits, emphasizing combinational logic, sequential logic and design of functions based on specifications. Different logic families such as Bi-polar, TTL and ECL, and Memory and Ports in Microcomputer Systems will also be covered. Simulation packages are used in digital circuit design.

270 Three Credits DISCRETE STRUCTURES PREREQUISITE: CSC 260; MTH 251

Introduction to the areas of discrete mathematics that are important for computer science. Topics include logic, sets, functions, relations, algorithms, counting methods, and graph theory.

292 Three Credits UNIX AND C PROGRAMMING PREREQUISITE: CSC 260

Introduction to C programming in a UNIX environment, including the UNIX command interpreter, Shell; how Shell scripts can be used as powerful tools and applications and the development of application and systems programs using C.

295 Three Credits JAVA APPLICATIONS PROGRAMMING PREREQUISITE: CSC 260

Introduction to the core JAVA language with emphasis on applications development using the latest JAVA class libraries such as Swing, JavaBeans, Java2D, Java3D. This course is designed for students who are familiar with object-oriented programming in C++ and the fundamentals of the World Wide Web.

360 Three Credits INTERFACE DESIGN AND IMPLEMENTATION PREREQUISITE: CSC 260

Introduction to the techniques used for designing, implementing, and testing human/computer interfaces, including methods of user-centered interface design, implementing user interfaces, techniques and tools for event driven programming, testing and evaluation of user interfaces.

361 Three Credits SURVEY OF PROGRAMMING LANGUAGES PREREQUISITE: CSC 260

Survey of programming languages such as FORTRAN, PL/1, AGOL, Pascal, APL, SNOBOL, Ada, Prolog, C, and LISP with emphasis on data structures and storage, control structures, execution environment, input/output, and the syntax and semantics of the languages.

369 Three Credits THEORY OF COMPUTATION PREREQUISITE: CSC 270

Introduction to sequential machines, finite state automata, formal languages and turning machines, computable, and non-computable functions.

372 Three Credits DATA STRUCTURES PREREQUISITE: CSC 260

Analysis of data structures and algorithms using C++ as the implementation language. Detailed examination of lists, heaps, trees, graphs, file structures, and the use of formal methods with emphasis on the development and analysis of efficient algorithms.

375 Three Credits FILE MANAGEMENT PREREQUISITE: CSC 372

Introduction to the use and maintenance of sequential and non-sequential files with emphasis on mechanisms for maximizing storage utilization and minimizing file processing time.

380 Three Credits SOFTWARE ENGINEERING PREREQUISITE: CSC 260

Introduction to the design of software projects with the analysis, design, implementation, testing and maintenance of the software life cycle with emphasis on significant and varied writing components, including group projects paralleling realistic software development projects.

420/ 521 Three Credits DATA BASE PRINCIPLES AND DESIGN COREQUISITE: CSC 372

Introduction to the basic concepts and principles of database systems including relational, hierarchical, and network approaches to data organization

422 Three Credits DATABASE IMPLEMENTATION PREREQUISITES: CSC 372, 292, 420

Introduction to database design methodology and tools, designing and building of forms and reports, database programming using embedded SQL, Internet/Web database and database administration.

430/ 530 Three Credits DATA COMMUNICATIONS PREREQUISITE: CSC 372

Study of principles of computer communication as well as hardware and software designs, including transmission media, data encoding, transmission techniques, protocols, switching networks, broadcast networks, and local area networks

435/ 535 Three Credits COMPUTER SECURITY I PREREQUISITE: Permission of Instructor

Introduction to Information Assurance concepts, in addition to logging, encryption and decryption, effects on operating systems and machine architecture, countermeasures, risk analysis, security administration, legality and ethics, and computer forensics.

450 **ELECTRONIC PUBLISHING** **Three Credits**
PREREQUISITES: CSC 192, 260
 Survey of information published via electronic means. Electronic publishing is an interdisciplinary field and many technologies are integrated, including Internet and document standards.

464/ 564 **OPERATING SYSTEMS** **Three Credits**
PREREQUISITE: CSC 372
 Introduction to the history and evolution of operating systems, the concepts behind and structure of various operating systems, process scheduling, interprocess communication, input and output, multiprogramming, memory management and file systems. Concepts of distributed operating systems are also introduced.

465 **MICROCOMPUTERS** **Three Credits**
PREREQUISITE: CSC 268
 In-depth study of the hardware and software in microcomputer systems with emphasis on the analysis of system architecture and programming with the instruction set of the system processor.

466/ 566, 467/ 567 **ADVANCED COMPUTER TOPICS I and II** **Three Credits**
PREREQUISITE: Consent of the Instructor
 Elective course for Computer Science.

468 **COMPUTER ARCHITECTURE** **Three Credits**
PREREQUISITE: CSC 268
 Study of computer organization and architecture that deals with processors, their architectures, memory, input, output, the micro architectural level, instruction set architectural level and the operating system machine level.

470/ 570 **ARTIFICIAL INTELLIGENCE** **Three Credits**
PREREQUISITE: CSC 372
 In-depth study of concepts and problem solving techniques of artificial intelligence, including knowledge representation, functional and logic programming, machine learning, natural language understanding, computer vision, robotics, and societal impact.

476/ 576, 477/ 577 **ADVANCED COMPUTER TOPICS III and IV** **Three Credits**
PREREQUISITE: Consent of the Instructor
 Advanced computer topics not generally covered in the curriculum. Designed as a Computer Science elective, not as a replacement for any specific required course

480/ 580 **COMPUTER GRAPHICS** **Three Credits**
PREREQUISITE: CSC 372
 Study of interactive computer graphics hardware and software: display devices, 2D and 3D geometric transformations, raster algorithms, representation of curves and surfaces, hidden line removal and surfaces, shading algorithms, and color graphics.

492 **INDEPENDENT STUDY** **Three Credits**
PREREQUISITE: Consent of the Instructor
 Supervised independent project designed to explore a single topic in a one-to-one learning relationship with a faculty member.

493/ 593 **SYSTEMS PROGRAMMING** **Three Credits**
PREREQUISITE: CSC 464/ 564
 Fundamentals of system and network programming methodology, techniques, system calls and library calls.

496/ 596 **COMPILER CONSTRUCTION** **Three Credits**
PREREQUISITE: CSC 372
 An introduction to the fundamentals of compiler construction and language translation. Topics include lexical analysis, specifications of syntax, algorithms for syntactic analysis, code generation, and optimization techniques.

498/ 499 **COMPUTER SCIENCE SEMINAR I and II** **One/ Two Credits**
PREREQUISITES: Senior Standing and CSC 380
 Culminating course designed to synthesize computer science knowledge and experiences through participation in a research project of the student's choice. Results of the research are presented to peers and other interested members of the computer science community.

COOPERATIVE EDUCATION – CED

250 **CAREER DEVELOPMENT AND LEADERSHIP SEMINAR** **One Credit**
 Study of resume writing, interviewing, goal setting (Visioning), leadership and job search strategies for internship, co-op and permanent placement. Upon completion, the student is equipped with all the necessary tools required to obtain professional and personal success.

350 **COOPERATIVE EDUCATION (ACTUAL CO-OP ASSIGNMENT)** **One Credit**
 Required for all students who have secured a cooperative work assignment on their own, through the department or through the Cooperative Education office to complete the appropriate forms. At this time, the student receives the criteria that must be met to receive academic credit.

450 **COOPERATIVE EDUCATION (ACTUAL CO-OP ASSIGNMENT)** **One Credit**
 Required for all students doing their second co-op assignment. Continuation of the previous assignment or a more advanced work experience. The student must also register for this course and come to the Cooperative Education office to complete the appropriate forms. At this time, the student receives the criteria that must be met to receive academic credit.

CRIMINAL JUSTICE - CJS

200 **INTRODUCTION TO CRIMINAL JUSTICE** **Three Credits**
 Study of systematic analysis of the functions of the police, courts, and corrections in dealing with lawbreakers with emphasis on basic theories and empirical research findings.

220 **JUVENILE DELINQUENCY** **Three Credits**
 Systematic analysis of juvenile delinquency as a major social problem in American society with emphasis on the prevention and control of delinquency, the cause of delinquency, and the treatment of juveniles in the juvenile justice system. Introduces and analyzes classical works and empirical findings.

225 **LAW ENFORCEMENT** **Three Credits**
 Focuses on the police as an official societal agency of social control. Provides understanding of the role of the police in reducing and promoting crime. Surveys the organization of police departments, as well as the recruitment and socialization of police officers.

230 **INTRODUCTION TO CORRECTIONS** **Three Credits**
 Examines various attempts to control crime and delinquency by diverting the potential and actual offender into law-abiding activities. Provides a better understanding of contemporary correctional activities in the United States through historical and cross-cultural information about formal and informal, legal and extra-legal, and institutional and community-based programs.

310 **CRIMINOLOGY** **Three Credits**
 Focuses on the scientific study of criminal behavior in contemporary industrial-urban societies. Systematic attention is given to social, economic, and cultural factors associated with the causes of crime, prevention and control of crimes, and treatment of criminals. Presents a systematic analysis of classical theories, innovative strategies, and empirical studies.

313 **AMERICAN COURT SYSTEMS** **Three Credits**
 Introduction to the operation of the judicial court system with emphasis on the police, agents of the Federal Bureau of Investigation, the Treasury Department, and other agencies, the prosecutor, the courts, and institutions, special treatment programs, and probation and parole offices. Analysis of problems in the administration of justice, such as overcrowding, delays, discrimination, and the role of negotiations in the sentencing process.

315 **SOCIOLOGY OF DRUG USAGE** **Three Credits**
 Examines facts and theories of drug usage in different cultures, focuses primary attention on contemporary United States. Includes medical aspects of different kinds of drugs and physiological effects; legal aspects of the origins of

criminal drug laws and the consequences of drug use; epidemiological aspects of the sociopsychological factors as to why persons use and abuse drugs; and control aspects including prevention and rehabilitation programs.

492 **TOPICS IN CRIMINAL JUSTICE** **Three Credits**
PREREQUISITE: Senior Standing and Consent of Instructor
 Introduction to a contemporary criminal justice subject with emphasis on a specific criminal justice issue or a combination of issues in greater depth.

DECISION SCIENCES - DSC

270 **BUSINESS STATISTICS** **Three Credits**
PREREQUISITE: MTH 132
 Methods of collecting, tabulating, graphing and interpreting statistical data, measures of central tendency and variability. Elementary probability with emphasis on binomial and normal distributions, sampling methods, estimating and hypotheses testing.

370 **TOTAL QUALITY MANAGEMENT** **Three Credits**
PREREQUISITES: DSC 270 and Junior Standing
 Introduction to quality management in manufacturing and service organizations with emphasis on the evolution of quality movement worldwide, TQM and "Quality First" Paradigms. Students are exposed to quality principles from a global perspective. The case study approach is used to examine quality planning and implementation in all types of organizations, especially those that won the MBNQA.

376 **STATISTICS AND QUANTITATIVE METHODS** **Three Credits**
PREREQUISITES: MTH 132; DSC 270; Junior Standing
 Introduction to regression techniques and analysis of variance in decision-making; contingency tables, decision analysis, management science models: decision-making process: linear programming, transportation, assignment and network models; simple waiting line problems and use of simulation.

476 **OPERATIONS MANAGEMENT** **Three Credits**
PREREQUISITE: BAD 376
 Analysis of the economic problems of operations management, design of operating systems, forecasting, capacity planning, layout of facilities, materials and project management, planning and scheduling in production systems.

490 **ADVANCED TOPICS IN QUALITY MANAGEMENT** **Three Credits**
PREREQUISITES: DSC 370; Junior Standing
 Philosophy of Total Quality management that provides an opportunity for in-depth analysis and application of the quality model from the general management problem-solving perspective, including complex case studies and strategic planning opportunities requiring a broad knowledge of the management discipline. Emphasis on issues such as conflict resolution, team-based leadership, diversity in the workplace, productivity enhancement, and continuous improvement.

DESIGN TECHNOLOGY - MECHANICAL - TMD

145 **ENGINEERING MATERIALS TECHNOLOGY** **Three Credits**
 Introduction to basics of materials science through individualized and group instruction, relating the basic nature and properties of polymer, ceramic, metallic, composite, and electronic materials to processing and design requirements.

150 **ENGINEERING GRAPHICS** **Three Credits**
 Introduction to theories of projection and the concepts of engineering drawing, including geometric construction, multi-view drawing, auxiliary views as well as techniques of lettering and sketching. Hands-on sessions provide practice to reinforce the concepts and to provide practical experience.

151 **INTRODUCTION TO CAD** **Three Credits**
PREREQUISITE: TMD 150
 Awareness of computers in engineering design and problem solving, with emphasis on AutoCAD program on microcomputers for engineering graphics.

DESIGN TECHNOLOGY – MECHANICAL – TMD (continued)

225 Three Credits

MECHANICS I: STATICS PREREQUISITE: MTH 153

Develops analytic abilities of various types of force, with emphasis on systems using algebra and trigonometry, including vectors, centroids, moments and friction.

227 Three Credits

DYNAMICS PREREQUISITE: MTH 184

Introduction to a vector treatment of the kinematics and laws of motion of particles and rigid bodies, including acceleration, momentum, work, energy and power.

251 Three Credits

ADVANCED CAD PREREQUISITE: TMD 151

Advanced aspects of CAD using AutoCAD, with emphasis on 3-D techniques, solid modeling, and rendering.

252 Three Credits

TOOL DESIGN PREREQUISITE: TMD 225

Study of function of a manufacturing environment to design production tools such as fixtures, gauges, dies, and clamping devices. Use of microcomputer provides experience in computer-aided design and other types of software for engineering problem solving.

345 Three Credits

MECHANICS II: STRENGTH OF MATERIALS PREREQUISITE: TMD 225 COREQUISITE: TMD 345L

Analysis of structures, utilizing principles of Hook's Law; Passions Ratio; shear and moment diagrams, including statically determinate and some statically indeterminate structures.

345L One Credit

MECHANICS II LAB: PROPERTIES OF MATERIALS PREREQUISITE: TMD 225 COREQUISITE: TMD 345

Experimentation with properties of materials, fabrication characteristics, testing, and inspection. (Meets 2 hrs. per week.)

348 Three Credits

FLUID MECHANICS PREREQUISITE: MTH 184

Introduction to the principles of hydraulics, fluid properties, hydrodynamics, and methods of fluid circuit analysis with applications directed toward various piping systems. Study of the principles for compressible flows, ideal gas, real gas, nozzle design and kinetic theory.

355 Three Credits

MACHINE DESIGN PREREQUISITE: TMD 345

Study of designing screws, fasteners, joints, springs, bearings, and rigid machine components.

380 Three Credits

MATERIALS SCIENCE PREREQUISITE: TMD 145 or Equivalent

Investigation of physics and chemistry of materials as related to their properties and process ability. Incorporates the study of metallurgy, polymers, composites, ceramics, and materials evaluation. Basic competencies developed in use of laboratory equipment used to evaluate structure, properties, and processing of engineering materials.

448 Three Credits

THERMODYNAMICS PREREQUISITE: MTH 184

Study of working ability with first and second laws of thermodynamics, including working fluids and heat engines' cycles.

450 Three Credits

INSTRUMENTATION

Introduction to a familiarity with the latest developments in measurement, control, calibrations and analysis of instrumentation from basic theory to its applications, with emphasis on operation, procedure, and principles.

455 Three Credits

MECHANICAL DESIGN PREREQUISITE: TMD 355

Study of design and selection of beams, gears, clutches, brakes couplings, flexible mechanical elements, including utilization of basic concepts of kinematics.

470 Three Credits

SPECIAL PROBLEMS

Individual problem solving of special problems relating to design, electromechanical and manufacturing technology.

ECONOMICS - ECN

211 Three Credits

PRINCIPLES OF ECONOMICS I

PREREQUISITE: Sophomore Standing

Introduction to microeconomic principles relative to an economic system including supply and demand analysis; types of business organizations; theories of the firm and market models; resource allocation, and factorial distribution.

212 Three Credits

PRINCIPLES OF ECONOMICS II

PREREQUISITE: Sophomore Standing

Introduction to macroeconomic principles relative to an economic system, including economic functions of households, business and government; national income accounting; business cycles; monetary and fiscal institutions and policy as they apply to national economic growth, stabilization goals, and international trade.

220 Three Credits

ECONOMIC AND BUSINESS STATISTICS

PREREQUISITE: Sophomore Standing

Introduction to techniques of gathering, sorting, tabulating, and interpreting statistical data; measures of central tendency; measures of dispersion, and index numbers. Also covers problems of statistical induction; sampling techniques; testing hypotheses; simple linear correlation and regression. government economic policy, as well as analysis of macroeconomic equilibrium and growth models.

ELECTRONICS TECHNOLOGY - ELT

111 Three Credits

CIRCUIT ANALYSIS I

PREREQUISITE: MTH 151

COREQUISITE: ELT 111L

Introduction to direct current circuits with emphasis on voltage, current, resistance, Ohm's Law, energy and power. Series, parallel, and series-parallel circuits, voltage and current dividers, and Kirchhoff's Law are studied, as well as DC network analysis, network theorem and magnetism circuits.

111L One Credit

CIRCUIT ANALYSIS I LAB

PREREQUISITE: MTH 151

COREQUISITE: ELT 111

Introduction to "live" and computer simulated experiments in DC theory with emphasis on breadboarding electric circuits, using meters, and using electronic simulation software. (Meets 3 hrs. per week.)

212 Three Credits

CIRCUIT ANALYSIS II

PREREQUISITES: MTH 153; ELT 111, 111L

COREQUISITE: ELT 212L

Study of alternating current circuits, with emphasis on alternating current and voltage, capacitors, RC circuits, Inductors, RL circuits, RLC circuits, resonance, AC network analysis, network theorem, and transformers..

212L One Credit

CIRCUIT ANALYSIS II LAB

PREREQUISITES: MTH 153; ELT 111, 111L

COREQUISITE: ELT 212

Introduction to "live" and computer simulated experiments in AC theory with emphasis on breadboarding electric circuits, using meters, and using electronic simulation software. Develops skills in measuring AC circuit parameters. (Meets 3 hrs. per week.)

211 Three Credits

COREQUISITE: ELT 211L

ELECTRONIC INSTRUMENTS AND MEASUREMENTS

PREREQUISITES: ELT 113, 113L

Study of the characteristics, capabilities, limitations, and application of such basic electronic instruments as the Volt-ohm Milliammeter, the digital voltmeter, D-Arsonval meter movement, the general oscilloscope, the audio generator, the resistance bridge, the tube tester, and others.

211L One Credit

COREQUISITE: ELT 211

ELECTRONIC INSTRUMENTS AND MEASUREMENTS LAB

PREREQUISITES: ELT 113, 113L

Analysis of the characteristics of various electronic test instruments. Develops skills in calculation, metering, signal tracing, waveform analysis. (Meets 3 hrs. per week.)

213 Three Credits

ELECTRONIC DEVICES I

PREREQUISITES: ELT 212, 212L; PHY 152, 152L

COREQUISITE: ELT 213L

Examination of semiconductor junction devices, with emphasis on characteristics and operation of diodes, bipolar junction transistors and field-effect transistors; DC characteristics, biasing, and DC stability.

213L One Credit

ELECTRONIC DEVICES I LAB

PREREQUISITES: ELT 212, 212L; PHY 152, 152L

COREQUISITE: ELT 213

Experiments with semiconductor junction devices, with emphasis on characteristics and operation of diodes, bipolar junction transistors and field-effect transistors; DC characteristics, biasing, and DC stability.

215 Three Credits

CIRCUIT ANALYSIS

PREREQUISITES: ELT 213, 213L

Study of systematic analysis of selected alternating current and direct current circuits including audio amplifiers, radio frequency amplifiers, oscillators, detectors, mixers, multivibrators, and power supply circuits.

310 Three Credits

DIGITAL ELECTRONICS

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 310L

Study of digital devices and circuits, logic devices, integrated circuits, microprocessor circuits, binary, octal, and hexadecimal.

310L One Credit

DIGITAL ELECTRONICS LAB

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 310

Experiments on logic circuits, integrated circuits and microprocessors, circuit and device troubleshooting and analysis. (Meets 3 hrs. per week.)

313 Three Credits

ELECTRONIC DEVICES II

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 313L

Examination of power amplifiers, operational amplifiers, active filters, oscillators, communications circuits, voltage regulators, and other semiconductor devices.

313L One Credit

ELECTRONIC DEVICES II LAB

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 313

Experiments with power amplifiers, operational amplifiers, active filters, oscillators, communications circuits, voltage regulators, and other semiconductor devices.

315 Three Credits

ANALOG COMMUNICATION SYSTEMS

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 315L

Introduction to analog communications technology, with emphasis on theory, operation, design of radio frequency amplifiers and receivers, mixers, oscillators, coupling circuits, transmitters, propagation, antennas and sidebands.

315L One Credit

ANALOG COMMUNICATION SYSTEMS LAB

PREREQUISITES: ELT 213, 213L

COREQUISITE: ELT 315

Construction and testing of analog communications circuits using simulation software and ends with a hardware design project.

413 Three Credits

DIGITAL COMMUNICATION SYSTEMS

PREREQUISITES: ELT 310, 315

Theory of communications systems utilizing digital signals. Includes coding, multiplexing, digital modulation, information codes, and error detection codes.

499 Three Credits

SENIOR PROJECT

PREREQUISITES: ELT 313, 313L

COREQUISITE: ELT 499L

Selection and completion of a project under faculty supervision conducted as an individual or small-group design project, including determining customer requirements, considering design alternatives, and issuing a formal project proposal then implementing the proposal. The course concludes with a report and demonstration of functionality of

individual hardware and software design. Projects are typical of problems which graduates must solve in their field of employment.

499L **SENIOR PROJECT LAB** **One Credit**
PREREQUISITES: ELT 313, 313L
COREQUISITE: ELT 499
 Individual or small group electronic design projects.

ELEMENTARY EDUCATION - EED

201 **THE AMERICAN SCHOOLS AND THE TEACHING PROFESSION** **Three Credits**
 Orientation to contemporary elementary and secondary schools in America with on-site experiences in diverse classrooms in local schools. Emphasis on issues raised in current reform movements, and upon the changing nature of the teaching profession.

233 **CRITICAL THINKING AND ASSESSMENT SKILLS** **Three Credits**
 Study and application of theories, methods, and materials used in acquiring critical thinking skills, with emphasis on areas of development and reinforcement include writing, schema concept mapping, and multiple-stimulus reinforcement.

274 **THE STUDY OF YOUNG CHILDREN** **Three Credits**
 Comprehensive introduction to the development of children from conception to nine years, with emphasis on the major theories of development with an examination of physical, cognitive, language and social-emotional development for each chronological period. Requirements are twenty scheduled hours observing and participating in programs for children ages three to nine years (Nursery/Kindergarten through grade four), with emphasis on techniques and strategies.

***360** **CURRICULUM AND INSTRUCTION FOR PRIMARY GRADES (Pre-K – 3rd Grade)** **Three Credits**
 Preparation for teaching preschool and kindergarten-aged children, with emphasis on three major components: Goal Setting, Content and Methodology. Requirements are twenty scheduled hours observation in a preschool, kindergarten or primary classroom, including planning, designing and implementing activities while video-taping lessons, demonstrations, and classroom simulations.

450 **TEACHING LITERACY IN THE ELEMENTARY SCHOOL** **Three Credits**
 Preparation for a lifetime of literacy appreciation, and to diagnose, correct and remediate mild to moderately severe reading difficulties among children between the grades of kindergarten through grade six, providing competencies in teaching phonemic awareness, sound-symbol relationships, phonics instruction, decoding skills, work attack skills, and literature appreciation. Study of basic knowledge of ways to utilize various media to support literacy in the classroom, including technological media instruction (i.e. books, software, Internet sites, audiotapes and other multimedia methodology).

***461** **CURRICULUM AND INSTRUCTION FOR EARLY SCHOOL (Grades 4-6)** **Three Credits**
PREREQUISITES: EED 461
 Introduction to first, second, third, and fourth grade curriculum with emphasis on three major components: Goal Setting, Content, and Methodology. Requirements are twenty scheduled hours observation in a first, second, third, or fourth grade classroom, including planning, designing and implementing activities while video-taping lessons, demonstrations, and classroom simulations.

465 **METHODS AND MATERIALS FOR TEACHING SCIENCE, MATHEMATICS AND TECHNOLOGY** **Three Credits**
 Study of methods and techniques of teaching mathematics, science and technology to elementary school children, including preparation and practice with materials in classroom situations and is designed especially to meet the needs of primary and elementary school teachers in grades NK-G.

470 **METHODS OF TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL** **Three Credits**
 Study of activities, plans, programs and methods that help pre-service teachers prepare children to accept their roles in

the community and in the nation. History, geography, economics, psychology, sociology, and values are to be discussed, with emphasis on multisensory, multicultural approach.

490 **DIAGNOSTIC READING** **Three Credits**
PREREQUISITES: EED 450
 Preparation for elementary school student teachers to diagnose, correct mild to moderately severe reading difficulties. Perceptual skills, decoding skills, experiences, language background, mind set, and the reasoning ability of the readers influence comprehension of written symbols. Elementary school students anticipate meaning on the basis of what they have just read. Serious flaw in any major function or part may prevent adequate performance. Emphasis on investigating nature and causes of reading difficulties. Formal and informal instruments and procedures used for early detection and correction of reading problems are investigated.

499 **DIRECTED TEACHING AND SEMINAR** **Twelve Credits**
 Combination of discipline- specific methods course work and actual student teaching. Extensive seminars dealing with the methods in each of the subject areas during the two weeks preceding student teaching, which continue throughout the student teaching experience on a weekly basis. Student teaching is a sixteen-week course.

499A **COREQUISITE: ECE 500B** **Three Credits**
PRACTICUM IN ELEMENTARY EDUCATION
 Direct experience in working with children ages 2 to 5 in a child care setting. Fifteen hours per week are required.

499B **PRACTICUM IN ELEMENTARY EDUCATION** **Three Credits**
 Emphasis on designing and implementing developmentally appropriate learning experiences for children ages 2 to 5 in child-care setting. Ten hours per week in a child-care setting is required.

499E **PRACTICUM IN ELEMENTARY EDUCATION** **Three Credits**
PREREQUISITE: This course is for Child Care Option candidates.
 Study of the role of the child-care director, with an emphasis on administrative tasks. Ten hours per week in a child-care setting is required.

*** Enrollment requires completion of requirements for admission to teacher education.**

ENGINEERING - EEN

100 **INTRODUCTION TO ELECTRICAL ENGINEERING** **One Credit**
 Introduction to basic concepts of electrical engineering, including use of variety of electrical engineering instruments, with emphasis on engineering ethics, elementary design problems.

101 **ENGINEERING USE OF COMPUTERS** **Three Credits**
PREREQUISITE: MTH 184
COREQUISITE: MTH 251
 Introduction to use of computers to model systems and to solve engineering problems, including electrical and interdisciplinary problems. Emphasis on numerical models and methods using FORTRAN as well as roots of equations, matrix operations, integration, etc.

140 **ENGINEERING DRAWING** **Three Credits**
 Study of orthographic, isometric, and perspective drawing, detail and assembly drawing.

200 **INTRODUCTION TO ELECTRONICS** **Three Credits**
PREREQUISITE: MTH 251
COREQUISITE: MTH 252; EEN 200L
 Discussions of basic principles of electronics, diodes and transistors, analog circuits and op-amps, digital logic and circuits, electronic instruments, transducer interfaces, data acquisition systems, filtering and processing statistical treatment of data.

200L **INTRODUCTION TO ELECTRONICS LABORATORY** **One Credit**
COREQUISITE: EEN 200
 Laboratory experience of basic principles of electronics.

201 **ELECTRICAL NETWORK THEORY I** **Three Credits**
PREREQUISITE: PHY 251
COREQUISITE: MTH 251
 Analysis of electrical networks in terms of the forced response and the natural response. Methods include nodal and mesh analysis, superposition and Thevenin's theorem, from DC to steady state sinusoidal responses, and phasor analysis. SPICE. Design project required.

201L **ELECTRICAL NETWORK LAB I** **One Credit**
COREQUISITE: EEN 230
 Familiarization with oscilloscope, other instruments and test equipment in the experimental verification of basic electric circuit theory. Modeling and validation of models, documentation of experimental work, report preparation. Introductory design project.

202 **ELECTRICAL NETWORK THEORY II** **Three Credits**
PREREQUISITE: EEN 230
 Introduction to the application of unit-step as forcing function, power and energy, polyphase circuits, complex frequency and frequency responses, transformers and other two-part networks, linear network analysis using Laplace transform methods, and fourier analysis, etc., and SPICE. Design project required.

202L **ELECTRICAL NETWORK LAB II** **One Credit**
COREQUISITE: EEN 232
 Familiarization with AC measurements, AC transient circuit experiments, use of good measurement and data collection techniques. Design procedures are developed as appropriate.

211 **MATERIAL SCIENCE** **Three Credits**
PREREQUISITE: CHM 221, PHY 251
 Introduction to mechanics of materials design project. with emphasis on following topics: atomic order and disorder in solids; single phase materials; molecular phases; ceramic composites, conductors and semiconductors, magnetic, dielectric and optical materials.

212 **ENGINEERING PROBABILITY & STATISTICS** **Three Credits**
PREREQUISITE: MTH 252
 Applications of random variables and random processes to engineering analysis and design. Cumulative and probability density functions; error function; central limit theorem; finite samples; auto correlation; power spectral density; effect of filters on digital data. Probabilistic and statistical design of systems required.

231 **DIGITAL ELECTRONICS LOGIC DESIGN** **Three Credits**
 Study of number systems, binary arithmetic and codes, Boolean algebraic simplification, Quine-McCluskey method, and Karnaugh Maps, Diode and transistor logic flip-flops, sequential networks, state tables, state assignments, etc.

301 **ENGINEERING ELECTRONICS I** **Three Credits**
PREREQUISITE: EEN 232
 Introduction to the theory and application of electronic devices; linear equivalent circuits, amplifier and bias considerations, frequency response of amplifiers, and integrated circuits, as well as the concept of electronic circuit design to meet prescribed specifications. Computer modeling of this employing SPICE or its equivalent.

301L **ENGINEERING ELECTRONICS LAB I** **One Credit**
COREQUISITE: EEN 309
 Laboratory practical examination, project, report preparation, and oral presentation required. Major emphasis is directed toward electronic circuit design.

302 **ENGINEERING ELECTRONICS II** **Three Credits**
PREREQUISITE: EEN 309
 Equivalent circuits of devices, "H" parameters, frequency and transient response of small signal amplifiers, multistage amplifiers, feedback in electronic circuits, power amplifiers and a more advanced treatment of linear integrated circuits. Computer modeling of electronic systems using SPICE or its equivalent; project required.

302L **ENGINEERING ELECTRONICS LAB II** **One Credit**
COREQUISITE: EEN 310
 Frequency and transient response of amplifiers, feedback amplifiers, oscillators, power amplifiers, and linear integrated circuits, including operational amplifiers, with emphasis on

ENGINEERING – EEN (continued)

electronic design. Laboratory practical examination, project, report preparations, and oral presentation required.

305 Three Credits
SIGNALS & SYSTEMS I
PREREQUISITES: EEN 232; MTH 372

Introduction to system representations and analysis; representation of signals, methods of linear system analysis using convolution, Fourier series and transforms, and Z transforms. Formulation and solution of state-variable equations as well as introduction to amplitude and analog pulse modulation. Design project required.

331 Three Credits
MICROPROCESSORS
PREREQUISITES: EEN 141, 444; Permission of the Instructor

Introduction to the structure of microprocessors and microcomputers. Representation of information in the computer logic and storage devices. Processor structure registers, transfer of information, and control programming in microcomputers. I/O structure and auxiliary electronics. Interrupt structures, direct memory access. LSI and its implication for microcomputers. Arithmetic operations. Different microcomputer architectures.

331L One Credit
MICROPROCESSORS LAB
COREQUISITE: EEN 448

Procedures for reliable digital microcomputer design; understanding manufacturer's specifications, use of special test equipment; characteristics of consumer SSI, MSI, and LSI devices; assembling, testing, and simulation of design, construction procedures, several single-period laboratory exercises, several design projects, and application of microprocessor in digital design.

334 Three Credits
DIGITAL INTEGRATED CIRCUITS
PREREQUISITES: EEN 231, EEN 301
COREQUISITE: EEN 302

Study of digital CMOS circuits; MOSFET transistor; combinational circuits; sequential circuits; design simple digital gates and circuits at the transistor level; simulate designed circuits to verify performance.

342 Three Credits
ELECTROMAGNETIC FIELD THEORY
PREREQUISITES: MTH 372; EEN 232; PHY 250, 251

Study of static, electric, and magnetic fields as well as an introduction to Maxwell's equation and applications.

351 Three Credits
COMMUNICATIONS ENGINEERING I
PREREQUISITE: EEN 384

Study of amplitude, frequency, and phase, including modulation, sampling and pulse modulation; time division, multiplexing detection and frequency mixing, filters, receivers, transmitters and noise analysis.

411 Three Credits
ENGINEERING ECONOMICS
PREREQUISITE: MTH 251

Introduction to economic principles and techniques used in making decisions about the acquisition and retirement of capital goods by government and industry. Special emphasis on methods of analysis based on the mathematics of compound interest. Study of time value of money, annual cost, present worth, future value, capitalized cost along with break-even analysis, valuation, and depreciation, and ethics in economics.

441 One Credit
ELECTRONICS ENGINEERING SEMINAR
PREREQUISITE: Senior Standing in Electronics Engineering or Approval of the Instructor

Introduction to various aspects of engineering practice and engineering ethics.

443 Three credits
PULSE AND WAVE SHAPING ELECTRONICS DESIGN
PREREQUISITE: EEN 312

Study of linear and non-linear wave shaping techniques, and logic families and their traits, such as fanout, power dissipation, noise immunity and speed, bipolar multivibrators, negative resistance devices, sweep waveforms and D/A and A/D converters. Active filters. Design project required.

471 Three Credits
CONTROL SYSTEMS ANALYSIS
PREREQUISITES: EEN 302, 302L

Introduction to control systems; mathematical models; feedback control systems characteristics and stability, root

locus, frequency responses; stability in the frequency domain analysis.

490 Three Credits
ADVANCED TOPICS IN ELECTRONICS ENGINEERING
PREREQUISITE: Senior Status and Approval of Instructor

Introduction to advanced topics in any area of electronics engineering. Project or research paper may be required.

498 One Credit
SENIOR PROJECT
PREREQUISITE: Senior Standing in Electronic Engineering, Consent of the Instructor

Planning, designing, and executing various experimental projects. Emphasis on use of computer simulation to aid in the design process. Preparation of report and oral presentation is required. Formal design topics covered.

499 Two Credits
SENIOR PROJECT STAGE II
PREREQUISITE: EEN 498

Final hardware, software of design project completed. Presentation and final report required.

ENGLISH - ENG

100 Four Credits
INTRODUCTION TO COLLEGE COMMUNICATION

Focus on reading comprehension, vocabulary development, sentence structure, standard usage and punctuation, paragraph and essay development. Course designed for the student whose SAT scores and high-school GPA results indicate a need for skills enhancement in reading, writing or concomitant literacy skills.

100E Three Credits
ENGLISH AS A SECOND LANGUAGE
 Preparation for foreign students to attain freshman entry-level writing proficiency. Students who score less than 500 on the TOEFL must enroll in this course. Offered in lieu of ENG 100.

101 Three Credits
COMMUNICATION SKILLS I
PREREQUISITE: Satisfactory Scoring on Placement Examination or Promotion from ENG 100

Experiences in multiple-draft writing of expository themes through the writing-process approach. Focus on thesis analysis and development, and analyses of audience, purpose, tone, style, and diction. Selected readings included.

102 Three Credits
COMMUNICATION SKILLS II
PREREQUISITE: ENG 101

Development of critical and analytical skills in communication which provides experience in argumentative reading and writing and in techniques of research.

108 Three Credits
ANALYTICAL REASONING, WRITING AND COMPREHENSION I
PREREQUISITE: Restricted to AROTC Cadets or students enrolled in a military science course.

Introduction to vocabulary building, literal and inferential comprehension, reading, writing and the development of critical reading and cognitive skills.

109 Three Credits
ANALYTICAL REASONING, WRITING AND COMPREHENSION II
PREREQUISITE: Restricted to AROTC Cadets or students enrolled in a military science course.

Emphasis on the application of comprehension and cognitive skills.

111 Two Credits
INTRODUCTION TO LANGUAGE STUDIES
 Orientation for various facets of written and oral language studies or to students' respective sequences of study, and to some related professional positions.

114 Two Credits
TECHNIQUES OF VOCABULARY BUILDING
 Introduction to the study of language with emphasis on processes of vocabulary building and some techniques of vocabulary expansion.

NOTE: PREREQUISITES TO ALL COURSES ABOVE THE ENG 114 LEVEL, UNLESS OTHERWISE INDICATED, ARE ENG 101 AND ENG 102

203 Three Credits
ADVANCED COMMUNICATION SKILLS
PREREQUISITE: ENG 102

Emphasis on the writing of analytical essays based on selected readings. Researched, documented exposition stressed.

207 Three Credits
INTRODUCTION TO WORLD LITERATURE
 Close attention to works selected from world literature for their exemplary literary qualities and their bearing upon our cultural heritage.

210 Three Credits
PRACTICAL ENGLISH GRAMMAR
 Structure of the English language and the principles underlying both sentence construction and standard English usage, establishing the connection between grammar and writing.

214 Two/Three Credits
INTRODUCTION TO CREATIVE WRITING
 Introduction to the process and practice of imaginative writing in the various genres. Brief study of the marketing of manuscripts. Practical experience in both writing and editing.

215 Three Credits
WRITING SHORT STORIES
 Introduction to the art of short story writing with emphasis on the elements of a story as well as models of classic literature. Students are expected to understand the construction of short fiction.

218 Three Credits
WRITING POETRY I
 Introduction to the art of poetry writing with emphasis on the elements of poetry as well as models of classic literature. Students are expected to understand the construction of poems.

286 Three Credits
ADVANCED COMPOSITION
 Principles and techniques of grammar, rhetoric and logic with emphasis on writing about literature and the nature and function of the English language. Required of all English majors in lieu of ENG 203.

303 Three Credits
PROFESSIONAL AND TECHNICAL WRITING
 Discipline-specific course designed to provide writing experiences across the curriculum.

306 Three Credits
INTRODUCTION TO LITERARY CRITICISM
 Survey of various critical approaches (biographical, sociological, mythical, structural, psychological, etc.) and their application to specific works and genres.

310 Three Credits
LITERATURE OF THE RENAISSANCE PERIOD
 Poetry and prose of the English Renaissance with emphasis on Spenser, Sidney, and the non-dramatic poetry of Shakespeare.

312 Three Credits
WRITING IN A GENRE
 Introduction to the process and practice of imaginative writing in a specific genre or genres to be determined by the instructor. Study of works by important genre authors and poets. Practical experience in writing, editing, manuscript preparation, and marketing.

313 Three Credits
WRITING AUTOBIOGRAPHY AND MEMOIR
 Introduction to the genres of autobiography and memoir. Experience in reading and writing samples of each genre as well as demonstrating critiques in a workshop atmosphere. Emphasis on organizing and shaping perceptions of students' lives into coherent form, both for self-expression and for publication.

315 Three Credits
SURVEY OF ENGLISH LITERATURE I
 Study of the major authors and major works in English literature from the Anglo-Saxon period through the Eighteenth Century.

316 Three Credits
SURVEY OF ENGLISH LITERATURE II
 Study of the major authors and major works in English literature from the Romantic period through the Modern Age.

317 Three Credits
THE BIBLE AS LITERATURE
 Reading selections from the Old and New Testaments and the Apocrypha with emphasis on their literary aspects.

318 WRITING POETRY II PREREQUISITE: ENG 218 Development of an advanced knowledge of self-expression and creativity, as well as the use of poetic devices such as meter, rhythm, imagery, and symbolism in traditional and contemporary forms.	Three Credits	419/ 519 CONTEMPORARY AMERICAN ENGLISH GRAMMAR Survey of the function of American English grammar in modern communication with emphasis on usage, dialectology, stylistics, and aesthetics.	Three Credits	455 LITERATURE AND POPULAR CULTURE Introduction to the systematic study of popular media, focusing on the development of selected print, film, and video genres.	Three Credits
319 SEVENTEENTH CENTURY ENGLISH LITERATURE Critical study of Milton, Donne, the metaphysical and cavalier poets, the Jacobean dramatists, and prose writings of Burton and Brown.	Three Credits	420/ 520 BLACK ENGLISH, DIALECTS, AND UNIVERSALS PREREQUISITE: Senior or graduate level Introduction and historical overview of linguistic universals and language variations including the structure and development of American speech and language styles, with emphasis on Black English.	Three credits	456 WOMEN'S STUDIES: MYTHS AND IMAGES Exploration of the universal myths that promote certain images of women that relate to their biological function in modern fiction written by women.	Three Credits
320 THE ART OF POETRY Analytical study of poetry with emphasis on meaning, technique, and form.	Two/Three Credits	421 EIGHTEENTH CENTURY ENGLISH LITERATURE Introduction to Addison, Steele, Dryden, Swift, Pope, Johnson, and their contemporaries.	Three Credits	457 MULTI-ETHNIC FICTION Introduction to the interracial fiction of various ethnic groups as they relate to the dominant culture in America with emphasis on specific beliefs, attitudes, values, and stereotypes that affirm the myth of the melting-pot concept.	Three Credits
336 MODERN ENGLISH AND AMERICAN LITERATURE Study of the major writers of the twentieth century with emphasis on main currents of thought within the century.	Three Credits	430 ROMANTIC WRITERS Critical study of the development of the Romantic Movement. Special emphasis upon Wordsworth, Coleridge, Byron, Shelly, and Keats.	Three Credits	458 SOUTHERN BLACK FEMALE AESTHETIC Introduction to the Southern black female aesthetic in black women's oral and written expressions, emphasizing an Afrocentric cultural continuum as well as the criteria identifying their aesthetic and to the racial, sexual politics influencing their cultural expressions.	Three Credits
341 AMERICAN LITERATURE I Survey of American Literature from the Colonial Period to the Civil War.	Three Credits	431 STUDIES IN THE NOVEL Study of selected novels of the nineteenth and twentieth centuries from the continent, England, and the Americas.	Three Credits	459 INTERNATIONAL WOMEN'S LITERATURE PREREQUISITE: ENG 207 or permission of instructor Examination of fiction, poetry, diaries, journals, letters, interviews, and feminist essays by women writers from the international community, including a study of new conceptual and psychological models of women which provide new frameworks for critical interpretation and judgment.	Three Credits
342 AMERICAN LITERATURE II Survey of American Literature from the Civil War to the present.	Three Credits	432 AFRICAN AND AFRICAN-AMERICAN NOVEL PREREQUISITES: ENG 383 or Permission of Instructor Detailed study of selected African and African-American novelists and their works.	Three Credits	460/ 550 ASSESSMENT AND EVALUATION OF WRITING Study of writing assessment practices with an emphasis on the variables of composition assessment, scalar measures of composition, large-scale assessment and classroom assessment methods, and alternative assessment techniques. Designed for the student teacher of composition at secondary and post-secondary levels.	Three Credits
383 AFRICAN-AMERICAN LITERATURE PREREQUISITE: Junior Standing or Permission of Instructor. Survey of African-American literature, including selected African-American writers from slavery to the present time.	Three Credits	433 AFRICAN AND AFRICAN-AMERICAN BIOGRAPHY AND AUTOBIOGRAPHY PREREQUISITES: ENG 383 or permission of instructor Study of selected biographies and autobiographies of noted Africans and African-Americans, including Malcolm X, Richard Wright, Alex Haley, and Wole Soyinka.	Three Credits	465/ 565 SPECIAL TOPICS IN LITERATURE AND LANGUAGE Engaging in modern literary or linguistic topics by using a variety of perspectives, disciplines, and related themes.	One, Two, Three Credits
384 AFRICAN-AMERICAN LITERATURE: POETRY Study of selected works of major African-American poets with emphasis on dominant themes and forms, and attention to the historical and literary background of the poetry.	Three Credits	435 VICTORIAN LITERATURE Study of representative British writers from 1837-1901.	Three Credits	475/COM 575 HISTORY OF RHETORIC PREREQUISITES: Senior or graduate level Study of the essential texts that form the Western rhetorical tradition from its origins in Greco-Roman times through Modernity with an inclusive treatment of the contributions of African-Americans and women.	Three Credits
385 AFRICAN-AMERICAN LITERATURE: FICTION Development of black American fiction from 1853 to the present. Includes social and historical conditions of African-Americans as reflected in their fiction, as well as the major literary trends of the writings.	Three Credits	440 SEMINAR IN AFRICAN AND AFRICAN-AMERICAN LITERATURE PREREQUISITES: ENG 383 or Permission of Instructor Study of selected works and authors in the African and African-American tradition.	Three Credits	480 AMERICAN FOLKLORE AND LITERATURE Examination of the subtle and complex relationship between the folklore and the literature of the United States, using a functional and contextual approach, special attention will be given to the kinds of folklore field data.	Three Credits
387 THE TEACHING OF ENGLISH IN SECONDARY SCHOOLS PREREQUISITE: Junior or Senior Standing Study of methods and materials in the teaching of English literature, language, composition, and grammar.	Three Credits	449, COM 549 TEACHING OF COMPOSITION PREREQUISITES: Senior or Graduate Level Study of the traditional and contemporary theories, practices, and research that inform the teaching of composition from late elementary school through freshman English.	Three Credits	552 LITERATURE FOR CHILDREN AND ADOLESCENTS Introduction to the great wealth of trade books (library literature) which is available to children (0-12) and adolescents (13-16). Survey of selection and utilization of literature in the home and in classroom settings.	Three Credits
400/ 500 ADVANCED PLACEMENT ENGLISH IN THE HIGH SCHOOL PREREQUISITE: Senior or graduate level Study of the Advanced Placement Program in English, with attention to establishing an AP program, designing and implementing an AP curriculum, and designing, developing, and teaching an AP course.	Three Credits	450 RESEARCH SEMINAR AND SENIOR THESIS Independent research on a topic selected by the student, approved by departmental advisor and completed under the guidance of the advisor.	Three Credits	ENTREPRENEURIAL STUDIES - ENT	
410 HISTORY OF THE ENGLISH LANGUAGE Structure and development of the language in England and America with emphasis on historical grammar and linguistic changes with the cultural factors involved.	Three Credits	452 LITERATURE FOR CHILDREN Preparation for pre-service teachers in becoming acquainted with and capable of evaluating the great wealth of trade books (Library Literature) available to today's children ages 0-12. Emphasis on the issues that result from the trends in publishing, selecting, and using these literary selections.	Three Credits	364 MANAGING THE FAMILY BUSINESS PREREQUISITES: MGT 365; FNC 360 Discussion of business management concepts on the family business environment which examines the stages of the family enterprise with emphasis on managing people, change and conflict, as well as strategic planning and organizational tools applicable to the family business, evaluation of situations and problems in a family business through the analysis of cases; and realize the career paths and opportunities.	Three Credits
412 CHAUCE Designed to provide a general acquaintance with The Canterbury Tales and Troilus and Criseyde and some of Chaucer's minor poems.	Three Credits	453 WOMEN'S LITERATURE AND CONTEMPORARY ISSUES PREREQUISITE: ENG 207 or permission of instructor. Survey of relevant contemporary social issues in women's literature of various ethnic groups. Issues relate to domestic battering, rape, child abuse/incest/pornography, prostitution, and genital mutilation.	Three Credits	454 YOUNG ADULT LITERATURE PREREQUISITE: Junior standing or permission of instructor. Survey of the reading needs and preferences of adolescent readers with emphasis on integrating literature throughout the curriculum and utilizing methods of maintaining the integral connection between reading and writing.	Three Credits
413 SHAKESPEARE General survey of Shakespeare's dramatic career, with readings of a selected number of his plays and their study against the background of Elizabethan social, political, and philosophical ideas.	Three Credits				
416 MILTON Study of the chief poems and prose works of Milton with emphasis on Milton's artistic merits and on his religious, scientific, and political ideas.	Three Credits				

ENTREPRENEURIAL STUDIES – ENT (continued)

386 Three Credits NEW VENTURE FINANCE PREREQUISITES: FNC 360

In-depth analysis of the process of funding an entrepreneurial venture with a critical examination of the decisions and alternatives of the basis on their impact on firm value. Exploration of the techniques used in the areas of evaluation, business plan development, deal structure, and venture harvest. Discussions of seed and growth capital from source such as individuals, angel funds, venture capita, investment banks, government, and commercial banks. Study of how entrepreneurs identify and commit the necessary resources to create and fund ventures.

387 Three Credits INTRODUCTION TO ENTREPRENEURSHIP PREREQUISITES: MKG 366; FNC 360; MGT 365

Introduction to the important characteristics of entrepreneurs that relate to successful business start-ups, with emphasis on self-evaluation, effective decision-making skills, and practical aspects of a successful business start-up. A requirement is a written assignment on business plans based on a potential future business venture.

465 Three Credits SMALL BUSINESS MANAGEMENT PREREQUISITE: ENT 387

Integration of entrepreneurial topics into comprehensive plans and/or suggestions for starting a business and solving problems. Requirements include completion of the business plans and presentation for approval, participation in a small business computer simulation, and learning more about entrepreneurs and small business management through classroom work.

467 Three Credits CONTEMPORARY TOPICS IN ENTREPRENEURSHIP PREREQUISITES: ENT 387; Senior Standing

Study of the latest concepts, theories, and applications in all aspects of entrepreneurship and small business management.

476 Three Credits FRANCHISING PREREQUISITES: MKG 366; Senior Standing

Introduction to the principles and strategies involved in starting and managing a franchise operation, with emphasis on the knowledge of franchise ability, the merits and demerits of franchising, and the rights and obligations of parties involved in franchising.

482 Three Credits MANAGING GROWING VENTURES PREREQUISITE: ENT 386

Study of managing growing companies in a professional manner while maintaining the entrepreneurial spirit. Emphasis on financing growth, measuring economic performance, and obtaining information for management decision making; management control systems for innovative companies; short-and long-run planning in owner managed businesses; and entrepreneurship and management.

484 Three Credits CREATIVITY INNOVATION AND CHANGE MANAGEMENT PREREQUISITE: ENT 387

Foundation for creating or finding new business opportunities, technologies or processes. Study of market research, competitive intelligence, and managing change, with emphasis on evaluation, planning, and leadership while distinguishing between need or idea and the opportunity.

486 Three Credits ENTREPRENEURSHIP FIELD STUDIES PREREQUISITE: ENT 465

Experience in working on an entrepreneurial venture with the instructor serving as a coach. Requirements are construction of a business plan and presentation of an assessment of the outcome.

495 Three Credits INTERNATIONAL ENTREPRENEURSHIP PREREQUISITES: FNC 360 and MKG 366

Analysis of the operations and the managerial strategies of various types of businesses in the international setting. Emphasis on the intellectual, political, social, economic, and moral issues that business and government leaders must face in dealing with international business problems.

EXERCISE SCIENCE - EXS

170 Three Credits INTRODUCTION TO EXERCISE SCIENCE

Review of the health related professional, the impact exercise has on a healthy lifestyle, and as a disease prevention tool. Exercise testing, basic exercise principles, and their use in fitness and rehabilitation are addressed.

237 Three Credits CARE AND PREVENTION OF ATHLETIC INJURIES PREREQUISITES: PED 287, 287L, 288, 288L

Theoretical foundation for care and prevention of athletic injuries, while addressing anatomy, medical conditions, and evaluation techniques with emphasis on basic first aid skills.

265, 266 Two Credits Each THERAPEUTIC EXERCISES AND SPORTS

Introduction to therapeutic physical activities and sports that afford the disabled success, recognition, and approval among a variety of handicapping conditions.

355 Three Credits ANATOMICAL KINESIOLOGY PREREQUISITES: PED 287, 287L, 288, 288L, or BIO 165, 166 (Lab Fee: \$30)

Study of anatomical terminology and gross human osteology, arthorology, mycology, neurology, and angiology.

356 Three Credits BIOMECHANICS OF HUMAN MOTION PREREQUISITES: EXS 355; MTH 153; PHY 152

Analysis of the functions and mechanics of human motion as applied to human movement with emphasis on qualitative movement analysis to improve performance and prevent injury.

357 Three Credits ORGANIZATION AND MANAGEMENT OF EXERCISE SCIENCE PREREQUISITES: EXS 170

Introduction to the basic processes of administration and management in health professions that afford a variety of broad-based managerial functions and detailed administrative actions for students.

363 Two Credits CLINICAL ASPECTS OF AGING PREREQUISITE: EXS 447

Application of the principle of fitness evaluation and prescription to the older adult population with emphasis on physiology of aging, motivational techniques, evaluation and programming with attention to chronic.

364 Two Credits TECHNIQUES OF WEIGHT TRAINING & CONDITIONING PREREQUISITES: PED 287, 287L, 288, 288L or BIO 165, 166

Introduction to the various areas of resistive exercise training, inclusive of isokinetic, isotonic, and isometric routines along with Biomechanical and physiological benefits associated with each.

369 Three Credits RESEARCH METHODS AND STATISTICAL EVALUATION PREREQUISITE: MTH 153

Introduction to the role of valid, reliable and objective testing methods in evaluation and decision making. Basic study design and statistical method prepare the student to make fundamental decisions using norm and criterion referenced criteria.

430 Three Credits NEUROLOGICAL AND PATHOLOGICAL FOUNDATIONS IN EXERCISE SCIENCE PREREQUISITES: EXS 447, 447L

Survey of illnesses relating neurological dysfunction, and the nature and physiological consequence of disease processes for healthy and diseased populations.

445 Three Credits THERAPEUTIC MODALITIES PREREQUISITES: EXS 355, 356, 447, 447L

Introduction to the body's physiological response to the various clinical techniques and therapeutic modalities used in the rehabilitation process.

447 Three Credits PHYSIOLOGICAL BASES OF EXERCISE PREREQUISITES: PED 287, 287L, 288, 288L or BIO 165, 166

Study of physiological responses, adjustments, and adaptations to the acute stress of exercise and physical

activity and the chronic stress of physical training, including an introduction to the physiological basis of exercise.

447L One Credit PHYSIOLOGICAL BASIS OF EXERCISE LAB COREQUISITE: EXS 447

Basic laboratory procedures and tests to provide experience in subject recruitment, data collection, and abstract presentation.

483 Three Credits CLINICAL KINESIOLOGY I PREREQUISITE: EXS 355, 356

Practical application of the knowledge with emphasis on physical musculoskeletal function, neurological involvement, goniometry, anthropometry, and gait analysis.

484 Three Credits CLINICAL KINESIOLOGY II PREREQUISITE: EXS 355, 356; or PED 356

Introduction to the development of rehabilitation as an integral part of comprehensive medical care and its application to restore persons with physical and emotional impairments to the optimal level of functional independence. Consideration on neurological dysfunction/rehabilitation, orthopedic/rehabilitation, prosthetics, orthotics, respiratory and cardiac dysfunction.

489 Three Credits ADVANCED ATHLETIC TRAINING PREREQUISITE: EXS 237

Introduction to injury prevention techniques, specific athletic injuries, and on the techniques used to enhance the healing process.

493 C and D Twelve Credits CLINICAL INTERNSHIP IN EXERCISE SCIENCE PREREQUISITES: Completion of all Didactic Course Work

Practicum experiences require 1,000 hours of supervised field work conducted at an approved setting which provide the opportunity to utilize and personalize knowledge gained in the classroom in a practical environment.

FASHION DESIGN/ MERCHANDISING - FDM

142 Three Credits INTRODUCTION TO FASHION INDUSTRY

Survey of Fashion Industry processes and procedures as related to the provision of apparel and related items for individuals and their families. Opportunity provided for study of fashion-related careers.

143 Three Credits PRINCIPLES OF APPAREL DESIGN AND PRODUCTION

Survey of methods and procedures associated with the fit of flat fabrics to the human body.

*149 Two Credits APPAREL PRODUCTION I

Study of basic procedures used in the conversion of fabric to acceptable wearing apparel. (Students who demonstrate exceptionally high construction skills may opt to test out of the course).

*150 Two Credits APPAREL PRODUCTION II

PREREQUISITE: FDM 149 or equivalent
Emphasis on perfecting sewing skills using more challenging patterns and fabrics to create quality garments with an introduction to simple pattern modification techniques.

151 One Credit FRESHMAN REVIEW

PREREQUISITES: FDM 149, 150
Evaluation of mastery of garment construction techniques. Special assignments may be prescribed for persons needing additional skill development.

210 Three Credits SOCIO-PSYCHOLOGICAL ASPECTS OF CLOTHING

Survey of socio-psychological and economic factors affecting selection and use of clothing by individuals and families.

*250 Three Credits PATTERNMAKING I

PREREQUISITES: FDM 149, 150
Using draping, flat pattern, and drafting procedures to develop and construct one original muslin garment in half or full size.

***251** **DESIGN STUDIO I** **Three Credits**
PREREQUISITES: FDM 149, 150, 250
 Introduction to design research. Completion of a full-size, original designed garment or garment ensemble is required.

253 **SOPHOMORE DESIGN REVIEW** **One Credit**
COREQUISITE: FDM 251
 Evaluation of competency in the application of apparel line development theory.

334 **TEXTILES** **Three Credits**
 Study of factors that influence the tactile behaviors of natural and man-made fabrics during garment design, manufacture and wear with emphasis on fiber/fabric properties, production, and finish.

362 **FASHION FORECASTING & SOURCING** **Three Credits**
 Explorations in the use of the Internet and other resources to determine trends and sources related to fashion apparel and accessories.

***365** **DESIGN STUDIO II** **Two Credits**
PREREQUISITE: FDM 364
 Studio practice in the creation and production of original fashion apparel using computer applications.

366 **APPAREL PRODUCTS EVALUATION** **Three Credits**
PREREQUISITE: FDM 149
 Development of visual and verbal precision in the identification, classification, and evaluation of quality in apparel structures.

368 **JUNIOR DESIGN REVIEW** **One Credit**
COREQUISITE: FDM 365
 Evaluation of student progress in documenting the professional portfolio in fashion and accessory design.

373 **FASHION HISTORY** **Three Credits**
 Introduction to social, economic, technological, cultural, and aesthetic factors influencing trends in design, merchandising, production, distribution, and consumption of textiles and apparel over time.

***387** **VISUAL MERCHANDISING** **Three Credits**
PREREQUISITES: FIA 114, 180
 Study of merchandising displays and promotion with emphasis on store design, in-store visual display and store windows.

395P **FASHION MERCHANDISING PRACTICUM** **Three Credits**
PREREQUISITE: Junior Standing
 Developing a field experience plan that results in 75 hours of paid employment in an apparel-related agency.

***449** **DESIGN COLLECTIONS** **Three Credits**
PREREQUISITES: FDM 368; Junior Standing
 Developing original line of apparel and/or accessory items for one of the major industry apparel categories. A minimum of 5 items must be included.

454 **CURRENT ISSUES IN FASHION DESIGN/** **Three Credits**
MERCHANDISING
PREREQUISITE: Senior Standing
 Seminar course in which emerging issues related to the fashion industry will be explored.

***495** **DESIGN STUDIO III** **Three Credits**
PREREQUISITE: FDM 449
 Independent study, with faculty guidance and evaluation, resulting in the spring fashion show or gallery exhibition.

496 **FASHION MERCHANDISING INTERNSHIP** **Three Credits**
PREREQUISITE: FDM 395
 Two hundred hours of supervised work experiences in an approved apparel retail agency is required. With faculty approval, plans for this experience may be submitted and the experience completed during summer prior to senior year.

***Courses require contact hours equal to twice the credit hours offered.**

FINANCE - FNC

281 **LEGAL ENVIRONMENT FOR BUSINESS** **Three Credits**
PREREQUISITE: BAD 175

Survey of the Anglo-American legal system, the American court system, criminal law, tort law, contracts, property law, the law governing business organizations, and governmental regulation of business. Emphasis on the legal, ethical, social, and political environment in which business and government operate.

310 **RISK MANAGEMENT** **Three Credits**
PREREQUISITES: FNC 360; MKG 366

Introduction to the theory of insurance, types of personal and business coverage, and the analysis of business risks and risk-bearing from the standpoint of risk reaction, risk reduction, risk elimination, and risk evaluation. Emphasis on the fundamental unifying elements of risk and insurance.

360 **CORPORATE FINANCE** **Three Credits**
PREREQUISITES: ACC 202; ECN 212

Study of the major finance functions of modern corporations, including the need for funds to finance the acquisition of various assets such as receivables, inventories, and plant and equipment; the alternative sources of funds available including short-term and long-term, internal and external analysis of the firm's capital structure, and alternative long-term financing sources and techniques. Analysis of the ethics involved in various areas of finance and international finance topics.

362 **INVESTMENTS** **Three Credits**
PREREQUISITE: FNC 360 or permission from department

Introduction to investment analysis which analyzes the various types of business and public securities and portfolio management concepts, including international diversification. Study of the process by which a growing small business can issue stock and other securities to the public.

363 **FINANCIAL INSTITUTIONS** **Three Credits**
PREREQUISITE: FNC 360

Fundamentals of financial institutions with emphasis on the actual operations and business of commercial banks, mutual savings bank, savings and loan associations, credit unions and other financial institutions.

372 **ENTREPRENEURIAL FINANCE** **Three Credits**
PREREQUISITE: FNC 360

Overview of entrepreneurial financial management which establishes a foundation for understanding of the basic financial techniques for an owner and owner manager in the small business environment with emphasis on the sources of funding, financial planning and forecasting, cash flow analysis, buy/lease decisions, financing of franchising, and the home office, among other topics. International opportunities for small businesses and financial instruments of global businesses are introduced.

380 **PRINCIPLES OF REAL ESTATE** **Three Credits**
PREREQUISITE: FNC 360 and Junior Standing

Analysis of the fundamental law of real property with special emphasis on the changing character of the urban economy, buildings and land use, and their values.

382 **COMMERCIAL LAW** **Three Credits**
PREREQUISITE: FNC 281

Introduction to commercial with emphasis on sales of goods, credit, secured transactions affecting both real estate and personal property, negotiable instruments, rules of bankruptcy, negotiable documents of title, legal aspects of the bidding process, and liability of accounts to clients and non-clients.

395 **INTRODUCTION TO PERSONAL FINANCIAL PLANNING** **Three Credits**
PREREQUISITES: ECN 211, 212
 Study of professional manuals in personal financial planning.

475 **TAXES, RETIREMENT, PLANNING** **Three Credits**
AND ESTATE PLANNING
PREREQUISITES: FNC 363, 395
 Study of professional manuals in personal financial planning.

488 **INTERNATIONAL FINANCE** **Three Credits**
PREREQUISITES: ECN 212; FNC 360; Junior Standing
 Analysis of the international monetary system and multinational firms. Evaluation of the environment of direct foreign investments with emphasis on capital budgeting, working capital management, and sources and instruments of international fund remittances.

490 **PORTFOLIO MANAGEMENT** **Three Credits**
PREREQUISITE: FNC 362

Introduction to modern portfolio theory and management based on financial techniques for individual and institutional clients, including professional ethics and advanced topics in capital market theory. (Capstone course in investment management.)

FINE ARTS - FIA

114 **BASIC DESIGN** **Three Credits**
 Study of basic elements of two-dimensional design and visual communication using a variety of media. Emphasis on visual problem-solving and critical decision making.

115 **BASIC DESIGN II** **Three Credits**
 Exploration of color using the basic elements and principles of two-dimensional design, including color theory and the practical application of theory in solving visual problems using a variety of media.

116 **BASIC DESIGN III** **Three Credits**
 Exploration of the relationship between form, space, and ideas in three-dimensional design. The sequence of projects begins with simple constructions and structures, then evolves to an investigation of complex three-dimensional form.

120 **DRAWING** **Three Credits**
 Development of ability to see and record through the use of a variety of drawing media, providing knowledge of line, shape, light and shade, texture, composition, and perspective.

Emphasis on drawing in still life, the live model, and outdoor sketching.

121 **DRAWING** **Three Credits**
PREREQUISITE: FIA 120

Development of ability to see and record through the use of a variety of drawing media, providing knowledge of line, shape, light and shade, texture, composition, and perspective. Emphasis on drawing in still life, the live model, and outdoor sketching.

140 **CERAMICS** **Three Credits**
 Introduction to modeling and sculpturing of tiles, panels, plaques, small figures in high and low relief, and in the round from plastic materials, casting in plaster, coiling, building, pressing and decorating pottery.

141 **CERAMICS** **Three Credits**
PREREQUISITE: FIA 140

Introduction to modeling and sculpturing of tiles, panels, plaques, small figures in high and low relief, and in the round from plastic materials, casting in plaster, coiling, building, pressing and decorating pottery.

160 **LETTERING** **Three Credits**
 Study of various techniques in poster layouts; practice in freehand pen and brush lettering; study of old style and modern alphabets; designing monograms, book covers and jackets, and constructing, printing, and illustrating a book.

161 **LETTERING** **Three Credits**
PREREQUISITE: FIA 160

Emphasis on how lettering can enhance the career of a professional artist or art educator. Assignments are often in the form of design problems requiring a convergence of skills from all classes.

160 **LETTERING** **Three Credits**
 Study of various techniques in poster layouts; practice in freehand pen and brush lettering; study of old style and modern alphabets; designing monograms, book covers and jackets, and constructing, printing, and illustrating a book.

161 **LETTERING** **Three Credits**
PREREQUISITE: FIA 160

Emphasis on how lettering can enhance the career of a professional artist or art educator. Assignments are often in the form of design problems requiring a convergence of skills from all classes.

160 **LETTERING** **Three Credits**
PREREQUISITE: FIA 160

Emphasis on how lettering can enhance the career of a professional artist or art educator. Assignments are often in the form of design problems requiring a convergence of skills from all classes.

180 **COMPUTER LITERACY FOR THE ARTS** **Three Credits**
 Study of the concepts and skills necessary to explore the use of computers in the arts. Emphasis on intuitive understanding of technical material and encourages artistic experimentation with computer-related ideas.

FINE ARTS – FIA (continued)

201 **Three Credits**
BASIC ART APPRECIATION
 Survey of the arts (architecture, painting, and sculpture) conducted through a series of lectures, slides, and art films. Emphasis on the elements that go into the making of a work of art, the artists' works related to the world around them, and an explanation of the periods of art.

211 **Three Credits**
FASHION DRAWING
PREREQUISITE: FIA 114
 Introduction to drawing from the live model and other sources. Emphasis is on developing skills necessary for competent illustration of the figure for fashion drawings.

214 **Three Credits**
CRAFT DESIGN
 Experimentation with basic processes and individual problems in woodcarving, ceramics, leather, metal, textiles and plastics. Develops appreciation of artistic craftsmanship, research, lectures, demonstration and participating experiences.

215 **Three Credits**
CRAFT DESIGN
PREREQUISITE: FIA 214
 Experience with various materials related to contemporary and traditional craft forms, related to object making which uses originality of concept and design.

220 **Three Credits**
LIFE DRAWING
PREREQUISITES: FIA 120 and 121
 Drawing from live models in an attempt to familiarize the student with various approaches to the figure.

221 **Three Credits**
LIFE DRAWING
PREREQUISITES: FIA 120, 121, and 220
 Drawing from live models in an attempt to familiarize the student with various approaches to the figure.

234 **Three Credits**
PAINTING
PREREQUISITES: FIA 120; 121; 114; 115
 Introduction to acrylic or oil painting with emphasis on a variety of painting techniques, composition and color mixing. Individual development stressed through class critiques. Museum and gallery visits required.

235 **Three Credits**
PAINTING
PREREQUISITES: FIA 120; 121; 114; 115; 234
 Introduction to acrylic or oil painting with emphasis on a variety of painting techniques, composition and color mixing. Individual development stressed through class critiques. Museum and gallery visits required.

240 **Three Credits**
SCULPTURE
 Introduction to the basic rules and techniques of sculpture, familiarizing them with the various tools and materials peculiar to this area. Emphasis on clay, plaster of paris, wire and plastics, and traditional materials such as wood, stone, and metal, wherever feasible. Elementary sculpture is bas-relief and in the round.

241 **Three Credits**
SCULPTURE
PREREQUISITE: FIA 240
 Introduction to the basic rules and techniques of sculpture, familiarizing them with the various tools and materials peculiar to this area. Emphasis on clay, plaster of paris, wire and plastics, and traditional materials such as wood, stone, and metal, wherever feasible. Elementary sculpture is bas-relief and in the round.

250 **Three Credits**
INTRODUCTION TO ANIMATION
PREREQUISITES: FIA 114, 115, 120, 121, or Permission of the Instructor
 Introduction to the history, careers, and production skills in animation art which provides hands-on knowledge of the various stages of production without recourse to heavy investments in supplies and professional equipment.

251 **Three Credits**
BASIC ANIMATION
PREREQUISITE: FIA 250
 Development of the historical knowledge of animation and the advancement of personal animation production skills through a hands-on studio class.

260 **Three Credits**
INTRODUCTION TO GRAPHIC DESIGN
 Fundamental principles of graphic design, organized as a series of problems in visual communication including a variety of working methods, developing designs from the initial conceptual stage through final production phase. Computer experience recommended.

261 **Three Credits**
PRINTMAKING WORKSHOP
 Fundamental understanding of various printmaking media through the demonstration and execution of basic technical methods combined with discussion of the aesthetic considerations involved in the creation of original prints.

262 **Three Credits**
PRINTMAKING WORKSHOP
PREREQUISITE: FIA 261
 Fundamental understanding of various printmaking media through the demonstration and execution of basic technical methods combined with discussion of the aesthetic considerations involved in the creation of original prints.

270 **Three Credits**
HISTORY OF ART SURVEY I
 Survey of architecture, painting, and sculpture designed to promote understanding and enjoyment of the fine arts through a series of lectures, slides, and art films. Emphasis on technical, social, historical, and thematic issues from prehistoric art through Gothic.

271 **Three Credits**
HISTORY OF ART SURVEY II
PREREQUISITE: FIA 270
 Survey of architecture, painting, and sculpture designed to promote understanding and enjoyment of the fine arts through a series of lectures, slides, and art films. Emphasis on technical, social, historical, and thematic issues from the Renaissance through contemporary.

280 **Three Credits**
COMPUTER IMAGING
PREREQUISITE: FIA 180
 Introduction to the process of involving electronic media in the production of visual images using the computer and its peripheral devices. Emphasis on two-dimensional still images, with attention to animation, web design, and presentations.

314 **Three Credits**
FINE ARTS AND METHODS
 Introduction to a wide variety of creative, problem-solving experiments with art materials for prospective or in-service teachers or students from other professions.

315 **Three Credits**
ART UNITS WITH OBSERVATION
PREREQUISITE: FIA 314
 Extension of the theory and practice of art education to guide art majors in a series of unit and lesson planning activities.

320 **Three Credits**
INTERMEDIATE DRAWING
PREREQUISITES: FIA 120 and 121
 Enhancement of the ability to translate physical and mental stimuli into tangible, visual images engaging in a variety of technical assignments designed to expand the creative thought process.

321 **Three Credits**
INTERMEDIATE DRAWING
PREREQUISITES: FIA 120, 121, and 320
 Enhancement of the ability to translate physical and mental stimuli into tangible, visual images engaging in a variety of technical assignments designed to expand the creative thought process.

323 **Three Credits**
INTERNATIONAL ANIMATED FILM HISTORY
 Survey of the history of the animated feature film from its creation in the late 1930's. Focus on the filmmaking, studios, trends and traditions, and their influence on popular culture worldwide.

334 **Three Credits**
ART COMPOSITION AND PAINTING
 Emphasis on the strengthening of organization principles of good drawing and design within a painting, including the application of effective painting methods, techniques, and thematic concepts.

335 **Three Credits**
ART COMPOSITION AND PAINTING
PREREQUISITES: FIA 234, 334
 Emphasis on the strengthening of organization principles of good drawing and design within a painting, including the

application of effective painting methods, techniques, and thematic concepts.

340 **Three Credits**
INTERMEDIATE CERAMICS
PREREQUISITES: FIA 140, 141
 Opportunity to execute individual programs, making use of stoneware temperature, reduction, and raku firing.

341 **Three Credits**
INTERMEDIATE CERAMICS
PREREQUISITES: FIA 140, 141, 340
 Opportunity to execute individual programs, making use of stoneware temperature, reduction, and raku firing.

350 **Three Credits**
INTERMEDIATE ANIMATION I
PREREQUISITES: FIA 250, 251, 220, 221
 Development of intermediate skills in character design and animation coupled with computer animation production. Further development of skills in "clean-up," "inbetweening," "layout," "special effects," and "background."

351 **Three Credits**
INTERMEDIATE ANIMATION II
PREREQUISITES: FIA 250, 251, 220, 221, 350
 Develops the intermediate skills in character design and animation, coupled with computer animation production. Further development of the student's skills in "clean-up," "inbetweening," "layout," "special effects," and "background."

360 **Three Credits**
TYPOGRAPHY
 Introduction to communication problem solving through the visual language. Exploration of the fundamentals of typography and typographic design through a series of experimental and practical projects.

361 **Three Credits**
ADVANCED PRINTMAKING
PREREQUISITES: FIA 261, 262
 Exploration of the art of lithography and either intaglio or relief prints.

362 **Three Credits**
GRAPHIC DESIGN I
PREREQUISITE: FIA 260
 Foundation of commercial art including video and the Web. Emphasis on layout, typography, computer graphics, photography, video and the various processes of reproduction as they pertain to graphic design.

363 **Three Credits**
GRAPHIC DESIGN II
PREREQUISITE: FIA 362
 Study of commercial art including video and the Web. Emphasis on layout, illustration, typography, computer graphics, photography, video, animation (such as Flash), and the various processes of reproduction as they pertain to graphic design.

365 **Three Credits**
ELEMENTARY PHOTOGRAPHY
 Fundamental principles and practices of photography necessary for taking and making excellent prints.

366 **Three Credits**
ADVANCED PHOTOGRAPHY
PREREQUISITE: FIA 365 or equivalent
 Study of composition and perspective in the following categories: advertising, copy ng, photographic drawings open and slide making (color). Emphasis on lighting, shadows, shape and form.

370 **Three Credits**
AFRICAN/AFRO-AMERICAN ART
 Survey of African and African-American art from the first millennium B.C. to the present, which examines painting, sculpture, architecture, and the lesser arts of metallurgy, design and textiles.

372 **Three Credits**
INTRODUCTION TO FIBERS
 Study of contemporary sculptural forms in the following categories: soft sculpture, body adornments, container forms, and wall hangings. Techniques used are wrapping, coiling, weaving, off-loom weaving, knot forming, trapunto, and fabric manipulation.

373 **Three Credits**
FASHION ILLUSTRATION AND LAYOUT
 Study of the mechanics of fashion layouts from the initial sketch to the camera ready design. Emphasis on basic techniques and integrating fashion illustration with typography.

374 ADVANCED FIBERS PREREQUISITE: FIA 372 Fundamentals of working with fibers using manipulative and basic skills to establish a fiber vocabulary, heighten sensitivity to materials, and impart knowledge of fibers and forms.	Three Credits	491 ADVANCED STUDIO PROBLEMS PREREQUISITE: Senior Standing Study of studio problems in drawing, painting, printmaking, graphic design, sculpture, ceramics, and photography.	Three Credits	220 FRENCH CIVILIZATION I PREREQUISITE: FRN 212 or Equivalent Survey of the most important elements of French civilization, geography, economy, political history, arts, sciences, and institutions. Conducted in French.	Three Credits
420 ADVANCED DRAWING PREREQUISITES: FIA 120/121, 220/221, 320/321 Establishment of individual responses to the environment while building drawing concepts by working in series and presenting work in a professional manner.	Three Credits	492 ADVANCED STUDIO PROBLEMS PREREQUISITE: FIA 491, Senior Standing Studio problems in drawing, painting, printmaking, graphic design, sculpture, ceramics, and photography. May be used for one semester major field related internship.	Three Credits	315 ADVANCED CONVERSATION PREREQUISITE: FRN 215 or Permission of Instructor Intensive and extensive practice in the use of oral French. Conducted in French.	Three Credits
421 ADVANCED DRAWING PREREQUISITES: FIA 120/121, FIA 220/221, FIA 320/321, and 420 Establishment of individual responses to the environment while building drawing concepts by working in series and by presenting work in a professional manner.	Three Credits	495 PORTFOLIO PREPARATION AND SENIOR EXHIBITION PREREQUISITE: To be taken only in the final semester of major course work for graduation. Preparation of a professional art portfolio which includes selecting pieces, presenting and documenting work, applying for graduate school or the profession. Portfolio reviewed by faculty and outside evaluators.	Two Credits	320 FRENCH CIVILIZATION II PREREQUISITE: FRN 215 or Permission of Instructor Survey of the most important elements of contemporary French culture. Conducted in French.	Three Credits
434 ADVANCED PAINTING PREREQUISITES: FIA 334, 335 Establishment of proficiency in the rendering of a special subject area with complete utilization of acquired skills in painting. Emphasis on freedom of expression and critical analysis of painting direction.	Three Credits	363 FRENCH - FRN		321 SURVEY OF FRENCH LITERATURE I PREREQUISITE: FRN 216 or Equivalent Study of representative works of French literature from the beginning to the end of the 17th century. Conducted in French.	Three Credits
435 ADVANCED PAINTING PREREQUISITES: FIA 334, 335, 434 Establishment of proficiency in the rendering of a special subject area with complete utilization of acquired skills in painting. Emphasis on freedom of expression and critical analysis of painting direction.	Three Credits	111 ELEMENTARY FRENCH I Introduction to fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.	Three Credits	322 SURVEY OF FRENCH LITERATURE II PREREQUISITE: FRN 216 or Equivalent Study of representative works of French literature from the beginning of the 18th century to the middle of the 20th century.	Three Credits
460 ADVANCED GRAPHIC DESIGN PREREQUISITE: FIA 363 Study of the means and methods of relating pictorial images, lettering, type, paper and color for use in publicity, book design, and allied fields.	Three Credits	112 ELEMENTARY FRENCH II PREREQUISITE: FRN 111 or Equivalent Introduction to fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.	Three Credits	All literature courses beyond this level are conducted in French.	
461 ADVANCED GRAPHIC DESIGN PREREQUISITES: FIA 260, 360, 362, 363, 460 Focus on research and experimentation in specialized visual communication media in a topical studio. Extensive experience in computer graphics required.	Three Credits	113 BASIC CONVERSATION I Practical use of daily conversation for students who have had no previous training with emphasis on idiomatic expressions and acquiring fluency. Conducted largely in French.	Three Credits	326 FRENCH LITERATURE OF THE 16TH CENTURY PREREQUISITE: FRN 321 Study of the representative works of the period: the poetry of the Pleiades and the prose of Rabelais and Montaigne.	Three Credits
462 DESIGN IN COMMERCE PREREQUISITES: FIA 260, 360, 362, 363, 460, and 461 Study of contemporary visual communications, with emphasis on systematic and methodological approaches to communication design through the solving of practical, complex problems in visual communication. Extensive experience in computer graphics required.	Three Credits	114 BASIC CONVERSATION II Practical use of daily conversation for students who have had no previous training with emphasis on idiomatic expressions and acquiring fluency. Conducted largely in French. (May be taken independently.)	Three Credits	330 LITERATURE OF THE 17TH CENTURY PREREQUISITE: FRN 321 Origins and foundations of French Classicism, including its philosophical and artistic implications and its main representatives: Descartes, Pascal, Corneille, Racine, Moliere, La Fontaine, and minor classicists.	Three Credits
463 DESIGN IN COMMERCE PREREQUISITES: FIA 260, 360, 362, 363, 460, 461, 462 Study of graphic design with emphasis on sharpening mechanical skills, promoting professional work and compiling a strong portfolio. Developing a sense of clarity and style in visual communication of the goal.	Three Credits	211 INTERMEDIATE FRENCH I PREREQUISITE: FRN 112 or Equivalent Review of grammar, reading moderately difficult prose, oral practice, and written compositions.	Three Credits	331 LITERATURE OF THE 18TH CENTURY PREREQUISITE: FRN 322 Presentation of the main trends in the political and literary developments of the Age of Enlightenment. Special emphasis on the contributions of Voltaire, Rousseau, Montesquieu and the Encyclopedists.	Three Credits
470 MODERN ART HISTORY PREREQUISITES: FIA 270, 271 Survey of modern art from the 19th century avant-garde to contemporary modes of expression. Focus on movements in European and American art including the evolution of painting, sculpture, and architecture.	Three Credits	212 INTERMEDIATE FRENCH II PREREQUISITE: FRN 211 or Equivalent Intensive and extensive study and reading of modern prose, oral practice, and composition.	Three Credits	332 LITERATURE OF THE 19TH CENTURY PREREQUISITE: FRN 322 Emphasis on Romanticism, Realism, Naturalism and Symbolism dealing with the chief tendencies of contemporary literature. Analysis of texts and literary theories in class discussions.	Three Credits
472 ENAMELING Study of master techniques in fusing colored gloss to metal surfaces. Experiments conducted with both opaque and transparent enamels on a wide variety of metal surfaces.	Three Credits	213 SCIENTIFIC FRENCH PREREQUISITE: FRN 211 or Equivalent Intensive and extensive reading of scientific French in chemistry, physics, biology, mathematics, psychology, etc. Course may be taken in lieu of FRN 212 by majors in science, mathematics, and psychology to satisfy language requirements.	Three Credits	333 LITERATURE OF THE 20TH CENTURY PREREQUISITE: FRN 322 Study of representative authors and works presenting contemporary literary trends.	Three Credits
473 JEWELRY MAKING Study of the concept of jewelry making with focus on usability and aesthetic quality.	Three Credits	214 ENTREPRENEURIAL FRENCH PREREQUISITE: FRN 112 Study of concepts of French business language and culture to prepare them to be competitive in an increasingly global marketplace.	Three Credits	382/SPN 382 THE TEACHING OF FOREIGN LANGUAGES IN SECONDARY SCHOOLS PREREQUISITE: SED 380 Study of methods and materials in the teaching of modern foreign languages.	Three Credits
474 FABRIC PRINTING Study of basic weaves enhanced by resist dyeing (ikat) and directly applied painted warps. Experiments conducted with methods of coloring and ornamenting fabrics through dyeing processes that affect material to be woven into fabric.	Three Credits	215 INTERMEDIATE CONVERSATION PREREQUISITE: FRN 212 or Equivalent Practical use of daily conversation with emphasis on idiomatic expressions and acquiring fluency. Conducted largely in French.	Three Credits	412 LANGUAGE FOR PROFESSIONALS PREREQUISITE: FRN 315 or Permission of the Instructor Intensive and extensive practice in the language of technical, vocational, and professional areas with emphasis on comprehension, speaking, reading, and writing. Special emphasis on the student's secondary area of concentration.	Three Credits
		216 EXPLICATION DE TEXTES PREREQUISITE: FRN 215 or Equivalent Preparation for the study of advanced texts from literary and linguistic points of view. Conducted in French.	Three Credits	413 INDIVIDUALIZED LANGUAGE FOR PROFESSIONALS PREREQUISITE: FRN 315 or Permission of the Instructor Intensive practice in the language of technical, vocational or professional areas.	Three Credits

FRENCH - FRN (continued)

450 Two Credits
PHONETICS
PREREQUISITE: FRN 215 or Equivalent
 Analysis of the phonetic features of French including systematic exercises in pronunciation, intonation, and reading of prose and poetry.

454 Three Credits
ADVANCED GRAMMAR AND COMPOSITION
PREREQUISITE: FRN 215 or Equivalent
 Intensive review and application of French grammar including intensive practice in writing and study of vocabulary and idioms.

485 Two Credits
CONTRASTIVE LINGUISTICS
PREREQUISITE: FRN 215 or Equivalent
 Introduction to the principles phonological, morphological, syntactical, and lexical contrasts between French and English. No previous work in linguistics is required.

490 Three Credits
SENIOR SEMINAR
PREREQUISITE: Departmental Permission
 Independent research on a topic approved by the departmental advisor, and completed under the guidance of that advisor.

500 One/Two/Three Credits
PRACTICUM IN FRENCH
PREREQUISITE: Senior or Graduate Level
 Variable content course in French language, literature, history, or culture for students who wish to study beyond the normal four-semester sequence of foreign language.

FUNERAL SERVICE - FNS

300L One Credit
FUNERAL SERVICE REVIEW LAB
 Comprehensive review of all courses in preparation for the National Board Examination.

301 Two Credits
INTRO TO FUNERAL SERVICES
 Survey of the history of funeral service, with emphasis on ethnic groups that have influenced contemporary funeral principles and practice, as well as the progression of associations and education within funeral service.

322 Two Credits
FUNERAL SERVICE LAW
 Preparation for exams to become funeral directors and embalmers. Study of laws, regulations, legislatures, and society as established to ensure the orderly and decent disposition of dead human bodies.

330 Three Credits
CONCEPTS & APPLICATIONS
 Introduction to computers and information processing. Primary emphasis on three standard applications: word processing, spreadsheets, and data base.

340 Four Credits
EMBALMING FOR FS I
PREREQUISITE: BIO 165
 Introduction to the history, purpose and technical aspects of embalming which include signs and tests for death, proper handling of human remains, different types of chemicals, instruments and disinfectants used to facilitate disinfections, preservation, and restoration of human remains.

345 Four Credits
EMBALMING FOR FS II
 Continuation of the history, purpose and technical aspects of embalming which include signs and tests for death, proper handling of human remains, pre-and post mortem changes in the body, government regulation, as it pertains to the preparation room, and handling of human remains, different type of chemicals, instruments and disinfectants used to facilitate disinfections, preservation, and restoration of human remains. Participation in a minimum of 10 embalming procedures is required. (Grades based on proficiency, technique and knowledge of subject matter.)

350 Three Credits
RESTORATIVE ART I
 Introduction to the methods of restoring human remains to a lifelike state, including analysis of the proportions and structures of the cranial and facial regions, identification of natural facial markings, and mastered techniques of restoring damaged remains. Additional emphasis on the importance and application of cosmetics and color.

355 Three Credits
RESTORATIVE ART II
 Study of the surface contour, the influence of the bone structure on facial form, and the effect of the facial muscles on the wrinkles, grooves and folds of the face, including wax and non-wax treatments and techniques, such as swellings, feature corrections, and hair restorations.

360 Three Credits
INTRO TO MANAGEMENT I
 Introduction to the basic principles of funeral management which apply to the practice of the funeral professions.

365 Three Credits
INTRO TO MANAGEMENT II
PREREQUISITE: FNS 360
 The role and function of an effective funeral services management in planning, organizing, motivating, and directing and controlling.

370 Three Credits
FUNERAL HOME MERCHANDISING
 Intensive study of display methods, promotion and advertising as they pertain to caskets, clothing, and cremation items through participation in projects designed to enhance knowledge of layout and design.

373 Two Credits
ETHNICS IN FUNERAL SERVICE EDUCATION
 Study of the basic rules governing the everyday activities of funeral service. Emphasis on trustworthiness, rapport, and sensitivity to the needs of the bereaved. Study of the standards of ethical behavior in personal and professional conduct as it pertains to funeral service.

GENERAL STUDIES - FRS/GST

FRS 100 Zero Credit
FRESHMAN SEMINAR
 Non-credit introduction to university life.

GST 180 Three Credits
CAREER EXPLORATION
 Introduction to career trends, values clarification, skills, and techniques necessary for decision-making and career assessment.

GST 200 Zero Credit
STUDY SKILLS SEMINAR
 Development of skills necessary to enhance academic success in college with emphasis on weekly activities to promote utilization of positive study habits and necessary college survival skills.

GST 345H or 346H Three Credits
HONORS SEMINAR
 Interdisciplinary topic-driven research course is designed for qualifying Juniors and Seniors for the NSU Honors Program. Successful completion of the honors seminar course is required to graduate with Parsons Vice-Presidential Scholar or Parsons Presidential Scholar. Students taking the course for the first time should enroll in GST 345H; however, students may choose GST 346H for a second time with a new topic.

GST 445H or 446H Three Credits
Honors Seminar
 Interdisciplinary topic-driven research course is designed for qualifying Juniors and Seniors for the NSU Honors Program. Successful completion of the honors seminar course is required to graduate with Parsons Vice-Presidential Scholar or Parsons Presidential Scholar. Students taking the course for the first time should enroll in GST 445H; however, students may choose GST 446H for a second time with a new topic.

GEOGRAPHY - GEO

130 Three Credits
PRINCIPLES OF GEOGRAPHY
 Survey of the development of geography principles with emphasis on principles underlying the types of climate, their causes, distribution, and influence, and presents an analysis of man's work in various physical and political regions.

141 Three Credits
WORLD REGIONAL GEOGRAPHY
 Survey of the major natural regions of the world according to their common physical characteristics, economic activities, cultural patterns, trends, and problems.

331 Three Credits
ECONOMIC GEOGRAPHY
 Study of the distribution, development, and conservation of natural resources; the growth of industrial regions, transportation lines, and trade centers; and interdependence of nations.

335 Three Credits
GEOGRAPHY OF VIRGINIA
 Study of the geographic regions of Virginia and the influence of geographic factors on social and economic problems in Virginia, past and present.

336 Three Credits
POLITICAL GEOGRAPHY
 Examination of the relationship between politics and territory including how natural environments, distributions of populations and resources, levels of technological developments influence political decisions and the world geographic realms.

337 Three Credits
GEOGRAPHY OF AFRICA
 Study of the natural regions of the continent, the physical and human resources and activities, the urban centers and economic and political problems and potentials. Emphasis on the analysis of problems and situations in regions and countries in the Islamic and Sub-Saharan African Realms.

340 Three Credits
GEOGRAPHY OF ANGLO-AMERICA
 Analysis of the relationship of Anglo-America to the development of nations in North America and environs. Focus on the characteristics of place, human interaction with the environment, urban systems, and comparative analysis of subregions and economic systems. Timely subjects reflect approaches to problem solving and the changing role of the geography of Anglo-America in cyberspace and in the world's political, military and economic alliances.

410 Three Credits
URBAN GEOGRAPHY
 Focus on structure and pattern in the urban fabric and the processes at work in the contemporary urban milieu. Emphasis on concepts and generalizations relating to the distribution of settlements, their functional specialization, and the spatial interrelations that bind them together into a complex, functional whole.

GERMAN - GRM

111 Three Credits
ELEMENTARY GERMAN I
 Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

112 Three Credits
ELEMENTARY GERMAN II
PREREQUISITE: GRM 111 or Equivalent
 Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

211 Three Credits
INTERMEDIATE GERMAN I
PREREQUISITE: GRM 112 or Equivalent
 Review of grammar, reading moderately difficult prose, oral practice, and written compositions.

212 Three Credits
INTERMEDIATE GERMAN II
PREREQUISITE: GRM 211 or Equivalent
 Intensive and extensive study and reading of modern prose, oral practice and composition.

213 Three Credits
SCIENTIFIC GERMAN
PREREQUISITE: GRM 211 or Equivalent
 Intensive and extensive reading of scientific German in chemistry, physics, biology, mathematics, psychology, etc. Course may be taken in lieu of GRM 212 by majors in science, mathematics, and psychology to satisfy language requirements.

500 One/Two/Three Credits
SUPERVISED INDEPENDENT STUDY IN GERMAN
PREREQUISITE: Senior or Graduate Level
 Variable content course in German language, literature, history, or culture for students who wish to study beyond the normal four-semester sequence of foreign language.

HEALTH EDUCATION - HED

100 Two Credits PERSONAL AND COMMUNITY HEALTH

Study of a basic knowledge of current personal and community health problems to make informed decisions, to develop more positive attitudes, and to practice a lifestyle of healthful living.

170 Three Credits PERSONAL AND COMMUNITY HEALTH

Study of a basic knowledge necessary for meeting the state's approved professional preparation and responsibilities in the area of health.

368A Three Credits CURRICULUM AND METHODS IN HEALTH EDUCATION

PREREQUISITES: HED 100, 170

Study of teaching and learning concepts; curriculum planning and organization; classroom management skills; professional behavior; subject matter delivery, and assessment and evaluation strategies. Successful completion of the course satisfies the state's endorsement requirements in health education.

442 Three Credits GENERAL SAFETY EDUCATION

PREREQUISITE: HED 170

Study of safety education including home safety, traffic safety, industrial safety, and pedestrian safety which provides healthy and enjoyable living in an environment that often presents hazards and chances for accidents.

HEALTH INFORMATION MANAGEMENT - HIM

120 Three Credits MEDICAL TERMINOLOGY

Study of medical terminology including abbreviations, prefixes, suffixes, root words, and technical terms with emphasis on proper spelling and usage.

121 Three Credits MEDICAL TERMINOLOGY II

PREREQUISITE: HIM 120

Study of the diagnostic and treatment modalities available for clinical management of patient care as well as pharmacy therapy used for diseases of the systems of the body.

310 Three Credits CURRENT TRENDS IN HEALTH-CARE DELIVERY

PREREQUISITE: All Courses Listed Under the Freshman and Sophomore Years

Study of the health-care industry, governmental and voluntary care organizations in health-care, the functions of health-care providers, the organizational patterns of health-care facilities, current issues, and forces impacting on the health-care delivery system.

311 Three Credits RECORD MANAGEMENT

PREREQUISITE: All Courses Listed Under the Freshman and Sophomore Years

Study of storage and retrieval systems and control techniques for health records; accreditation, certification, and licensure standards applicable to health records; the quantitative and qualitative analysis of health records; techniques of word processing and machine transcription; policies and procedures for the control and use of personal health information; confidentiality; forms design and control; and ethical standards for health record practice.

311L One Credit RECORD MANAGEMENT LABORATORY

PREREQUISITE: All Courses Listed Under the Freshman and Sophomore Years

Projects related to concepts such as storage and retrieval systems, numbering and filing systems, content and format of health records, qualitative and quantitative analysis of health records, and forms design and control.

312 Three Credits HEALTH INFORMATION MANAGEMENT

PREREQUISITE: HIM 311, 311L

Study of the content, format, maintenance requirements and control of various indexes and registries, nomenclatures, classification systems, data abstracting, and retrieval techniques.

312L One Credit HEALTH INFORMATION MANAGEMENT LABORATORY

PREREQUISITE: HIM 311, 311L, and 312

Assignments related to concepts such as content and format of various indexes and registers, nomenclatures, classification systems, data abstracting and retrieval techniques.

315 Three Credits INTRODUCTION TO MANAGEMENT CONCEPTS

PREREQUISITE: All Courses Listed Under the Freshman and Sophomore Years

Introduction to basic managerial concepts and functions. Emphasis on managerial leadership styles and employee motivation; development of plans, policies, procedures, and organization charts; principles of authority, responsibility, delegation, and communication; performance appraisal; and labor organizations in health care.

316 Three Credits RESEARCH METHODS

PREREQUISITES: HIM 311, 311L

Study of descriptive and vital statistics, reporting requirements, definitions and formulas for computing hospital and public health statistics, data display techniques and research methodologies.

340 Three Credits DIRECTED PRACTICUM

PREREQUISITES: HIM 311, 311L, 315

Learning experience for students assigned with problems and projects in health care facilities.

365 Three Credits HEALTH CARE INFORMATION SYSTEMS

PREREQUISITES: CSC 150, 169

Introduction to the major concepts of computer programming, computer architectures, operating systems, and application software.

412 Three Credits ORGANIZATION AND MANAGEMENT OF HEALTH INFORMATION SYSTEMS

PREREQUISITES: HIM 312, 312L, 315

Study of the problem-solving/decision-making process, work measurement and simplification techniques, managerial control mechanisms and information systems, budgeting procedures and controls, cost containment techniques, and the selection, utilization, and control of physical space, supplies, equipment, and environment.

420 Three Credits SENIOR RESEARCH PROJECT

PREREQUISITE: HIM 316

Independent research project relating to a specific aspect of health information management.

425 Three Credits EVALUATION TECHNIQUES

PREREQUISITES: HIM 315, 316, 340, 412

Evaluation techniques including criteria development for appraising health care and interdepartmental functions; methods of using established criteria in assessing appropriateness of admissions, continued hospitalization, and interdepartmental functions; methodologies to identify and meet employee training needs; and instructional methodologies and evaluation techniques.

450 Five Credits MANAGEMENT PRACTICUM

PREREQUISITE: HIM 340

Capstone experience in which students complete a major independent research project.

460 Two Credits ADVANCED HEALTH INFORMATION MANAGEMENT SEMINAR

PREREQUISITES: HIM 311, 311L, 312, 312L, 315, 316, 340, 412, 425, 465

Comprehensive review of record management, health information management, management foundations, management technology, resource management, management of human resources, medico-legal aspects, utilization and evaluation of health-care services, research methods and statistics, health-care delivery systems, and computers in health care.

465 Three Credits MEDICAL INFORMATION SYSTEMS

PREREQUISITES: CSC 150, 169; HIM 311, 311L, 312, 312L, 315, 316

Introduction to computerized information systems useful to health-care facilities; computer applications to information systems and techniques in the health-care field.

HEALTH RELATED PROFESSIONS - HRP

190 Three Credits INTRODUCTION TO HEALTH PROFESSIONS

Study of occupations involved with conditions and situations brought about by the interruption or the establishment of the health of an individual. Emphasis on developing good professional characteristics, understanding and imparting knowledge on the relationship of science to the health profession, and giving an overview of the health-care system as it exists and functions in America.

290 Three Credits AFRICAN AMERICAN HEALTH

Examination of the health problems and healthcare issues specific to African Americans, including sickle cell, diabetes, hypertension, cancer, end stage renal disease and HIV/AIDS. Study of the delivery of health care to the African American community as influenced by health related historical events and the current economic influences.

HEALTH SERVICES MANAGEMENT - HSM

300 Three Credits HEALTH SERVICES MANAGEMENT

Orientation to the health delivery system, and the role of the health services manager and/or supervisor which provides organization theory and practical information about health administration. Investigation of the organizational and environmental context within which a health manager works.

300L One Credit HEALTH SERVICES MANAGEMENT LAB

Study of various problems and work settings of a health manager. Visit to various community health facilities required.

310 Three Credits HEALTH PERSONNEL MANAGEMENT

Principles and practices in personnel recruitment, selection, management, and utilization. Emphasis on unique characteristics of professional, technical, skilled and unskilled health-care workers. In-depth study of legal responsibilities, contract administration, grievance procedures, and in-services training and education.

311 Three Credits LEGAL ASPECTS AND ETHICS OF HEALTH-CARE DELIVERY

Presentation of the historical perspectives, current status, and future projections in the field. Concepts of corporate liability, malpractice, and professional negligence. Informed consents, incident reporting, and the importance of accurate and complete records. Emphasis on the prevention of legal actions. Examination of the role of ethics and moral decision-making in the everyday life of the health service manager with special emphasis on the various professional Codes of Ethics.

331 Four Credits HEALTH FINANCIAL MANAGEMENT

Overview of economic theory and practice in the financial interactions between consumers and provider of health-care services, including all forms of public and private prepayment mechanisms. Broad orientation to financial management problems and practices is provided.

451 Three Credits COMPREHENSIVE HEALTH PLANNING

History of the development of health planning in the United States with understanding the principles, policies, and tools related to the planning process. Examination of the philosophical foundations of various methodologies of the planning process.

454 Three Credits LONG TERM CARE ADMINISTRATION

Study of the long-term care health delivery system to gain a working knowledge of the holistic approach to the care of the elderly and long-term care individuals. An overview of the emotional and physiological needs of individuals who require long-term care. Emphasis on finances, management, standards, and compliance for quality.

HEALTH SERVICES MANAGEMENT - HSM (continued)

494 **HEALTH SERVICES MANAGEMENT INTERSHIP** **Six Credits**
PREREQUISITES: HSM 300, 300L, 310, 311, 331
 On-the-job experience in selected institutions and agencies providing first-hand knowledge of the operational world by devoting full-time effort to observing and participating in management functions (minimum of 250 work hours). Routine written reports, a major management project, and periodic peer-advising are required with faculty direction provided by telephone and on-site visitations.

497 **HEALTH SERVICES MANAGEMENT PROBLEMS AND RESEARCH** **Three Credits**
PREREQUISITES: HSM 300, 300L, 310, 311, 331
 Examination of selected health service management problems such as the current and emerging challenges in financing, organizational changes and managerial functions.

HISTORY - HIS

100 **HISTORY OF CIVILIZATION** **Three Credits**
 Survey of the development of cultures, societies, and institutions from the earliest human beings through antiquity to the European Renaissance.

101 **HISTORY OF CIVILIZATION** **Three Credits**
 Survey of the development of cultures, societies, and institutions from the European Renaissance through the end of the Cold War.

102 **UNITED STATES HISTORY TO 1865** **Three Credits**
 Survey of American History to 1865.

103 **UNITED STATES HISTORY 1865 TO PRESENT** **Three Credits**
 Survey of American History from 1865 to the present.

205 **INTRODUCTION TO THE STUDY OF HISTORY** **Three Credits**
PREREQUISITE: HIS 102 and 103, or Sophomore standing
 Introduction to the general problems of historical study and to the skills required for conceptualizing, analyzing, and synthesizing historical materials. (At the discretion of the department chair, transfer students may be allowed to substitute an upper level history course for HIS 205.)

304 **PHILOSOPHY AND RELIGION** **Three Credits**
PREREQUISITES: Junior or Senior standing, or Sophomore with the permission of the instructor
 Survey of the basic ideas of philosophy and religion, affording students knowledge and understanding of their intellectual and spiritual heritage.

320 **LATIN AMERICAN HISTORY SINCE 1820** **Three Credits**
 Survey of the political, social, economic, and cultural history of the Latin American nations since the early nineteenth century.

325 **DIPLOMATIC HISTORY OF THE UNITED STATES** **Three Credits**
 Study of the development of American foreign relations from 1776 to the present with special emphasis on the twentieth century.

328 **HISTORY OF VIRGINIA** **Three Credits**
 Study of the history of Virginia to appreciate the roles that Virginia has played in the development of the nation.

330 **COLONIAL AMERICA** **Three Credits**
 Study of the Spanish, French, English, Dutch, and Swedish colonies through the eighteenth century, ending with the Treaty of Paris (1763). Emphasis on the economic, social, religious, and political concepts shaping colonial cultures.

331 **THE AMERICAN REVOLUTION AND THE FEDERAL ERA, 1763-1800** **Three Credits**
 Survey of the political, economic, diplomatic, and intellectual themes associated with the American Revolution and post-Revolutionary era, with particular emphasis upon the drafting of the U.S. Constitution.

332 **THE UNITED STATES: EARLY NATIONAL PERIOD, 1800-1840** **Three Credits**
 Study of the Jeffersonian and Jacksonian eras, with special emphasis on economic, political, and social forces shaping American development.

333 **THE CIVIL WAR AND RECONSTRUCTION** **Three Credits**
 Study of nature of sectional conflicts leading to Civil War; political, military and diplomatic aspects of the war itself; Reconstruction and its results to 1877.

335 **AFRICAN AMERICAN HISTORY** **Three Credits**
 Survey of African American history from its African origins to 1865.

336 **AFRICAN AMERICAN HISTORY** **Three Credits**
 Survey of African American history from 1865 to the present.

340 **ENGLAND, 1485 TO 1832** **Three Credits**
 Study of the transformation of Tudor and Stuart England into eighteenth century Great Britain. Emphasis on the making and maintenance of England's limited monarchy through its own civil war to the end of the Napoleonic period. Explanation of the causes and consequences of Great Britain becoming the leading industrial and commercial power by 1832.

341 **ENGLAND SINCE 1832** **Three Credits**
 Study of the rise of liberalism and corresponding rivalry of conservatism; development of Britain as the leading industrial, commercial, and financial power; the Victorian Compromise; colonial expansion and imperialism; and the great reform movements and English cultural advancement.

343 **EUROPE FROM THE RENAISSANCE TO WATERLOO** **Three Credits**
 Study of modern Europe from its beginnings through the final defeat of Napoleon including Late Renaissance, Commercial Revolution, religious conflicts, absolute rulers, the Industrial Revolution, the French Revolution and Napoleon as a son of the French Revolution.

345 **EUROPE, 1815 TO 1914** **Three Credits**
 Study of Congress of Vienna; period of reaction; rise of liberalism, nationalism, imperialism, democracy, industrialization; and causes of World War I.

346 **TWENTIETH CENTURY EUROPE** **Three Credits**
 Study of the problems of the states of Europe, emphasizing the causes of World War I, the terrible and unpredicted consequences of "total" war, the chaotic interwar period, the effects of the Great Depression, the emergence of totalitarian ideologies, World War II and the Holocaust, and the reconstruction of Europe amidst the context of Cold War.

348 **ANCIENT HISTORY** **Three Credits**
 Study of the great civilizations of Mesopotamia, Egypt, Greece and Rome. Emphasis on political, economic, social, religious, and cultural life. Assessment of the rise of Christianity and the Germanic invasions culminating in the end of the Western Roman Empire.

349 **MEDIEVAL HISTORY** **Three Credits**
 Study of invasions of the "barbarians" and the rise of national states in Europe. Emphasis on the origins and development of institutions and cultures.

360 **LATIN AMERICA: ARGENTINA, BRAZIL, AND CHILE** **Three Credits**
 Analysis of the political, economic, and social histories of these nations, 1810 to present.

361 **LATIN AMERICA: READINGS IN LATIN AMERICAN HISTORY** **Three Credits**
 Intensive directed reading for exceptionally able students.

362 **INTRODUCTION TO THE MODERN NEAR EAST** **Three Credits**
 Survey of the foundation and development of the Islamic civilization to the foundation of the Ottoman Empire providing close study of the Ottoman Empire in the late 18th century and throughout the 19th century.

363 **INTRODUCTION TO THE MODERN NEAR EAST** **Three Credits**
 Detailed study of the problems attending the creation of the modern states of the Middle East with special emphasis on the interwar period and the various independence movements.

364 **READINGS IN AMERICAN HISTORY** **One to Three Credits**
 Readings and discussions in selected historical problems.

365 **CARIBBEAN AND LATIN AMERICAN HISTORY** **Three Credits**
 Survey of the political, economic, and social histories of the Caribbean and Latin America from their earliest inhabitants through the end of the twentieth century.

370 **AFRICAN HISTORY AND CULTURE** **Three Credits**
 Survey of African history and culture from the origins of man and Paleolithic times to the coming of the Portuguese about 1500 A.D. Emphasis on Egyptian Civilization, the kingdoms along the Nile, the East African Coast, the development of Christianity in North Africa, the Sudan and Ethiopia, the Kingdom of Axum, the invasion and influence of Islam, the Bantu Expansion, and the Western Sudanic kingdoms.

371 **AFRICAN HISTORY AND CULTURE** **Three Credits**
 Survey of African history and culture from the Western Sudanic Kingdoms to the Scramble for Africa in the late nineteenth century and the onslaught of colonialism. Emphasis on the coming of the Europeans, European contacts and influence in Africa, the East African Coast, the Slave Trade, South Africa, Ethiopia, the West African Forest Kingdoms, the Abolition Movement, the Scramble for Africa, and the development of colonialism.

373 **EAST ASIAN CIVILIZATION** **Three Credits**
 Study of the civilization of ancient China from the dawn of history to the collapse of the Qin Dynasty in 206 B.C. Special consideration given to religion and philosophy and the other influences on the development of national institutions, includes brief survey of traditional Japan.

374 **EAST ASIAN CIVILIZATION** **Three Credits**
 Study of the civilization of medieval China from the founding of the Han Dynasty (206 B.C.) to the fall of Yuan Dynasty about 1368. Special emphasis on the introduction of Buddhism into China and the rise of Neo-Confucianism, and the influence of Chinese culture on feudal Japan.

375 **CONTEMPORARY ECONOMIC SYSTEM OF CHINA** **Three Credits**
 Study of the agricultural, industrial, commercial, and financial institutions of the People's Republic of China with emphasis on the strategic and economic importance of Sino-American relations to the growth of the world economy and the preservation of world peace.

376 **CONTEMPORARY ECONOMIC SYSTEMS OF JAPAN** **Three Credits**
 Study of postwar Japan's spectacular economic growth, with emphasis on lessons that Americans can learn from the Japanese experience.

377 **BLACK LEADERS, THEN AND NOW** **Three Credits**
 Survey of the role of Black leaders in American history from the period of exploration and discovery to the present.

380 **AMERICAN MILITARY HISTORY** **Three Credits**
 Study of the development of the American military establishment, policies, and strategies from the American Revolution to the present.

410 **AMERICAN CONSTITUTIONAL HISTORY** **Three Credits**
 Study of basic principles of the American constitutional system. Emphasis on the judicial interpretation and application of these principles in constraining the powers of the government and the rights of persons. Examines the historical background of major federal court decisions.

411 **TWENTIETH CENTURY RUSSIA** **Three Credits**
 Study of the background of the 1917 revolution, the emergence of the USSR, and its impact upon other nations.

418 **SOUTHERN HISTORY** **Three Credits**
 Survey of social, political, and economic development of the Southern United States.

420/520 **Three Credits**
COMPARATIVE HISTORY OF MINORITIES IN THE U.S. FROM THE COLONIAL PERIOD TO THE PRESENT
 Focus on the diversity of America's population, the factors, which shaped the coming of various people to America, their adjustments to a new homeland, and the contributions various groups have made.

438 **Three Credits**
THE UNITED STATES FROM THE 1890S TO 1932
 Study of the impact of industrialism, urbanization, racial problems, foreign policy, and World War I.

439 **Three Credits**
THE UNITED STATES FROM 1932 TO PRESENT
 Study of social, economic, and political changes, including the Great Depression, the New Deal, World War II, the Cold War, the 1950s and 1960s, to the end of the century. Also includes the Black Revolution and other contemporary developments.

446 **Three Credits**
LATIN AMERICA: THE COLONIAL PERIOD
 Study of the leading Native American cultures of 1500 AD, their conquest by Iberian adventurers, the making of colonial institutions and cultures, and the eventual origins of independence movements.

448 **Three Credits**
SLAVERY IN THE ATLANTIC BASIN
 Study of the development of slavery in the Atlantic Basin from its Western African/Islamic/European origins through the dreaded Middle Passage to the Caribbean, Latin America, and the American South.

451 **Three Credits**
GERMANY FROM THE RENAISSANCE TO UNIFICATION
 Study of German history from the Trans-Alpine Renaissance and the Protestant Revolution through unification under Bismarck, economic, political, social, and cultural forces. Emphasis on the religious struggle, the evolution of Prussia, and the impact of the Napoleonic wars.

452 **Three Credits**
GERMANY SINCE UNIFICATION
 Study of political, cultural, and military development under Bismarck and William II including the First World War, defeat, and republican government; Nazism, the Second World War and defeat; partition, the struggle to regain prestige and reunification.

475 **Three Credits**
EMERGENCE OF MODERN CHINA (1368-1911) AND MODERN JAPAN (1867-1921)
 Study of political, economic, social, and intellectual currents in China and Japan and their responses to the Western Challenge.

476 **Three Credits**
MODERN CHINA AND MODERN JAPAN
 Study of the interplay of ideology, nationalism, economic ideas, and culture in twentieth century Japan and China.

490 **One to Three Credits**
SPECIAL TOPICS IN HISTORY
 Opportunities to study and examine historical problems of special interest.

494 **Three Credits**
INTERNSHIP
PREREQUISITE: Senior with Minimum of 24 Hours of History
 Development of knowledge and skills in fields related to history, for example museum work or digital projects. A minimum number of clock hours in an approved placement is required.

497 **Three Credits**
INTRODUCTION TO HISTORICAL RESEARCH
PREREQUISITES: Minimum of 15 hours lower level (1XX, 2XX) history courses and 9 hours of upper level (3XX, 4XX) history courses.
 Introduction to historical methodology, research, website application, and writing. Survey of the major types of historical sources and different approaches to historical inquiry. Original research project includes a research paper, and the creation of a website with a searchable database.

501 **Three Credits**
TOPICS IN AMERICAN HISTORY
 Lecture or seminar topics to be selected by course instructor.

502 **Three Credits**
TOPICS IN EUROPEAN HISTORY
 Lecture or seminar topics to be selected by course instructor.

503 **Three Credits**
TOPICS IN NON-WESTERN HISTORY
 Lecture or seminar topics to be selected by course instructor.

516 **Three Credits**
AMERICA AND THE RISE OF THE CITY: 1865 TO THE PRESENT
 Study of population growth, industrialization and urbanization, urban decay, and renewal providing related reading in the economic, political, and governmental development from the Post-Civil War town to the modern megalopolis.

HOTEL AND RESTAURANT MANAGEMENT - HRM

100 **Three Credits**
PROFESSIONAL DEVELOPMENT I
 Study of career development, professional conduct, portfolio development, interviewing, etiquette and social development, customer service, and proper dress.

115 **Three Credits**
INTRODUCTION TO HOSPITALITY
 Overview of various facets of the industry's restaurants, hotels, resorts, travel, tourism, and clubs. Emphasis on general operating procedures and professional management principles with the inclusion of career planning and exposure to role models. Field trips and hospitality executive guest lecturers required.

120 **Three Credits**
SANITATION PRINCIPLES
 Study of sanitation standards for food and beverage establishments, food handling practices, and microorganisms and their control.

150 **Three Credits**
TOURISM PRINCIPLES
 Study of cultural tourism, sociology of tourism, components and supply, tourism development, economic role of tourism demand, the marketing of tourism, and the international scope of tourism.

200 **Three Credits**
COMPUTERS IN HOSPITALITY
 Study of computer applications used in the hospitality industry. Emphasis on the different software packages available and the programs they run.

210 **Three Credits**
FRONT OFFICE MANAGEMENT
 Study of principles and procedures used in effective hotel/motel front office management. Emphasis on operation of specific equipment, planning and forecasting hospitality needs.

220, 220L **One /Two Credits**
INTRODUCTION TO FOOD PREPARATION/LABORATORY
 Introduction to commercial food preparation, nutrition, standard product identification, and storage which includes classroom instruction, demonstrations, and actual cooking experience. Emphasis on explanations of techniques and procedures of quality/quantity food production.

230 **Three Credits**
HOSPITALITY ACCOUNTING I
 Study of the management aspects of accounting and financial statement analysis as they relate to hospitality operations which begins with an introduction to the Generally Accepted Accounting Principles and explains the system of double entry accounting. Emphasis on understanding analysis and interpretation of financial statements, ratio analysis, internal control, pricing and cost management.

240 **Three Credits**
INTRODUCTION TO GAMING
 Overview of gaming; topics include the economics of the gaming industry, its interface with the hotel, organizations and terminology.

242 **Three Credits**
THE TRAVEL AGENCY
 Examination of the services and functions of retail and wholesale travel agencies, including agency administration, procedures, ticketing, accounting, promotion, and travel counseling

280 **Three Credits**
DINING ROOM AND BEVERAGE MANAGEMENT OPERATIONS
 Introduction to the dining room and beverage service operation found in the Hospitality Industry. Elements of showmanship and techniques for promoting sound guest

relations are stressed. Experience in working on campus and off, in addition to attending regular classes.

300 **Three Credits**
PURCHASING
 Exploration of the procedures and practices utilized in purchasing items and services for the hospitality industry. Emphasis on the procurement cycle, legal aspects of purchasing, standards and specifications of items, sources of supplies, and distribution systems.

310 **Two Credits**
PROFESSIONAL DEVELOPMENT II
 Introduction to aspects of the hospitality industry and related areas that are not available in regularly scheduled courses.

330 **Three Credits**
HOSPITALITY ACCOUNTING II
PREREQUISITE: HRM 230
 Examination of various approaches to managerial accounting from the perspective of hospitality operations. Emphasis on the cost-volume-profit approach to decision-making, use and source of working capital, cash flow analysis, investment decision-making, and market, as well as financial feasibility studies.

331 **Three Credits**
FOOD AND BEVERAGE COST CONTROL
 Fundamentals of food, beverage, and labor cost control for hotel and restaurant operations.

340 **Three Credits**
TRAVEL AND TOURISM MARKETING
 Study of marketing principles and practices used to meet the needs of the hospitality industry. Emphasis on the role of marketing, the role of advertising and promotion in the hospitality, and effective use of marketing strategies in the hospitality industry.

342 **Three Credits**
THE RECREATION INDUSTRY
 Study of leisure and the recreation industry, their interrelationships to American lifestyles, and their implications for the hospitality industry

351 **Three Credits**
CONVENTION AND EXHIBIT SERVICES
PREREQUISITE: HRM 340
 Emphasis on organizing, arranging, and operating conventions, trade shows, and concessions. Examination of methods of sales used in booking conventions and trade shows, and division of administrative responsibility in their operation.

359, 359L **One /Two Credits**
COMMERCIAL FOOD PRODUCTION/LABORATORY
PREREQUISITES: HRM 220, 220L
 Principles and practices of large quantity food preparation and service. Topics include Principles and Practices of Large Quantity Food Preparation and Services, Production, Efficient Work Methods, Quality Control, Safety, and Sanitary Food Handling. Laboratory food experiences included.

361 **Three Credits**
TRAINING FOR THE HOSPITALITY ORGANIZATION
 Overview of the key principles of employee training, management training and development, and pre-opening training. Development of a training plan for a hospitality facility.

381 **Three Credits**
FACILITIES LAYOUT AND DESIGN
 Study of hospitality facilities, layouts, and designs, exterior and interior; building systems; space allocations; equipment; and budgets.

382 **Three Credits**
INCENTIVE TRAVEL
 Study of the use of travel as an incentive to help meet marketing objectives, including the organization and marketing of transportation, hotels, restaurants, tour and ground operators, destination, and other creative services

387 **Three Credits**
FAIR & AMUSEMENT PARK ADMINISTRATION
 Focus on the management and marketing of fairs and amusement parks, including crowd control, concessions, security and contract negotiations

391, 391L **Three/One Credit**
MANAGEMENT INTERNSHIP/LABORATORY
 Supervised on-the-job management training at selected facilities. Minimum of 250 clock hours required.

HOTEL AND RESTAURANT MANAGEMENT – HRM (continued)

400 RESTAURANT MANAGEMENT Three Credits

Theories and principles of organization and administration, the tools of managerial decision-making, and the management process, with particular reference to the hospitality industry.

401 CLUB AND RESORT MANAGEMENT Three Credits

Survey of the organization and management of member-owned and proprietary private clubs and resorts. Study of relationship between board of directors, management, employees, club committees, and club members. Emphasis on budget preparation, including applicable tax laws. Field trips required.

402 MANAGEMENT BY MENU Three Credits

Principles of menu planning applied to the food services industry, including the menu and financial success, the menu and marketing, measuring menu effectiveness, menu writing procedures, and menu analysis and feasibility. Principles of table service for all types of food services.

440 HOSPITALITY SALES AND ADVERTISING Three Credits

Study of hospitality sales and advertising with emphasis on practical sales techniques, proven approaches to selling to targeted markets, and advertising's role in sales.

441 RESTAURANT ENTREPRENEURSHIP: HOW TO PLAN, OPEN AND RUN A SUCCESSFUL RESTAURANT Three Credits

Exploration of the factors necessary for the successful start-up or take-over of a restaurant. Procedures are set forth for determining the entrepreneur's suitability (personal characteristics) as well as the market and financial feasibility of the project. Emphasis on concept development, seating, construction, menu, design, equipment, staffing and management necessary to maximize the chances for success.

448 CRUISE SHIP ADMINISTRATION Three Credits

In-depth discussion of the growth, direction, organization, structure and marketing concepts relating to the cruise industry. Reference of all aspects of the cruise industry, including philosophy, management, staffing, operations and marketing strategies

449 INTERNATIONAL TOURISM Three Credits

Study of international travel and tourism. Focus on the economic, social, political, and environmental considerations of international tourism management and development

462 HUMAN RESOURCE MANAGEMENT Three Credits

Study of the relationship between individual employees and the hospitality industry. Analysis of human behavior, attitudes, motivation strategies, stress management, employee wages, and productivity.

466 MULTI-CULTURAL MANAGEMENT IN THE HOSPITALITY INDUSTRY Three Credits

Analysis of the interaction of persons and groups of various ethnic backgrounds within the work environment. Review of management to develop awareness and acceptance of the differences within the work force and to provide motivation and understanding of various needs.

471 HOSPITALITY INDUSTRY LAW Three Credits

Introduction to fundamental laws and regulations applied to the hospitality industry. The case study approach is used to develop awareness and understanding of the legal problems confronting the executive in his/her policy and decision-making role.

481 HOSPITALITY PROPERTY MANAGEMENT Three Credits

Study of the problems of cost and operation of pest control, security, parking, general cleaning and upkeep, laundry, fire prevention, pools, tennis courts, and care of guest rooms and public space, with emphasis on equipment, personnel, and modern innovations.

490 SENIOR PROJECT Three Credits

PREREQUISITES: HRM 391, HRM 391L

Emphasis on providing the student with the opportunity to engage in a research project designed to showcase competence and developed managerial knowledge.

494 HOSPITALITY FRANCHISING Three Credits

Emphasis on the unique difference between franchise and company owned properties and the application of special techniques required to manage these differences.

HUMANITIES - HUM

210 HUMANITIES Three Credits

Study of the creative expression of the Western world, from the Italian Renaissance to the twentieth century. Emphasis on the philosophical and social matrix out of which these artistic expressions have developed.

211 HUMANITIES Three Credits

Exploration of the Non-Western World. Emphasis on an understanding of the great religious traditions and the world views, which have shaped the values, expressions, and the social structures of the people.

INDUSTRIAL EDUCATION - IED

170 FUNDAMENTALS OF MASONRY I Three Credits

Study of the historical significance of brick making with emphasis on the importance of design and structural soundness in masonry construction, and opportunities for practical use and care of masonry tools.

171 FUNDAMENTALS OF MASONRY II Three Credits

PREREQUISITE: IED 170
Study of the different mixtures of mortar, use of tools, and methods of performing unfinished and finished common brickwork; piers and walls of different bonds as examples.

354 COURSE DEVELOPMENT IN VOCATIONAL EDUCATION Three Credits

PREREQUISITES: Four successful semesters in major technical electives or equivalent Journeyman experience. Identification and application of analysis in the development of systematized instruction. Students plan and construct a course of study, including terminal performance objectives, manipulative and information elements arranged in logical sequence, special projects and activities, designated instructional aids and techniques, and appropriate practices for implementing and evaluating instruction.

360 INSTRUCTIONAL MATERIALS Two Credits

PREREQUISITE: IED 354
Introduction to sources, types, and procedures for obtaining, organizing, and evaluating teaching materials for shop and laboratory instruction. Emphasis on locating, appraising, and utilizing a variety of audio-visual aids and teaching strategies appropriate for individual and group instruction.

451 METHODS OF LABORATORY INSTRUCTION Three Credits

PREREQUISITES: IED 354; SED 380
Implementation of performance of effective teaching behaviors. Development of competence in writing instructional objectives, planning systematic instruction units, effectively teaching manipulative and informational lessons, and utilizing a variety of instructional aids and techniques.

452 MEASUREMENT IN INDUSTRIAL EDUCATION Three Credits

PREREQUISITE: Senior Standing
Study of the purposes and appropriate uses of standardized and informal teacher-made instruments for appraising student performance. Application of basic principles for constructing various types of test items and measuring instruments, criterion-referenced objectives, properly administering tests, and interpreting the result.

458 CURRENT PROBLEMS FOR INDUSTRIAL TEACHERS Two Credits

PREREQUISITE: Assignment to Directed Teaching
Directed teaching practicum exploring problems in the occupational education environment. Cooperative advisement of prospective teachers by seminar coordinator and area advisors. Emphasis on development of competence in motivating learners, maintaining discipline, writing letters appropriate for securing job placement, and preparing for job interviews and graduate study.

459 ADMINISTRATION AND COORDINATION OF COOPERATIVE EDUCATION Three Credits

PREREQUISITE: Permission

Development of the special competencies required of teacher coordinators for the selection of students and training agencies, including provision of related instruction and the coordination of in-school and on-the-job activities of cooperative education students in secondary schools.

460 DEVELOPMENT OF RELATED INSTRUCTION FOR COOPERATIVE EDUCATION Three Credits

PREREQUISITE: IED 459

Acquisition of competencies required for identifying and developing the variety of specialized materials needed for related instruction of students in secondary cooperative education programs. Emphasis on techniques needed in developing and organizing materials appropriate for small group and individual instruction.

461 INSTRUCTIONAL LABORATORY MANAGEMENT Three Credits

PREREQUISITE: Permission

Study of plans and layouts peculiar to the school industrial laboratory. Emphasis on competency development for prospective teachers in organizing and executing shop instructional aids and techniques, and appropriate practices for implementing and evaluating.

INDUSTRIAL MANAGEMENT TECHNOLOGY - IMT

205 INDUSTRIAL SAFETY AND MANAGEMENT Three Credits

Study of the nature, background, importance, and trends in industrial safety. Major emphasis on regulatory aspects of industrial safety, identification and controlling safety hazards, accident and injury analysis, development of safety goals, material handling; and fire prevention and protection.

244 INDUSTRIAL SPECIFICATIONS & TECHNICAL DOCUMENTATION Three Credits

PREREQUISITE: ENG 102

Development of proficiency in writing technical reports through collecting, organizing, and presenting materials in specialized areas.

303 INTERNSHIP IN TECHNOLOGY Three Credits

Experience in developing and refining skills that requires for a transition into career-related positions relative to specialty programs. The purpose of the internship is to acquire a minimum level of practical application of the theory and content in the specialty program.

340 ENGINEERING ECONOMICS Three Credits

Evaluation of engineering alternatives by quantitative methods. Application to problems in depreciation of assets, their replacement analysis, breakeven points, increment costs, and production alternatives.

410 FIRST-LINE SUPERVISION AND FOREMANSHIP Three Credits

Study of a management development for business, industrial, and institutional supervisors. Emphasis on motivation, leadership, decision making, and supervisory skills.

411 INVENTORY MANAGEMENT Three Credits

Study of inventory classifications, inventory control, optimum inventory, and future trends in inventory management.

415 INDUSTRIAL MAINTENANCE MANAGEMENT Three Credits

PREREQUISITES: IMT 105 and 411

Identification and appraisal of industrial maintenance management functions, organizational problems, and practices. Consideration given to key factors for optimizing maintenance efficiency and effectiveness.

420 LABOR AND INDUSTRIAL RELATIONS Three Credits

Discussion of individual groups and organizations in unions, management, and government act as they do in industrial relations with emphasis on psychological and sociological factors.

423 Three Credits
MOTION AND TIME STUDY
 Methods, materials, tools and equipment of industry for purposes of improvement and standardization.

425 Three Credits
PLANT LAYOUT AND MATERIAL HANDLING
 The fundamental theories, practices, and methods for design of manufacturing facilities; materials handling equipment and services.

445 Three Credits
STATISTICAL QUALITY CONTROL
 Introduction to the principles of quality control in business and industrial engineering/technological managerial environments that provide techniques and procedures for determining and maintaining the quality of industrial products. Emphasis on random sampling, probability theories, and statistical methods for practical quality controls to ascertain if products meet industrial specifications.

INTERDISCIPLINARY STUDIES - INT

308 Three Credits
INTRODUCTION TO INTERDISCIPLINARY STUDIES
 Survey of major concepts and processes that explain interdisciplinarity; the influences of culture, socialization and language on meanings of social interaction and critical thinking, and interdisciplinary research; the consequences of modernism, postmodernism and globalization for contemporary living. Social science paradigms such as feminist and Afro-centric ideas are explored in order to develop analytic and synthetic insights related to beliefs, values, laws and actions of human groups.

322 Three Credits
APPROACHES TO CRITICAL ANALYSIS
 Examination of how characteristic logical constructs are employed in reading, writing, and speech acts; modeling and application of modes of analysis that develop critical thinking skills and flexible orientation toward reading and writing. Focus on current themes and issues in globalization.

360 Three Credits
FOUNDATIONS OF RESEARCH IN INTERDISCIPLINARY STUDIES
 Exploration of relationships between social theory and the interdisciplinary process; investigates rationales and appropriate applications of qualitative and quantitative research methods; examines techniques for formulating thesis statements and hypotheses; reviews salient factors for developing valid and reliable questionnaires, and constructs researchable proposals.

375 Three Credits
LANGUAGE AND SOCIETY
 Examination of the fundamental characteristics of language as a system of signs and symbols used to interpret and influence social and behavioral environments. Exploration of common linguistic and hegemonic practices and the underlying assumptions that sustain them; shows language as a medium for understanding the world and highlights contrasts between social and written reality. Topics include the uses of English in globalization vis-à-vis voices of race, gender and other minorities.

411 Three Credits
IDEAS AND THEIR INFLUENCES
 Investigation of the origins (historical, social and cultural) of ideas, theories, and paradigms in the Western intellectual tradition; their influences in contemporary globalization; a holistic approach to an analysis, synthesis and interpretation of pre-Platonic, Renaissance, Enlightenment, modern, postmodern and globalization ideas.

412 Three Credits
CONTEMPORARY GLOBALIZATION
 Critical survey of issues and forces shaping interdependencies among the world's nations; their meanings for global resource management and sharing; global investment, trade, production, the free-market system, Western democratic intrusions, technologies and the global telecommunications revolution; their significance for new social groupings, human welfare, cultural and religious diversity, and education. Focus on diminishing national boundaries, migration of labor, world hegemonic powers and the role of the United Nations.

470 Three Credits
SENIOR SEMINAR
PREREQUISITES: INT 308, 322, 360, 375, 411, 412
 Wide-ranging examination of the historical and theoretical developments that led to the evolution of Interdisciplinarity; assessment of societal parameters impacting the proliferation of new areas of inquiry and their outgrowth as complementary or counteragents of particular institutionalized modes of behavior and thought; development of adequate descriptions and explanations for current and evolving social and cultural practices, some that contrast sharply from normative perspectives grounded in configured traditional thought.

477 Three Credits
SENIOR THESIS
PREREQUISITES: INT 308, 322, 360, 375, 411, 412, 470
 Holistic, integrative research processes that accommodate concepts, language and paradigms of various disciplines using qualitative research methodologies to collect data for analysis, synthesis and interpretation of findings. Research project is supervised by a thesis supervisor.

JAPANESE - JPN

111 Three Credits
ELEMENTARY JAPANESE I
 Introduction to reading, writing, pronunciation, grammar, structure, vocabulary, and conversation.

112 Three Credits
ELEMENTARY JAPANESE II
PREREQUISITE: JPN 111 or Equivalent
 Introduction to reading, writing, pronunciation, grammar, structure, vocabulary, and conversation.

113 Three Credits
JAPANESE CULTURE
 Survey of aspects of culture and language of both traditional and modern Japan.

211 Three Credits
INTERMEDIATE JAPANESE I
PREREQUISITE: JPN 112 or Equivalent
 Review of grammar, reading of moderately difficult prose, oral practice, and written composition.

212 Three Credits
INTERMEDIATE JAPANESE II
PREREQUISITE: JPN 211 or Equivalent
 Intensive and extensive study and reading of modern prose, oral practice, and composition.

JOURNALISM - JRN

210 Three Credits
ADVERTISING PRINCIPLES
 Introduction to the basic principles of advertising and its practice.

220 Three Credits
BASIC WRITING
PREREQUISITE: ENG 101
 Introduction to writing for all mass media, including intensive study of basic journalistic composition elements (grammar, punctuation, spelling) in preparation for professional reporting, writing, and editing courses.

221 Three Credits
NEWS WRITING
PREREQUISITES: JRN 220; ENG 102
 Introduction to the fundamentals of news evaluation, gathering and writing with special emphasis on newspaper style.

240 Three Credits
PRINCIPLES OF PUBLIC RELATIONS
Analysis of the history and growth of public relations and its role within organizations including ethical standards, basic principles, and problems of public relations.

290 Three Credits
DIGITAL PHOTOGRAPHY
 Study of the integration of basic photography with computer technology. Emphasis on the digital photography process through in-class discussion, field assignments and hands-on laboratory experience.

299 Three Credits
MULTICULTURALISM AND MASS MEDIA
 Historical survey of participation by people of color in early publications, and the industries of print and broadcast journalism, entertainment television and film, and advertising. Emphasis on case studies and other methods to examine interactions between societal conditions and mediated reality.

313 Three Credits
ADVERTISING/PUBLIC CAMPAIGNS
 Philosophy and techniques of developing an advertising campaign with emphasis on integrating all creative elements, including market research; developing advertising objectives; plans and strategies; budgeting; scheduling of media; coordination of sales promotion; and measuring effectiveness.

323 Three Credits
WRITING SPECIAL ARTICLES
PREREQUISITE: JRN 221
 Study of advanced writing involving feature articles for newspapers and magazines. Emphasis on an analysis of markets for feature articles.

330 Three Credits
COPY EDITING
PREREQUISITE: JRN 221
 Study of the fundamentals of copy editing, headline writing, re-writing and general copy desk work.

332 Three Credits
GRAPHICS OF COMMUNICATION
 Study of the basic theories and skills of visual communication, including the selection and editing of photographs, the use of maps, charts, graphs, artwork and other graphic-design elements. Emphasis on common graphic programs such as Quark and Adobe Photoshop.

341 Three Credits
PUBLIC RELATIONS PRACTICE
PREREQUISITE: JRN 240
 Study of the management and decision-making process in public relations. Emphasis on the case history approach to evaluate strategic planning in a variety of situations and areas, including business, government, non-profit and education.

342 Three Credits
PROMOTIONAL WRITING
PREREQUISITE: JRN 210 or 240
 Planning, implementing and measuring the effectiveness of public relations programs including techniques of using controlled and uncontrolled media to reach various target publics. Study of producing materials originating from public relations departments and agencies; publicity; human relations; writing and editing business, industrial, and house publications; and fund raising.

461 Three Credits
PRINCIPLES OF NEWSPAPER MANAGEMENT
 Study of basic economic theory relative to newspapers, including problems of newspaper management, staffing, and budgeting; circulation policies and methods; advertising; marketing and promotion using the case study method.

493, 495 Three Credits
INTERNSHIP OR PRACTICUM
PREREQUISITE: Consent of Instructor
 Experience working for a newspaper or magazine, in public relations, or with an advertising department or agency. (Practicum is an on-campus position. Internship is an off-campus position.)

497 Three Credits
DIRECTED RESEARCH
PREREQUISITES: Consent of Instructor, Advisor and Department Head
 Individual study and/or research in journalism under the guidance of a journalism instructor.

LATIN - LAT

111 Three Credits
 Introduction to basic sentence structure and vocabulary with attention to basic syntactic units and cases that are part of universal linguistic knowledge.

LOGIC - LOG

210 Three Credits
LOGICAL AND CRITICAL THINKING
 Examination, development and practice of critical thinking skills with emphasis on the deliberate improvement of both everyday thinking skills and basic communication skills (analytical reading and writing). Application of critical thinking skills to problem solving in personal, academic, professional and social dimensions of life.

MANAGEMENT - MGT

365 **Three Credits**

ORGANIZATIONAL BEHAVIOR AND THEORY

PREREQUISITES: PSY 210 or Equivalent, Junior Standing
Study of organizational behavior and the various social units-including individuals, groups, and group of groups-that constitute organizations. Exploration of relevant theories of the relations and processes among individuals, in and between groups, and in and between organizations. Through experiential approaches, develops social and analytical skills for leadership and membership in organizations.

368 **Three Credits**

HUMAN RESOURCE MANAGEMENT

PREREQUISITE: MGT 365

Focus on administering change within organizations through the training and developing of human resources. Experiential activities enhance the development of leadership skills in the training process.

410 **Three Credits**

LEADERSHIP AND DIVERSITY IN MANAGEMENT

PREREQUISITE: MGT 365

Focus on how individuals and organizations can effectively, efficiently, and productively adapt to the challenges of diversity in the workforce and in the customer base.

415 **Three Credits**

INTERNATIONAL MANAGEMENT

PREREQUISITES: Junior Standing; MGT 365

Analysis of the operations and the managerial strategies of various types of businesses in the international setting. Focus on the intellectual, political, social, economic, and moral issues that the business and government leaders must face in dealing with international business problems.

420 **Three Credits**

ORGANIZATIONAL CHANGE AND DEVELOPMENT

PREREQUISITE: MGT 365 and Senior Standing

Study of the knowledge base and competencies to be leaders or effective participants in organizational change efforts. Exposure to various models, determinants, and processes of effective change efforts.

425 **Three Credits**

ADVANCED SEMINAR IN MANAGEMENT AND TOTAL QUALITY

PREREQUISITES: DSC 370; MGT 365

Examination and analysis of real studies of corporate and public sector management situations and problems, including a review of the strengths, weaknesses, opportunities, threats and how they relate to the problem solution. Development of total quality-based solutions to the specific case studies.

430 **Three Credits**

LABOR RELATIONS

PREREQUISITE: MGT 368

Exploration of the evolution and characteristics of union-management relations in America including union structure, government and leadership, social significance of unions, legal aspects of labor relations, contract administration, grievance resolution, and affirmative action.

435 **Three Credits**

COMPENSATION

PREREQUISITE: MGT 368

Examination of wage and salary administration and fringe benefit management in organizations including wage and salary administration, job evaluation procedures, compensation plans, fringe benefit analysis and planning.

440 **Three Credits**

COLLECTIVE BARGAINING

PREREQUISITE: MGT 368

Focus on the real world application of collective bargaining negotiations through a simulated activity that integrates the theoretical background of the prerequisite courses.

478 **Three Credits**

STRATEGIC MANAGEMENT

PREREQUISITES: MGT 365, 366; FNC 360; DSC 476; Senior Standing

Study of formulating and implementing business and corporate strategic plans and evaluating management strategic performance in complex business environments including the corporate mission and objectives, industry analysis, competitive analysis, environmental analysis, business, corporate, and international strategy.

MANAGEMENT INFORMATION SYSTEMS - MSY

184 **Three Credits**

ESSENTIALS OF MICRO COMPUTING

Introduction to computer hardware and software productivity tools including computer architecture, spreadsheets, databases, word processing, and Internet.

272 **Three Credits**

PROGRAMMING IN C

PREREQUISITE: MSY 184

Introduction to the design of algorithms and to programming in a business environment using C.

284 **Three Credits**

ADVANCED MICRO COMPUTING

Exploration of complex spreadsheet problems, sensitivity analyses, and the use of database management systems within microcomputer software.

372 **Three Credits**

BUSINESS APPLICATIONS IN VISUAL C++

PREREQUISITE: MSY 284

Application of the object model through C++ providing the necessary tools to design and implement business applications using C++'s Visual Workbench/IDE.

374 **Three Credits**

BUSINESS APPLICATIONS IN VISUAL BASIC

PREREQUISITE: MSY 284

Study of Visual Basic development, language syntax, and programming in an event-driven environment.

375 **Three Credits**

MANAGEMENT INFORMATION SYSTEMS & E-COMMERCE

PREREQUISITE: MSY 284

Study of functional information systems, e-commerce concepts, and ethical issues in MIS and E-Commerce.

390 **Three Credits**

BUSINESS DATABASE MANAGEMENT

PREREQUISITE: MSY 284

Introduction to the design and development of database systems. Exploration of the database environment; relational aspects of the database theory; structured query language; features of SQL server.

410 **Three Credits**

INFORMATION SYSTEMS ANALYSIS AND DESIGN

PREREQUISITE: MSY 375

Introduction concepts and methods used in the analysis and design of business information systems. Opportunity to study the SDLC phases through group projects and CASE tools such as Visible Analyst.

419 **Three Credits**

NETWORKING

PREREQUISITE: MSY 284

Introduction to current networking technology. Exploration of OSI reference model, basic network designs, network components, network architectures, network operations, network administration and support, network hardware and software installation, and NT Server installation and configuration. Extensive hands-on training provided.

422 **Three Credits**

DECISION SUPPORT AND EXPERT SYSTEMS

PREREQUISITE: MSY 375

Study of the manager's responsibilities in problem-solving and decision-making and areas in which computers can be used as tools to gain insight needed to support decision alternatives.

499 **Three Credits**

BUSINESS APPLICATIONS IN JAVA

PREREQUISITES: Senior Standing; departmental permission; MSY 410, 374, or 372

Opportunity for an internship or a research project to synthesize information knowledge and experiences. Must be implemented in JAVA. The instructor assists students with learning JAVA programming. Results are presented to peers and other interested members in a public forum.

MANUFACTURING TECHNOLOGY - ITM

147 **Three Credits**

INTRODUCTION TO MANUFACTURING PROCESSES

PREREQUISITE: Consent of Department Chairman

Focus on the study and application of processes for industrial product manufacture including selected machining processes and synthetic-forming processes.

246 **Three Credits**

PRINCIPLES OF MANUFACTURING

PREREQUISITE: TMD 145

Comprehensive coverage of basic manufacturing processes including traditional and latest developments. Emphasis on descriptive and qualitative concepts, including surfaces of materials, casting, bulk deformation, sheet metal forming, material removal, plastic processing, powder metal and ceramic processing, fastening, joining, advanced manufacturing concepts, and manufacturing economics.

248 **Three Credits**

FABRICATION AND WELDING PROCESSES

PREREQUISITE: IMT 147

Study of metal fabrications, basic fusing and nonfusion welding processes of shielded electric arc, TIG, MIG, plasma, resistance, gas, and other related processes. Crystallization and plastic deformation are considered in relation to the effects of working temperatures of the molecular structure, grain size, and ultimately, in the properties of metals; applied analysis of mechanical and physical properties of materials.

320 **Three Credits**

MACHINE TOOL PROCESSES

PREREQUISITE: IMT 147

Theory and set-ups for precision machining including turning, milling, surface grinding, and metrology.

353 **Three Credits**

COMPUTER NUMERICAL CONTROL AND COMPUTER-AIDED MANUFACTURING

PREREQUISITES: ITM 147; CIT 280; MTH 153

Development of insight into the advantages of computer numerical control and computer-aided manufacturing tools and techniques. Experience gained in CNC and CAM programming, operation, and equipment.

400 **Three Credits**

ADVANCED MACHINE TOOL PROCESSES

PREREQUISITES: IMT 147, 320 and 353

Study of producing machine set-ups, primary and secondary machine operations, laboratory experience in the application of numerically-controlled machine tools, and study of chipless machine processes of metal removal.

453 **Three Credits**

ROBOTICS AND COMPUTER-INTEGRATED MANUFACTURING SYSTEMS

Development of advances in automated manufacturing. Experience gained in determining applications, interfacing, and programming of industrial robots developing a background in computer-integrated manufacturing systems.

MARKETING - MKG

366 **Three Credits**

PRINCIPLES OF MARKETING

PREREQUISITE: Junior Standing

Survey of the field of marketing, concentrating on the marketing mix. Significant emphasis on the relationship between marketing activities and the consumer, the ethical and international aspects of marketing in entrepreneurial and corporate environments.

367 **Three Credits**

CUSTOMER IDENTIFICATION AND ANALYSIS

PREREQUISITE: MKG 366

Study of customer characteristics needed to write an effective marketing plan. Emphasis on both the household customer and organizational customers in relation to positioning, promotion, and marketing strategy.

411 **Three Credits**

SALESMANSHIP

PREREQUISITE: FNC 366; Junior Standing

Study of the principles and techniques of personal selling and sales presentations including sales policies and the problems involved.

412 **MARKETING MANAGEMENT** **Three Credits**
PREREQUISITE: MKG 366; **Senior Standing**
 Study of the organization and management of marketing with emphasis on strategic decision-making for entrepreneurs and corporate entrepreneurs.

413 **STRATEGIES FOR RETAIL BUSINESSES** **Three Credits**
PREREQUISITE: MKG 366
 Study of the organization and management of retail establishments with emphasis on problems and trends in retailing from the point of view of the entrepreneur including such factors as store location, merchandise assortment and budget planning, inventories planning and control, customer support services, advertising and promotions, and other topics.

414 **ADVERTISING AND PROMOTION MANAGEMENT** **Three Credits**
PREREQUISITE: MKG 366
 Study of the fundamental principles of communication as they apply to marketing and promotion including management of the promotional mix, advertising, personal selling, sales promotion, publicity, and point of purchase.

415 **BLACK PERSPECTIVES IN MARKETING** **Three Credits**
PREREQUISITE: MKG 366
 Study of the economic, social, and psychological characteristics of blacks as they relate to the field of marketing including demographic characteristics, psychological perceptions, shopping patterns, the role of black media, and the black businessperson and the marketing concept.

416 **INTERNATIONAL MARKETING** **Three Credits**
PREREQUISITE: MKG 366
 Analysis of marketing principles relating to international marketing organizations, marketing channels, channels of distribution, selling, and pricing.

418 **INTERNET MARKETING** **Three Credits**
PREREQUISITE: MKG 366 or **Permission of Instructor**
 Survey of marketing products on the Internet including such topics as uniqueness of the Internet as a marketing tool; Internet commerce; starting an Internet business; marketing mix and the Internet; and designing an Internet Web site.

476 **MARKETING SEMINAR** **Three Credits**
PREREQUISITE: MKG 366
 Discussion of topics related to the field of marketing.

497 **MARKETING RESEARCH STRATEGIES AND OPPORTUNITIES** **Three Credits**
PREREQUISITES: MKG 366; DSC 270; **Senior Standing**
 Focus on problem definition (opportunity analysis) and data analysis techniques and strategies as applicable to small business owners.

MASS COMMUNICATIONS - MCM

211 **SOCIETY AND MASS COMMUNICATIONS** **Three Credits**
 Study of the socio-economic developments related to the growth and development of American newspapers, magazines, books, radio, television, motion pictures, cable and satellite communications.

220 **RADIO BROADCASTING** **Three Credits**
PREREQUISITE: MCM 211 or **permission of instructor**
 Introduction to WNSB-FM and radio station duties. Study of the manner in which WNSB-FM conducts its daily operations and the equipment at the station.

250 **TELEVISION PRODUCTION** **Three Credits**
PREREQUISITE: MCM 211
 Introduction to the fundamentals, essential tools, and techniques of television and audio operations. Structured laboratory exercises provide an understanding of theory, terminology and crew position responsibilities.

261 **INTRODUCTION TO MEDIA WRITING** **Three Credits**
PREREQUISITES: ENG 102; MCM 250
 Introduction to the aural writing style used in broadcast/cable programs. Primary emphasis on news writing for radio and

television based on industry formula. Secondary emphasis on applying aural style to more complicated program scripts.

280 **HISTORY AND APPRECIATION OF MOTION PICTURES** **Three Credits**
PREREQUISITE: MCM 211
 Summary of motion pictures as a distinctive medium of expression and communication including the techniques, physical basis, and history of the silent films to sound films of the leading genres, and the directors who illustrated selected phases of film evolution.

310 **HISTORY OF MASS COMMUNICATIONS** **Three Credits**
 Study of the origin and development of mass media in the United States. Emphasis on the press, radio, television and motion pictures.

315 **INTERVIEWING AND INFORMATION GATHERING** **Three Credits**
 Study of the identification and utilization of tools necessary in gathering information, setting up, preparing and conducting interviews for broadcast. Emphasis on organization of the information for use in the media and allied industry.

330 **ELEC. FIELD PRODUCTION & EDITING** **Three Credits**
PREREQUISITES: MCM 250, 261
 Introduction to basic shooting, editing and lighting techniques necessary for field production. Experience shooting and editing a variety of news stories will serve as a resume tape upon completion of the course.

350 **TV DIRECTING** **Three Credits**
PREREQUISITE: MCM 250
 Development of television program producing and directing with emphasis on leadership skills and advanced audio-visual equipment instruction through specific laboratory exercise.

351 **INTRODUCTION TO BROADCAST AND FILM CRITICISM** **Three Credits**
PREREQUISITES: MCM 211, 280
 Analysis of the historical, aesthetic, and critical aspects of broadcast programs and motion pictures. Attendance and viewing of films and evaluations required.

352 **SPORTS BROADCASTING** **Three Credits**
PREREQUISITE: MCM 261
 Prepares students for live on-air sports broadcasting. WNSB-FM and public access cable channels will serve as laboratories for students who meet the requirements for the course. Lectures and laboratory experience emphasize fundamentals of communications, sports language and rules, interviewing and reporting techniques, and research and preparation for announcing games.

362 **BROADCAST NEWS WRITING AND REPORTING** **Three Credits**
PREREQUISITE: MCM 261
 Experience researching, planning, writing, producing and delivering news and public affairs material over campus media. Primary emphasis on television news. Secondary emphasis on radio, internet and new media.

363 **AUDIO PRODUCTION** **Three Credits**
PREREQUISITE: MCM 250
 Study of audio principles, practices, and concepts of communication for radio, television, and motion pictures. Proficiency in campus facilities, including studios and remote locations required.

390 **COMPARATIVE MASS MEDIA SYSTEMS** **Three Credits**
PREREQUISITE: MCM 211
 Survey of international mass media systems focusing on their development, organization, and operation. Emphasis on the similarities and differences of various systems with a critical view of the effect government has on a nation's mass media

391 **RADIO AND TELEVISION ANNOUNCING** **Three Credits**
PREREQUISITE: MCM 261
 Emphasis on the style, manner, characteristics and performance of broadcast/cable news anchoring and reporting including talk show hosting techniques. Primary focus on participation in a TV lab environment with selected projects broadcast over the campus TV system. Secondary focus on radio, internet and new media productions.

440 **LAW AND MASS COMMUNICATIONS** **Three Credits**
PREREQUISITES: MCM 211; ENG 203
 Examination of the various laws that affect mass communications in the United States including licensing, operations, programming, advertising, defamation, privacy, copyright and other related topics.

445 **ETHICS IN MEDIA** **Three Credits**
PREREQUISITE: MCM 211
 Development of a strong sense of ethical responsibility as communications professionals including case studies of ethical decision-making by news and communications organizations and analysis of ethical codes of various professional groups.

450 **MASS COMMUNICATIONS THEORY AND RESEARCH** **Three Credits**
PREREQUISITE: MCM 211
 Examination of the theory and principles of communications systems and processes including research methods commonly used by communications professionals and trends in media research.

460 **CONTEMPORARY ISSUES AND SPECIAL PROBLEMS** **Three Credits**
PREREQUISITES: MCM 211; ENG 203
 Analysis of current issues and problems in mass media including the roles of media, ethics in media, media criticism, new technology, media market, and the trends of the media industry.

464 **ADVANCED TV PRODUCTION** **Three Credits**
PREREQUISITES: MCM 250, 261, 330, 350
 Capstone course builds on writing, producing and directing skills in order to produce a weekly television program. Production of a news/magazine format, dramatic, or comedied program or segment required.

470/570 **BROADCAST/CABLE PROGRAMMING** **Three Credits Each**
PREREQUISITE: Upper-Class Standing
 Introduction to the field of telecommunications (broadcast, cable, and satellite) programming as it relates to programming history and development, structure and formats, program strategies, research, regulation and operating practices.

476 **BROADCAST SALES** **Three Credits**
PREREQUISITE: Upper-Class Standing
 Study of principles, structures, strategies, and practices of broadcast, cable, and satellite programming and sales. Emphasis on mid-management areas, which are crucial to the successful operation of all broadcast properties.

485/585 **MEDIA TECHNOLOGIES** **Three Credits**
PREREQUISITE: Senior Standing or Consent of Instructor; for undergraduates, and advice and/or consent of the graduate coordinator for students seeking graduate credit
 Survey of the growth and development of domestic and global broadcasting via cable, satellite systems and the Internet with an emphasis on their development and organization.

489 **MEDIA MANAGEMENT** **Three Credits**
PREREQUISITE: Senior Standing
 Exploration of management and administrative principles, roles, functions, structure and goals in the mass media including budget planning, personnel, labor/management relations, and regulation of the print and electronic media.

490 **SPECIAL TOPICS IN MEDIA** **Three Credits**
 Opportunities to study and examine media-related and special-interest issues in culture, society, history, economy and politics.

491 **INTRODUCTION TO THE INTERNET: WEB PAGE DESIGN** **Three Credits**
PREREQUISITE: CSC 200 or **Permission of the instructor**
 Introduction to HTML writing and web page design and creation of a multi-page website targeted to a particular audience. Usage of search engines to find relevant information and evaluate similar sites for content, structure, quality of information, purpose, and bias required.

MASS COMMUNICATIONS – MCM (continued)

493, 494 **Three Credits Each**
PRACTICUM (WNSB)
PREREQUISITES: C or better in ENG 101, ENG 102 and MCM 261
 Real-world experience in radio at WNSB-FM. Emphasis on developing the ability to become creative writers and producers, along with learning radio production techniques.

496 **Three Credit**
INTERNSHIP
PREREQUISITE: Junior or Senior Standing and Consent of Supervising Instructor
 Practical experience in the production departments of radio and television stations, newspapers, film production companies, advertising and public relations agencies, media research organizations, and selected other media-related agencies.

MATHEMATICS - MTH

101 **Three Credits**
ELEMENTARY ALGEBRA
 Developmental approach for students whose backgrounds indicate a need for further review of basic algebra. Mathematics Laboratory required. (Credits do not count toward the mathematics requirements of a student's major.)

103 **Three Credits**
CONTEMPORARY MATHEMATICS
PREREQUISITE: MTH 101 or the equivalent
 Emphasis on global, unifying ideas in mathematics and the connections between contemporary mathematics and modern society. Topics selected from elementary mathematics, logic, probability and statistics, discrete systems, geometry, measurement, and consumer applications. (Satisfies the minimum general education mathematics requirement.)

105 **Three Credits**
INTERMEDIATE ALGEBRA
PREREQUISITE: MTH 101 or the equivalent
 Preparation for the precalculus including linear and quadratic equations, graphing, polynomials, roots, radicals, and systems of equations. (Satisfies the minimum general education mathematics requirement.)

131 **Three Credits**
PRECALCULUS FOR BUSINESS MAJORS
PREREQUISITE: MTH 105 (Grade C or higher) or the equivalent
 Transition from elementary mathematics to calculus including a review of exponents, factoring, linear and quadratic equations, inequalities, functions, graphs, system of equations, exponential and logarithmic functions.

132 **Three Credits**
CALCULUS FOR BUSINESS MAJORS
PREREQUISITE: MTH 131 or 151 (Grade: C or higher)
 Introduction to elementary calculus including limits, continuity, differentiation, and integration.

141 **Three Credits**
ELEMENTS OF MATHEMATICS FOR TEACHERS
PREREQUISITE: MTH 101 or the equivalent
 Thorough treatment of the modern mathematics curricula for prospective school teachers. Emphasis on sets and logic, number systems, number theory, algebra, geometry and measurement, and probability. Computer-based laboratory component with manipulatives included.

142 **Three Credits**
ELEMENTS OF MATHEMATICS FOR TEACHERS
PREREQUISITE: MTH 101 or the equivalent
 Continued treatment of the modern mathematics curricula for prospective school teachers. Emphasis on geometry and measurement.

151 **Three Credits**
COLLEGE ALGEBRA
PREREQUISITE: MTH 105 or the equivalent
 Study of basic algebra stressing fundamental concepts and reasoning used in mathematics and the sciences. Emphasis on skills necessary for the calculus sequences.

153 **Three Credits**
COLLEGE ALGEBRA AND TRIGONOMETRY
PREREQUISITE: MTH 151 or equivalent
 Extension of algebra topics and a treatment of trigonometry necessary for the study of advanced subjects in mathematics and the sciences. Preparation for the calculus sequence.

170 **Two Credits**
TECHNOLOGY IN THE MATH CURRICULUM
PREREQUISITE: MTH 105 or the equivalent
 Introduction to the graphics calculator and other classroom technologies that assist in learning math, science, and business courses.

184 **Four Credits**
CALCULUS I
PREREQUISITE: MTH 153 or the equivalent
 Treatment of the essentials of calculus necessary for the study of more advanced subjects in the natural sciences and mathematics including limits, continuity, derivatives and applications, antiderivatives and the Fundamental Theorem of Calculus. Integration of some calculus applications with computer activities included.

242 **Three Credits**
HISTORY OF MATHEMATICS
PREREQUISITE: MTH 184
 Study of the history and development of mathematics as a vital and integral part of the history of civilization including the history of numbers and numerals; computation; development of geometry, algebra, trigonometry and calculus, and the development of modern mathematics.

250 **Three Credits**
ELEMENTARY STATISTICS CONCEPTS
PREREQUISITE: MTH 105
 Introduction to statistics including graphical data representation, basic probability concepts, sampling and expectation, confidence interval and hypothesis testing for sample mean and proportion.

251 **Four Credits**
CALCULUS II
PREREQUISITE: MTH 184
 Applications of definite integrals, the calculus of transcendental functions, infinite series, and integration techniques. Some topics are integrated with computer activities.

252 **Four Credits**
CALCULUS III
PREREQUISITE: MTH 251
 Investigation of calculus concepts at the intermediate level including polar coordinates, vectors, and the calculus of several variables.

300 **Three Credits**
LINEAR ALGEBRA
PREREQUISITE: MTH 184
 Introduction to the basic concepts, techniques, and elementary applications of linear algebra including matrices, linear systems, gaussian elimination, vector spaces, linear independence, linear transformations, eigenvalues and eigenvectors.

310 **Three Credits**
DISCRETE MATHEMATICS
PREREQUISITE: MTH 184
 Introduction to discrete math including topics in graph theory, management science, the mathematics of social change, and statistics. Use of manipulatives and other learning tools included.

311 **Three Credits**
MODERN GEOMETRY
PREREQUISITE: MTH 184
 Re-examination of Euclidean plane geometry as a postulational system. Emphasis on formulating definitions and constructing valid proofs including mathematical reasoning, postulational method, finite geometries, congruence, similarity, parallelism, and construction with ruler and compass.

323 **Three Credits**
NUMBER THEORY
PREREQUISITE: MTH 251
 Theoretical study of the properties of the integers including prime numbers, congruences, continued fractions, Euclidean Algorithm, factorization, and Diophantine equations.

331 **Three Credits**
ALGEBRAIC STRUCTURES
PREREQUISITE: MTH 300
 An introduction to modern algebra, which deals with, selected algebraic structures (groups, rings, fields, etc.). The course stresses the axiomatic approach and the logic and method of proof.

351 **Three Credits**
PROBABILITY AND STATISTICS I
PREREQUISITE: MTH 251
 First of a two-semester sequence of probability and mathematical statistics, primarily for majors. Introduction to

probability, univariate and multivariate probability distributions and their properties, distributions of functions of random variables, random samples and sampling distributions.

352 **Three Credits**
PROBABILITY AND STATISTICS II
PREREQUISITE: MTH 351
 Second of a two-semester sequence of probability and mathematical statistics, primarily for majors. Applications of probability, random samples, point and interval estimators and their properties, methods of moments, maximum likelihood, tests of hypotheses.

355 **Three Credits**
INTRODUCTION TO REGRESSION ANALYSIS
PREREQUISITE: MTH 251
 This course uses regression analysis as a flexible statistical problem solving methodology. Topics include matrix review; variable selection; prediction; multicollinearity; model diagnostics; dummy variables; logistic and non-linear regression. Emphasizes use of computer.

371 **Four Credits**
DISCRETE MATHEMATICAL STRUCTURES
PREREQUISITES: MTH 184; CSC 170
 An introduction to the area of discrete mathematics that is important to computer science. Topics include logic, sets, functions and relations, algorithms, counting principles, and graph theory.

372 **Three Credits**
DIFFERENTIAL EQUATIONS
PREREQUISITE: MTH 251
 A first course in ordinary differential equations. Topics include first-order equations, linear differential equations, and variable-coefficient equations. Applications include growth/decay models and the vibrational models.

373 **Three Credits**
ADVANCED VECTOR CALCULUS
PREREQUISITE: MTH 252
 A one-semester course in the calculus of functions of several variables and vector analysis. Topics include derivatives and integrals of functions of several variables, vector fields, divergence, curl, Green's Theorem, and LaGrange Multipliers. Course includes selected applications to the physical sciences.

382 **Three Credits**
INTRODUCTION TO APPLIED MATHEMATICS
PREREQUISITE: MTH 372
 A junior level introduction to applications of mathematics designed for mathematics, computer science, and engineering majors. Topics include difference equations, Laplace transforms, Sturm-Liouville problems, and Bessel functions.

384 **Three Credits**
MATHEMATICAL MODELING IN THE SCIENCES
PREREQUISITE: MTH 184
 A one-semester interdisciplinary course integrating mathematics and science investigations in a mathematical model setting. Students, working in cooperative groups, investigate real world science problems, formulate model solutions to the problems, and then present their solutions in a classroom setting using various technological aids.

401 **Three Credits**
NUMERICAL ANALYSIS I
PREREQUISITES: MTH 300, and a Programming Language
 Introduction to numerical techniques for problem solving involving the use of the computer. Topics include error analysis, solutions of one variable equations, solutions of linear and nonlinear systems of equations, iterative techniques in matrix algebra, and approximating eigenvalues.

402 **Three Credits**
NUMERICAL ANALYSIS II
PREREQUISITE: MTH 401, MTH 372
 Continuation of MTH 401. Topics include polynomial interpolation and approximation, numerical differentiation and integration, approximation theory, and numerical approaches to ordinary and partial differential equations.

431 **Three Credits**
ABSTRACT ALGEBRA
PREREQUISITE: MTH 331
 Continuation of MTH 331. Topics include a more advanced discussion of groups, rings, fields, homomorphism, isomorphism, and automorphism.

441 INTRODUCTION TO TOPOLOGY PREREQUISITE: MTH 331 or 373 Introduction to the theory of point-sets including topological spaces, connectedness, compactness, continuity, and metric spaces.	Three Credits	501 MATHEMATICS FOR COMPUTING PREREQUISITE: MTH 184 Introduction to the mathematics of computer science including mathematical logic, informal set theory, relations, functions, and networks.	325 CLINICAL CHEMISTRY I Study of the theory and principle of biochemical procedures performed in the clinical laboratory to analyze various body fluid constituents (proteins, enzymes, carbohydrates, electrolytes, acid-base balance, blood gases, pH, and buffer systems) to aid in the diagnosis of diseases including the theory, operation, and maintenance of instruments used in the clinical laboratory; quality control and laboratory mathematics. (3 hrs. lecture/4 hrs. laboratory)
451 STATISTICAL THEORY I PREREQUISITE: MTH 352 Senior level course in applied statistics, designed especially for majors seeking an emphasis in statistics. Probability tools for statistics include description of discrete and absolutely continuous distributions, expected values, moments, moment generating functions, transformations of random variables, marginal and conditional distributions, independence, order statistics, multivariate distributions, concepts of random sample, derivation of many sampling distributions.	Three Credits	501A GRAPHING CALCULATOR APPLICATIONS PREREQUISITE: MTH 184 Introduction to the use of graphing calculators as an aid to problem solving in mathematics and science including methods for the use of calculators in classroom instruction.	373 CLINICAL MICROBIOLOGY I Clinical application and interpretation of the principles of Medical Bacteriology, including historical and epidemiological significance, specimen collection, growth requirements, cultural characteristics, identification and pathogenicity. Laboratory exercises emphasize techniques, methods, and differential media used to isolate and identify pathogenic bacteria. (3 hrs. lecture/4 hrs. laboratory)
454 EXPERIMENTAL DESIGNS PREREQUISITE: MTH 351 Topics to be covered include single factor experiments, residuals, randomized block designs, general factorials, blocking, regression models, unbalanced data, confounding blocks, and Taguchi experiments.	Three Credits	505 TOPICS IN CONTEMPORARY MATHEMATICS PREREQUISITE: MTH 184 Emphasis on the connections between mathematics and contemporary real-life problems. Selected topics are drawn from statistics, linear programming, geometry, discrete systems, and consumer applications.	375 CLINICAL MICROBIOLOGY II Clinical application and interpretation of the principles of Medical Bacteriology, including historical and epidemiological significance, specimen collection, growth requirements, cultural characteristics, identification and pathogenicity. Laboratory exercises emphasize techniques, methods, and differential media used to isolate and identify pathogenic bacteria. (3 hrs. lecture/4 hrs. laboratory)
457 STATISTICAL THEORY II PREREQUISITE: MTH 352 General framework for statistical inference. Point estimators: biased and unbiased, minimum variance unbiased, least mean square error, maximum likelihood and least squares, asymptotic properties. Interval estimators and tests of hypotheses: confidence intervals, power functions, Neyman-Pearson lemma, likelihood ratio tests, unbiasedness, efficiency and sufficiency are covered.	Three Credits	510 DISCRETE MATHEMATICS PREREQUISITE: MTH 184 Introduction to the basic concepts in discrete mathematics including computer science, graph theory, management science, and applied statistics. Course methodology includes the use of technology, cooperative learning, and manipulatives.	395 HEMATOLOGY/COAGULATION PRACTICUM Rotation in the clinical hematology laboratory which incorporates instruction and examinations in routine hematology, special hematology, and coagulation under the supervision of a clinical specialist.
473 INTRODUCTION TO REAL ANALYSIS PREREQUISITE: MTH 251 A rigorous introduction to the analysis of real-valued functions of a real variable. Provides a theoretical and axiomatic basis for calculus concepts taught in previous courses.	Three Credits	511 ADVANCED TOPICS IN GEOMETRY PREREQUISITE: MTH 311 Study of selected topics from integral, combinatorial, and algebraic geometries including the geometry of numbers. Independent research project required.	396 IMMUNOHEMATOLOGY PRACTICUM Rotation in the clinical blood bank laboratory which incorporates instruction and examinations in routine blood banking and transfusion therapy under the supervision of a clinical.
474 COMPLEX VARIABLES PREREQUISITE: MTH 251 Treats the fundamentals of analytic function theory. Topics include algebra and geometry of the complex numbers, limits, derivatives, Cauchy-Riemann equations, Cauchy's Theorem, Taylor and Laurent series, and contour integration.	Three Credits	520 MATHEMATICAL LOGIC AND SET THEORY PREREQUISITE: MTH 310 or 331 Special emphasis on topics in sets and logic. Independent research project on an approved topic in sets and logic required.	397 SEROLOGY PRACTICUM Application of the immunological and serological procedures utilized in the clinical laboratory under the direction of a proficient technologist. Aaminations required.
484 TOPICS IN APPLIED MATHEMATICS PREREQUISITE: MTH 382 A senior level course containing advanced topics in mathematical and scientific applications. Topics vary, but may include partial differential equations, Fourier analysis and boundary value problems, with selected applications in mathematical physics and fluid dynamics.	Three Credits	531 TOPICS IN ABSTRACT ALGEBRA PREREQUISITE: MTH 331 Special emphasis on ring and field theory. Independent research project required.	410 IMMUNOLOGY Introduction to the study of antigens, antibody reactions, basic immune mechanisms, and their manifestations. Presentations on current immunological concepts and their application in the diagnosis, prevention, and treatment of infectious and noninfectious disease processes. (3-hrs. lecture)
491, 492 INDEPENDENT STUDY PREREQUISITE: MTH 252 and as Specified by the Instructor Under the direction of an instructor, this course is designed to give mathematics majors the opportunity to explore a single topic in theoretical or applied mathematics in a one-on-one learning relationship with a faculty member. Special topics must be approved by the department head.	One to Twelve Credits	540 MATHEMATICAL MODELS AND APPLICATIONS PREREQUISITE: MTH 384 Study of the principles of mathematical modeling by way of selected science investigations. Independent research project incorporating mathematical modeling required.	425 CLINICAL CHEMISTRY II PREREQUISITE: MDT 325 Study of the theory and principle of biochemical procedures performed in the clinical laboratory to analyze various body fluid constituents and organ functions (lipids, vitamins; NPN and renal functions; liver, heart, and skeletal muscle, thyroid, pancreas, and GI system; endocrinology; toxicology, and TDM) to aid in the diagnosis of diseases including the theory, operation, and maintenance of instruments used in the clinical laboratory, quality control, computer applications, and laboratory calculations. (3 hrs. lecture/4 hrs. laboratory)
496/497 MATHEMATICS SEMINAR PREREQUISITE: Junior Status and Completion of Core Math Courses Culminating sequence designed to review and fortify knowledge of essential mathematics concepts and to synthesize mathematical knowledge and experience through the completion of an approved research to synthesize mathematical knowledge and experience through the completion of an approved research project. Results of the research are presented to peers and other interested members of the academic community. Course includes a comprehensive examination used to assess the objectives of the core mathematics courses.	Two Credits Each	540 MATHEMATICAL MODELS AND APPLICATIONS PREREQUISITE: MTH 384 Study of the principles of mathematical modeling by way of selected science investigations. Independent research project incorporating mathematical modeling required.	425 CLINICAL CHEMISTRY II PREREQUISITE: MDT 325 Study of the theory and principle of biochemical procedures performed in the clinical laboratory to analyze various body fluid constituents and organ functions (lipids, vitamins; NPN and renal functions; liver, heart, and skeletal muscle, thyroid, pancreas, and GI system; endocrinology; toxicology, and TDM) to aid in the diagnosis of diseases including the theory, operation, and maintenance of instruments used in the clinical laboratory, quality control, computer applications, and laboratory calculations. (3 hrs. lecture/4 hrs. laboratory)
500 TOPICS IN MATHEMATICS EDUCATION PREREQUISITE: Nine Semester Hours of College Math Study of selected topics in mathematics curriculum development and methodology. Topics vary from semester to semester.	Three Credits	306 PHEBOTOMY Simulated laboratory and direct clinical experience in blood collection techniques including venipuncture, capillary sticks, special test procedures, and isolation. Emphasis on patient handling, nursery patients, and safety. (1 hr. lecture/2 hrs. laboratory)	450 CLINICAL HEMATOLOGY II PREREQUISITE: MDT 315 Study of interpretative hematology through the classification and pathogenesis of hematologic white blood cell disorders associated with leukemia and leukemoid reactions, plasma cell and plasma protein abnormalities, myeloproliferative disorders, and lymphoproliferative disorders. Hemostasis and coagulation disorders will be presented. Laboratory exercises to diagnose disorders of hemostasis included. (3 hrs. lecture/2 hrs. laboratory)
500 TOPICS IN MATHEMATICS EDUCATION PREREQUISITE: Nine Semester Hours of College Math Study of selected topics in mathematics curriculum development and methodology. Topics vary from semester to semester.	Three Credits	307 SEROLOGY Study of "in-vitro" antigen-antibody reactions and the serological procedures used in the diagnosis of disease states. (1 hr. lecture/2 hrs. laboratory)	455 IMMUNOHEMATOLOGY PREREQUISITE: MDT 410 Clinical application of the principles of blood banking and transfusion therapy. Emphasis on the clinical manifestations of the blood group system, their antigens and antibodies; blood donation, blood processing component preparation, aphaeresis, exchange transfusions and transfusion reactions. Emphasis on quality control, FDA mandates, and blood bank policies for emergency transfusions. Simulated laboratory sessions introduce the general conditions and problems of the modern blood bank service. (3 hrs. lecture/4 hrs. laboratory)
500 TOPICS IN MATHEMATICS EDUCATION PREREQUISITE: Nine Semester Hours of College Math Study of selected topics in mathematics curriculum development and methodology. Topics vary from semester to semester.	Three Credits	308 URINALYSIS/BODY FLUIDS Study of the theory and principles of chemical, physical, and microscopic clinical analysis of human urine and other body fluids. Emphasis on correlation of data obtained to diagnose disease states. (1 hr. lecture/2 hrs. laboratory)	455 IMMUNOHEMATOLOGY PREREQUISITE: MDT 410 Clinical application of the principles of blood banking and transfusion therapy. Emphasis on the clinical manifestations of the blood group system, their antigens and antibodies; blood donation, blood processing component preparation, aphaeresis, exchange transfusions and transfusion reactions. Emphasis on quality control, FDA mandates, and blood bank policies for emergency transfusions. Simulated laboratory sessions introduce the general conditions and problems of the modern blood bank service. (3 hrs. lecture/4 hrs. laboratory)
500 TOPICS IN MATHEMATICS EDUCATION PREREQUISITE: Nine Semester Hours of College Math Study of selected topics in mathematics curriculum development and methodology. Topics vary from semester to semester.	Three Credits	315 CLINICAL HEMATOLOGY Introduction to the study of blood cells and blood forming organ cells in the peripheral blood, bone marrows, and reticuloendothelial tissue; hematopoiesis; normal physiology and metabolism of blood cells; abnormal red and white cell morphology and associated pathological findings with emphasis on the classification of the anemia. (3 hrs. lecture/2 hrs. laboratory)	473 CLINICAL MICROBIOLOGY II PREREQUISITE: MDT 373 Study of clinically significant fungi, parasites, and viruses. Emphasis on historical and epidemiological significance, specimen collection, growth requirements, cultural characteristics, identification, and pathogenicity. Laboratory sessions emphasize techniques, methods, and media used to

MEDICAL TECHNOLOGY – MDT (continued)

isolate and identify these microorganisms. (3 hrs. lecture/2 hrs. laboratory)

475 MEDICAL TECHNOLOGY SEMINAR One Credit

Preparation and presentation of a seminar on an approved topic in clinical laboratory science. Critiques will be done on the seminar. Comprehensive examination in all areas of medical technology required.

480 CLINICAL LABORATORY ADMINISTRATION Two Credits

Overview of the medical technology profession including accreditation, licensure, certifying procedures; laboratory safety; principles of laboratory management and organization; educational methodologies; and professional responsibility and ethics.

495 CLINICAL MICROBIOLOGY PRACTICUM Four Credits

Rotation through the clinical microbiology laboratory, incorporating instruction and examinations in bacteriology, mycology, parasitology, and virology under the supervision of a clinical specialist.

496 CLINICAL CHEMISTRY PRACTICUM Four Credits

Rotation through the chemistry laboratory incorporating instruction and examinations in routine chemistry and special chemistry under the supervision of a clinical specialist.

497 URINALYSIS PRACTICUM One Credit

Rotation through the urinalysis laboratory incorporating instruction and examinations in urinalysis and other body fluids under the supervision of a clinical specialist. Qualitative and quantitative chemical and microscopic analysis of urine, gastrics, and feces for the detection of substances associated with pathology included.

MILITARY SCIENCE - MSL

101 FUNDAMENTALS OF LEADERSHIP/MANAGEMENT Two Credits

Study of the role of the U.S. Army, U.S. Army Reserve, and the U.S. Army National Guard including customs and traditions of the service, basic land navigation, leadership, problem analysis, and decision-making skills.

101D BASIC DRILL & CEREMONY MODULE One Credit

PREREQUISITE: MIS 101
Practical application of drill and ceremony procedures, squad and platoon drill, land navigation training, practical exercises, first aid training, and Army tactical communications equipment training. (One semester of 100 level Basic Leadership Laboratory required for continued advancement in ROTC.)

102 FUNDAMENTALS OF LEADERSHIP /MANAGEMENT Two Credits

Study of military skills relating to the treatment and prevention of personal injury. Extensive concentration in the area of first aid and cardiopulmonary resuscitation (CPR).

102D BASIC DRILL & CEREMONY MODULE One Credit

PREREQUISITE: MIS 101 or 102
Practical application of drill and ceremony procedures, squad and platoon drill, land navigation training and practical exercises, first aid training and Army tactical communications equipment training. (One semester of 100 level Basic Leadership Laboratory required for continued advancement in ROTC.)

201 APPLIED LEADERSHIP/MANAGEMENT Two Credits

Study of the fundamentals of leadership and management including communication skills required in both the military and civilian environment. Emphasis on the utilization of subordinates, establishing a physical readiness program, inspection of personnel, equipment, and productivity.

201D BASIC DRILL & CEREMONY MODULE One Credit

PREREQUISITE: MIS 201
Practical application of drill and ceremony procedures, squad and platoon drill, land navigation training and practical exercises, first aid training, and Army tactical communications equipment training. (One semester of 200 level Basic

Leadership Laboratory required for continued advancement in ROTC.)

202 Two Credits

APPLIED LEADERSHIP/MANAGEMENT
Study of leadership management and productivity in a military environment. Emphasis on practical instruction in military skills to include land navigation, first aid, and related skills.

202D One Credit

BASIC DRILL & CEREMONY MODULE
PREREQUISITE: MIS 202

Practical application of drill and ceremony procedures, squad and platoon drill, land navigation training and practical exercises, first aid training, and Army tactical communications equipment training. (One semester of 200 level Basic Leadership Laboratory required for continued advancement in ROTC.)

301 Three Credits

ADVANCED LEADERSHIP/MANAGEMENT
PREREQUISITES: MIS 101, 102, 201, and 202 or Placement Credit

Study of land navigation, physical training, marksmanship, small arms training, and squad and platoon tactics.

301D One Credit

ADVANCED DRILL & CEREMONY MODULE
PREREQUISITE: MIS 301

Practical application of land navigation, physical training, marksmanship, and small arms training, and squad and platoon tactics. (Leadership Laboratory is required for continued advancement in ROTC.)

302 Three Credits

ADVANCED LEADERSHIP/MANAGEMENT
PREREQUISITE: MIS 301

Study of land navigation, physical training, marksmanship, small arms training, and squad and platoon tactics.

302D One Credit

ADVANCED DRILL & CEREMONY MODULE
PREREQUISITE: MIS 302

Practical application of land navigation, physical training, marksmanship, and small arms training, and squad and platoon tactics prepare cadets for Army ROTC Advanced Camp at Fort Lewis, WA. (Leadership Laboratory is required for continued advancement in ROTC.)

313 Three Credits

ADVANCED CAMP

Designed to evaluate a cadet's leadership ability and mastery of military skills. Successful completion qualifies a cadet for commissioning as an Army Officer.

401 Three Credits

THEORY AND DYNAMICS OF MILITARY TEAM
PREREQUISITES: MIS 301, 302

Study of the branches of the Army, drafting military correspondence, counseling of personnel on-job performance, and personal problems. Emphasis on planning meetings and conferences; planning, conducting, and evaluating personnel training; and writing information and decision papers.

401D One Credit

ADVANCED DRILL & CEREMONY MODULE
PREREQUISITE: MIS 401

Practical application of the development of leadership skills to ensure the successful transition from Cadet to Second Lieutenant. Successful completion of 411D is required for commissioning.

402 Three Credits

THEORY AND DYNAMICS OF MILITARY TEAM
PREREQUISITE: MIS 401

Study of ethics and professionalism as it pertains to U.S. Army Personnel Management System, the principles and laws of war, military justice, intelligence and combat information, command and staff functions.

402D One Credit

ADVANCED DRILL & CEREMONY MODULE
PREREQUISITE: MIS 402

Practical application of development of leadership skills to ensure the successful transition from Cadet to Second Lieutenant. (Successful completion of 412D is required for commissioning.)

421 One Credit

INDEPENDENT STUDIES

Military research and/or professional reading and military book review designed to develop a cadet's professional reading list and prepare for future military service.

MUSIC - MUS

MINOR COURSE (Open to non-majors by permission of department only.)

100 Zero Credit

Preparatory course for students who do not qualify (on audition) for MUS 121, PRIVATE INSTRUCTION. Available in each of the following media: brasswind, percussion, strings, woodwind, organ, piano, voice, harpsichord. (Meets one-half hour weekly.)

MAJOR COURSE (Open to non-majors by permission of department only.)

101 Zero Credit

Preparatory course for students who do not qualify (on audition) for MUS 125, PRIVATE INSTRUCTION (2). Available in each of the following media: brasswind, organ, percussion, piano, strings, voice, woodwind. (Meets one hour per week.)

110, 111 One Credit Each

Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

Required for Music Majors according to curriculum pursued.) (Open to non-majors by audition. Each course carries One Credit hour.

112, 113 One Credit Each

PERFORMANCE WORKSHOP
Hands-on experiences in performing individual works.

121,122A One Credit Each

VOICE
PREREQUISITE: Placement or MUS 100

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

121, 122B One Credit Each

PIANO
PREREQUISITE: Placement or MUS 100

Study of major scales; technical exercises and studies chosen from Schmitt, Hanon, Czerny-Liebling, Burgmuller, Op. 100 Oxford Piano Course for Older Beginners, or the equivalent; selected short compositions in various keys and rhythms; sight-reading.

121, 122C One Credit Each

ORGAN
PREREQUISITE: Placement or MUS 100

Plan of study to be followed will be similar to the foregoing outline, but the expected rate of completion will be about one-half that of the organ major. To receive credit for MUS 121 (Organ), for instance, the student would be required to complete approximately one-half of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) would require the completion of all material outlined for MUS 125 (Organ).

121, 122D One Credit Each

BRASS
PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

121,122E One Credit Each

WOODWIND
PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

121, 122F One Credit Each

STRINGS
PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

121,122G One Credit Each

PERCUSSION
PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

123, 124 One Credit Each

PERFORMANCE CLASS
Seminar for Music Education students.

125, 126A **Two Credits Each**
VOICE**PREREQUISITE: Placement or MUS 101**

Mastery of vocal exercises for the development of breath control, legato singing, tone placement, diaphragmatic support and agility; emphasis on building musicianship, compositions of moderate difficulty, English text.

125, 126B **Two Credits Each**
PIANO**PREREQUISITE: Placement or MUS 101**

Study of major scales (2-4 octaves), hands together, minor scales, hands separate; selected studies of Czerny, Hanon, Burgmuller, sonatinas of Clementi, Kuhlau, Beethoven; seventh arpeggio.

125, 126C **Two Credits Each**
ORGAN**PREREQUISITE: Placement or MUS 101**

Study of basic organ techniques as outlined in Gleason's "Methods of Organ Playing," or David Johnson's "Instruction Book for Beginning Organists"; pedal scales; hymn tunes; selected compositions of the level of Bach "Eight Little Preludes and Fugues," the "Orgelbuchlein;" and pre-Bach compositions.

125, 126D **Two Credits Each**
BRASS WINDS**PREREQUISITE: Placement or MUS 101**

Study of the fundamentals of trumpet playing including: breath control, proper attack, formation of embouchure; elementary exercises from Arban, Complete Conservatory Method, Henna, 40 Progressive Etudes, Clark Technical Studies, and Coin, Lip flexibilities, Book I; major and minor scales and arpeggio, chromatic scale. Solo literature: Haydn, Trumpet Concert in Eb. 217d Movement; Kennan, Sonata for Trumpet and Piano; Contest Album; etc. Trombone studies: Slamag Studies, Rochut Melodious Studies, Remington Warm-ups; Arban's Complete Method, Solos on the level of Andante et Allegro by Baret; scales and technical exercises as listed for trumpet. Tuba studies: scales and technical exercises as listed for trumpet; Foundation of Tuba Playing by Bell; solos on the level of "Honor and Arms" by Handel. French Horn: Foundation of French Horn Playing by Farces; solos on the level of "Panis Angelicus" by Franck.

125, 126E **Two Credits Each**
WOODWINDS**PREREQUISITE: Placement or MUS 101**

Emphasis on basic problems of embouchure, fingering, breathing and tonguing facility, and control; selected studies from Klose, Method, Books II and III; Rose, 40 Studies; Perier, Etudes de genres et interpretation; Cavallini Caprices; Recital Literature For Clarinet, Stubbins, Vols. I, II, and III; all major, pure minor, harmonic minor, and melodic minor scales, also chromatic; scales in 3rds; dominant seventh arpeggios.

125, 126F **Two Credits Each**
STRING**PREREQUISITE: Placement or MUS 101**

Study of basic violin technique, left-hand position, and bow arm techniques; exercises in first position; two octave major scales in first position; exercises from Wohlfahrt Method, Opus 38, and Whistler's Introduction to the Positions, Book I; Rayser Etudes; Simandl Etudes; solo literature from Vivaldi, Bach, Corelli.

125, 126G **Two Credits Each**
PERCUSSION**PREREQUISITE: Placement or MUS 101**

Rudiment studies from the Gardner's Complete Method for Percussion; selected snare drum solos from the Haskell-Harr Collection; major scales on marimba with alternating sticks; study of other instruments of the percussion family.

131, 132 **Two Credits Each**
MUSIC LITERATURE**PREREQUISITE: Placement or MUS 140**

Foundation in the materials and history to identify music styles and genres, major composers and their works, and familiarity with historical periods in music.

140 **Three Credits Each**
MUSIC FUNDAMENTALS

Study of the fundamentals of music and elementary theory. Does not count towards graduation. (For students who do not pass the Theory Placement Test)

141, 142 **Two Credits Each**
SIGHT-SINGING AND EAR TRAINING

Study of Theory I, II including sight-singing; melodic and harmonic dictation; scales, intervals and triads; and the analyzation of melodies.

143 **Three Credits**
PROGRESSIVE HARMONY

Practice in writing and analyzing contemporary chord progressions with emphasis on keyboard skills, ear-training, and creative writing. Exploration of the use of chords of the ninth, eleventh, and thirteenth. Special emphasis on voice leading and chord sonorities.

145, 146 **Two Credits**
HARMONY AND KEYBOARD

Study of Theory I, II including part-writing, keyboard harmony, and harmonic analysis from triads and their inversions through non-harmonic tones, the dominant seventh chord and its inversions, secondary dominant, and other chords. (Meets three hours per week.)

151 **Two Credits**
ELEMENTARY CONDUCTING**PREREQUISITES: MUS 141, 145**

Introduction to the art of conducting with emphasis on mastery of fundamental beat patterns.

161 **One Credit**
STRING CLASS

Development of the skills necessary for teaching instruments of the string family on the elementary and intermediate levels through practical experience. (Meets two hours per week.)

210, 211 **One Credit Each**
ENSEMBLES

Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

212, 213 **Two Credits Each**
PERFORMANCE WORKSHOP

Hands-on experiences in performing individual works. (Meets one hour per week.)

221,222A **One Credit Each**
VOICE

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

***221, 222B** **One Credit Each**
PIANO

Study of major and minor scales; arpeggios, technical exercises and studies continued; selected compositions; sight-reading, transposition, harmonization of simple melodies; folk and patriotic songs. Passing of the Piano Facility Examination required.

221, 222C **One Credit Each**
ORGAN

Plan of study to be followed will be similar to the foregoing outline, but the expected rate of completion will be about one-half that of the organ major. To receive credit for MUS 121 (Organ), for instance, the student would be required to complete approximately one-half of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) would require the completion of all material outlined for MUS 125.

221,222D **One Credit Each**
BRASS

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

221,222E **One Credit Each**
WOODWINDS

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

221,222F **One Credit Each**
STRINGS

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

221,222G **One Credit Each**
PERCUSSION

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

223,224 **One Credit Each**
PERFORMANCE CLASS

Once a week seminar for Music Education students.

225,226A **Two Credits Each**
VOICE

Continuation of technical development; repertoire including English songs (Purcell, Haydn, Handel Carpenter, Quilter,

Head); songs from the Anthology of Italian Song (Schirmer) or Classic Italian Song (Ditsun).

225, 226B **Two Credits Each**
PIANO

Study of major scales (4 octaves); minor scales (2-4 octaves), hands together, studies of the level of Czerny, Hanon, Heller, sonatinas or sonatas of Haydn, Mozart, or Beethoven; studies from Bach, Little Preludes and **Fugues** or Two-Part Inventions; selected compositions of other periods. Passing of the Piano Facility Examination required.

225, 226C **Two Credits Each**
ORGAN

Continued technical study; pedal scales through all minor scales; composition selected from shorter works by the forerunners of Bach, "Bach Preludes and Fugues" (G. Schirmer, ed., Vol. II), the sonatas of Mendelssohn, works by major composers such as Franz and Vierne and shorter contemporary works.

225, 226D **Two Credits Each**
BRASS WINDS

Further development of fundamentals; use of song literature to develop style and phrasing; continued work in Arban, Clark, Coin and Hering, 32 Progressive Etudes; Introduction to Transposition; whole tone scales; dominant seventh and diminished; selected compositions from various periods; easy sight-reading; harmonization using primary triads; melodic transposition.

225, 226E **Two Credits Each**
WOODWINDS

Emphasis on technical development, finger all tone control; Giampieri Caprices; Kroepsch Daily Studies, major scales in thirds.

225, 226F **Two Credits Each**
STRINGS

Bow and finger exercises; two-octave major and melodic minor scales up to and including third position; selected studies from Wohlfahrt's Foundation Studies for the Violin; solo literature using the first three positions.

225, 226G **Two Credits Each**
PERCUSSION

Continued study of rudiments; further study of other percussion instruments; major and minor scales in octaves on marimba; major and minor arpeggio and two-stick marimba solos. Selected snare drum solos from Haskell-Harr.

234 **Three Credits**
AFRICAN-AMERICAN MUSIC

Survey of the music created and performed by African-Americans as an ethnic group and as individuals from the period of slavery to the present. Emphasis on the types and elements of African-American folk music including evidences and psychological factors that have impinged upon the development of African-American Music in the United States and other Americas.

241/242 **Two/One Credit**
SIGHT-SINGING AND EAR TRAINING**PREREQUISITE: MUS 142**

Study of aural non-diatonic exercises, advanced sight-singing, advanced melodic and harmonic dictation.

245, 246 **Two Credits Each**
HARMONY AND KEYBOARD**PREREQUISITE: MUS 146**

More advanced keyboard harmony and part-writing including modulation, the augmented sixth chords, and the Neapolitan 6th chord. Harmonic and formal analysis; writing for various combinations of instruments in the second semester. (Meets three hours per week.)

247 **Three Credits**
MUSIC IN THE TWENTIETH CENTURY

Study of the analytical and historical aspects of music written in the twentieth century. Emphasis on various techniques used in the composition of twentieth-century music including the socio-historical influences relating to the outstanding composers of this time.

260 **One Credit**
BAND INSTRUMENT SURVEY

Introduction to the principles of playing musical instruments including the rudiments of tone production and performance techniques of woodwind, brasswind, and percussion instruments. (Meets two hours per week.)

261 **One Credit**
PERCUSSION CLASS

Development of the skills necessary for teaching instruments of the percussion family on the elementary and intermediate

MUSIC – MUS (continued)

levels through practical experience. (Meets two hours per week.)

265 **Three Credits**
PRACTICAL APPLICATION IN ELECTRONIC MUSIC
 Introduction to various computer software used in electronic music including hands-on instruction on synthesizers. Emphasis on MIDI, sequencing and composition with computer software.

271 **One Credit**
VOCAL DICTION
 Drill on English phonetics with application to singing. General survey of basic Italian, German, and French phonetics with emphasis on usages in music literature. (Meets two hours per week.)

272 **One Credit**
VOICE CLASS
 Study of vocal techniques and survey of solo and choral literature designed to prepare students in training voices in the public schools. (Meets two hours per week.)

273 **One Credit**
VOICE CLASS
 Study of vocal techniques and survey of solo and choral literature designed to prepare students in training voices in the public schools. (Meets two hours per week.)

301 **Three Credits**
MUSIC APPRECIATION
 Survey of the major forms and styles of music with emphasis on developing awareness and understanding of representative music literature including the relation of music to other aspects of history and the culture of western civilization.

310, 311 **One Credit Each**
Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

312, 313 **One Credit Each**
PERFORMANCE WORKSHOP
 Hands-on experiences in performing individual works (Meets one hour per week)

321, 322A **One Credit Each**
VOICE
 Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

321, 322B **One Credit Each**
PIANO
 Major and minor scales; arpeggios, technical exercises and studies continued; selected compositions; sight-reading, transposition, harmonization of simple melodies; folk and patriotic songs. Passing of the Piano Facility Examination required.

321, 322C **One Credit Each**
ORGAN
 Plan of study to be followed is similar to the foregoing outline, but the expected rate of completion is about one-half that of the organ major. To receive credit for MUS 121 (Organ), for instance, the student is required to complete approximately one-half of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) requires the completion of all material outlined for MUS 125 (Organ).

321, 322D **One Credit Each**
BRASS
 Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

321, 322E **One Credit Each**
WOODWINDS
 Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

321, 322F **One Credit Each**
STRINGS
 Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

321, 322G **One Credit Each**
PERCUSSION
 Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

323, 324 **One Credit Each**
PERFORMANCE CLASS
 Once a week seminar for Music Education students. (Meets one hour per week.)

325, 326A **Two Credits Each**
VOICE
 Advanced study of greater technical difficulty; development of interpretation; repertory to include Italian songs of greater complexity; lieder of Schumann, Schubert, Frantz; French songs of Hahn, Godard, Debussy; contemporary songs in English, moderately difficult oratorio and operatic literature; vocal exercises of Panofka; Marchesi, Lamperti, and others.

325, 326B **Two Credits Each**
PIANO
 Major and minor scales and arpeggios at increased speeds; scales in thirds; continued technical studies with exercises transposed to various keys; sight-reading of more difficult accomplishments; compositions of the level of Bach Two and Three-Part Inventions, French and English Suites, Well Tempered Clavier, sonatas of Haydn, Mozart, Beethoven; selected compositions from Romantic and contemporary periods.

325, 326C **Two Credits Each**
ORGAN
 Technical study continued as needed; repertory selected from each of the major periods of organ composition with particular emphasis on proper styles in the following: pre-Bach, J.S. Bach, Romantic, contemporary European and American.

325, 326D **Two Credits Each**
BRASS WINDS
 Emphasis on style, techniques, and range, continued work in Araban, Clark, Coin; Brandt, Orchestra Atolls; Bousquet, 36 Celebrated Studies; transposition from Caffarelli, 100 Studi Melodici. Solo literature: Haydn, Trumpet Concerto in Eb; Hummel, Trumpet Concerto; Damase, Hummel, etc.

325, 326E **Two Credits Each**
WOODWINDS
 Emphasis on performance repertoire; Recital Literature for clarinet, Stubbins, Vols. I, II, III, IV; one selection from the standard sonata repertory; all scales, major, minor and chromatic; diminished arpeggios.

325, 326F **Two Credits Each**
STRINGS
 Studies from Kreutzer Etudes 123; extended scales and arpeggio; double stops, study of concertos such as Mozart and Villa, all sonatas such as Handel and Vivaldi.

325, 326G **Two Credits Each**
PERCUSSION
 Study of all scales in thirds and sixths on marimba; selected three-stick marimba solos; timpani solos and difficult snare drum solos from Haskel-Harr.

331, 332 **Two Credits Each**
MUSIC HISTORY
PREREQUISITES: MUS 132, 242, 246
 Chronological survey of the development of music in the Western world from its beginnings through contemporary idioms including illustration and analysis of styles, forms, and techniques characteristic of main periods in the history of music. (Meets three hours per week)

335 **Three Credits**
JAZZ LITERATURE AND CRITICISM
 Introduction to basic performance in the field of jazz and its derivatives including popular music, tunes from musical stage shows, themes from motion pictures and television shows, as well as jazz classics. Emphasis on a critical analysis of the compositions and artists' performances. Knowledge of structural aspects of musical theory required.

336 **Three Credits**
JAZZ HISTORY
 In-depth study of jazz from the musical, historical, and social points of view, giving recognition to the artists responsible for innovations within each historical era.

345 **Three Credits**
FORM AND ANALYSIS
PREREQUISITES: MUS 242, 246
 Study of the forms, structures, and styles of selected larger works of the eighteenth and nineteenth centuries including analysis and writing of music of the twentieth century.

346 **Three Credits**
COMPOSITION
PREREQUISITES: MUS 242, 246
 Presentation of techniques of original music compositions written under the guidance of the instructor. Emphasis on techniques of form, harmony, orchestration, and independence. (Meets three hours per week.)

351 **Two Credits**
ADVANCED CONDUCTING
PREREQUISITES: MUS 151, 242, 246
 Study of conducting technique with particular attention to interpretation, technique of choral or instrumental conducting, tempo, diction, articulation, nuance, seating of choral or instrumental groups, testing voices, and auditioning. Conducting experience with laboratory group required.

361 **One Credit**
WOODWIND CLASS
 Practical development of the skills necessary for teaching instruments of the woodwind family on the elementary and intermediate levels. (Meets two hours per week.)

362 **One Credit**
BRASSWIND CLASS
 Practical development of the skills necessary for teaching instruments of the brasswind family on the elementary and intermediate levels. (Meets two hours per week.)

365 **Three Credits**
RECORDING AND MUSIC PRODUCTION
 Study of the operations of consoles, tape machines, microphones, and signal processing equipment including extensive in-studio experience in recording and mixing music as well as commercial quality production and editing.

366 **Three Credits**
MUSIC VIDEO
 Study of music video making through shooting with the camera and editing videotapes to recorded music. Extensive video editing suite experience resulting in the creation of a high quality production.

383 **Two Credits**
METHODS IN PUBLIC SCHOOL MUSIC
PREREQUISITES: Completion of All Music Courses in the Freshman and Sophomore Years; PSY 225, 230; Admission to Teacher Education.
 Study of methods and materials to be used in the development of the grade school instrumental program. (Meets three hours per week.)

383 **Two Credits**
METHODS IN PUBLIC SCHOOL MUSIC
PREREQUISITES: Completion of all Music courses in the Freshman and Sophomore Years; PSY 225, 230; Admission to Teacher Education.
 Study of the principles and procedures for conducting a music program in elementary school including organization, administration, and supervision of the music program; motivation and techniques of teaching; methods and materials. Special emphasis on multicultural content and appreciation; developing competencies in identifying and referring special students. (Meets three hours per week.)

384 **Two Credits**
METHODS IN PUBLIC SCHOOL MUSIC
 Study of the principles and procedures for conducting music program in the secondary school including curriculum organization and planning; instruction in general music and specialized classes; organization and direction of instrumental and vocal ensembles. (Meets three hours per week.)

410, 411 **One Credit Each**
Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

412 **One Credit**
PERFORMANCE WORKSHOP
 Hands-on experiences in performing individual works (Meets one hour per week.)

421, 422A **One Credit Each**
 Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

421, 422B **One Credit Each**
PIANO
 Study of major and minor scales; arpeggios, technical exercises and studies continued; selected compositions; sight-reading, transposition, harmonization of simple melodies; folk and patriotic songs. Passing of the Piano Facility Examination required.

**421, 422C
ORGAN** **One Credit Each**

Plan of study to be followed is similar to the foregoing outline, but the expected rate of completion is about one-half that of the organ major. To receive credit for MUS 121 (Organ), for instance, the student is required to complete approximately one-half of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) requires the completion of all material outlined for MUS 125 (Organ).

**421, 422D
BRASS** **One Credit Each**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

**421, 422E
WOODWINDS** **One Credit Each**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

**421, 422F
STRINGS** **One Credit Each**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

**421, 422G
PERCUSSION** **One Credit Each**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

**423
PERFORMANCE CLASS** **One Credit Each**

Seminar for performing on major instrument (or voice or keyboard).

**425, 426A
VOICE** **Two Credits Each**

Demonstration of sufficient technical mastery to permit the performance of an extensive repertoire of various schools and nationalities including art songs and selections from oratorio or operatic literature, preparation of senior recital or senior examination.

**425, 426B
PIANO** **Two Credits Each**

Study of all major and minor scales, arpeggios, and studies executed with good technical mastery at approximately 100 to 120 MM.-quarter note; advanced sight-reading; compositions representative of advanced literature from different periods; preparation for senior recital or senior examination.

**425, 426C
ORGAN** **Two Credits Each**

Continuing study of style, ornamentation, organ construction, as applicable to music by the Pre-Bach masters; Baroque, Romantic, and contemporary composers; preparation for senior recital or senior examination.

**425, 426D
BRASS WINDS** **Two Credits Each**

Continued emphasis on style, technique, range, transposition, exercises from Arban, Coin, Brandt, Caffarelli, and Charlier, 26 Etudes Transcendantes; orchestra literature from Bartold, Orchestral Excerpts, Vol. +5. Solo literature: Trumpet Tune; Clark; Trumpet Voluntary; etc. Preparation for senior recital or senior examination.

**425, 426E
WOODWINDS** **Two Credits Each**

Preparation of senior recital or senior examination; transportation at major 2nd up and minor 2nd down; major and pure minor scales in 3rds; tonic, dominant seventh, and diminished arpeggios; review of previous scales and other technical requirements; transposition at major 2nd up; finished performances of compositions from MUS 325, 326 and other compositions of different styles in preparation for senior recital, sight-reading of advanced literature.

**425, 426F
STRINGS** **Two Credits Each**

Studies from Kreutzer Etudes 24-42; Schradieck's Technical Violin School; preparation for senior recital or senior examination.

**425, 426G
PERCUSSION** **Two Credits Each**

Three- or four-stick marimba solos from Haskell-Harr, Marimba solos; timpani solos using three and four timpani; difficult snare drum solos; preparation of senior recital or senior jury examination.

**440
LEGAL PROTECTION FOR MUSIC AND MUSICIANS** **Three Credits**

Survey of the field of music law including performance and recording royalties, contract, performing rights organization, musical copyright procedures, and publication.

**448
ARRANGING** **Three Credits**

PREREQUISITES: MUS 242, 246 or Permission of the Instructor

Scoring for small ensembles and for full band and orchestra involves practical application of the knowledge of transposing instruments as well as applied knowledge of the purpose and the range of each band and orchestral instrument.

***PIANO FACILITY EXAMINATION**

All students majoring in Music must pass a Piano Facility Examination as a requirement for the Bachelor's Degree. This examination is a prerequisite to Directed Teaching. The Facility Examination tests the students' ability to use the piano as a tool within the framework of his/her professional application. The examination is scheduled at the end of each semester and during the summer session. The passing of this examination is required for successful completion of MUS 222 and MUS 226.

NAVAL SCIENCE - NSC**101
NAVAL ORIENTATION** **Two Credits**

Introduction to sea power and the naval service, with emphasis on the mission, organization, regulations, and broad warfare components of the Navy, including an overview of officer and enlisted rank and rating structures, procurement and recruitment, training and education, promotion and advancement, and retirement policies.

**102
SEAPOWER AND MARITIME AFFAIRS** **Three Credits**

Study of the general sea power (including the merchant marine), the role of various warfare components of the Navy in supporting the Navy's mission, the implementation of sea power as an instrument of national policy, and a comparative study of U.S. and Soviet naval strategies.

**201
NAVAL SHIP SYSTEMS I (ENGINEERING)** **Three Credits**

Introduction to the types, structure, and purpose of naval ships including ship compartmentation, propulsion systems, auxiliary power systems, interior communications, and ship control. Examination of elements of ship design to achieve safe operations and ship stability.

**202
NAVAL SHIPS SYSTEMS II (WEAPONS)** **Three Credits**

Introduction to the theory and principles of weapons systems including coverage of types of weapons and fire control systems, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles, and basics of naval ordinance. Knowledge of algebra and trigonometry recommended.

**301, 302
NAVIGATION AND NAVAL OPERATIONS I AND II** **Six Credits**

PREREQUISITE: Basic Course
Comprehensive study of the theory, principles, and procedures of ship navigation, movements, and employment including the use of charts and publications, dead reckoning, piloting and electronic navigation techniques, voyage planning, and a survey of celestial navigation. Operations topics include communications, sonar-radar search, and screening theory. Tactical formations and dispositions, relative motion, maneuvering board, and tactical plots are analyzed for force effectiveness and unit; rules of the road, lights, signals, and navigational aids, including inertial systems, are also covered.

**310
THE EVOLUTION OF WARFARE** **Three Credits**

Exploration of the forms of warfare employed by great leaders in history in order to formulate a sense of historical flow or to demonstrate alternative military actions, the impact of historical precedents on military thought and actions as practiced by the great leaders and military organizations. (Marine Corps Option Students Only).

**401
LEADERSHIP AND MANAGEMENT** **Three Credits**

PREREQUISITE: Advanced Program Status
Development of effective managerial and leadership competence through functional, behavioral, and situational approaches. Focus on the officer-manager as an organizational decision maker and leader.

**402
LEADERSHIP AND ETHICS** **Three Credits**

PREREQUISITE: Advanced Program Status
Capstone course in the NROTC curriculum builds and focuses on managerial and professional competencies developed during prior at-sea training and naval science courses.

**410
AMPHIBIOUS WARFARE** **Three Credits**

Historical survey of the sea power with emphasis on the evolution of amphibious warfare in the twentieth century including the concept of amphibious warfare, its doctrinal origins, and its evolution and development as an element of national naval policy.

**111, 112, 211, 212, 311, 312, 411, 412
NAVAL LABORATORIES** **One Credit Each**

PREREQUISITE: Acceptance into NROTC Program
Study of basic military formations, drill movements, commands, customs, courtesies, honors, and inspections including lectures and discussions on a variety of subjects.

NURSING - NUR**144
CNA-RN BRIDGE** **Three Credits**

PREREQUISITE: Admission to the LPN-RN Bridge Program; successful completion of challenge processes
Focus on identified nursing content that is included in nursing theory and practice basic to preparation of the Associate Degree Program.

**150, 150L
FUNDAMENTAL CONCEPTS OF NURSING** **Seven Credits**

PREREQUISITE: Admission to the Associate Degree Program
Introduction to general concepts of health and nursing and their applicability to clients of all ages located on the wellness portion of the wellness-illness continuum. Focus on stages of development and maturation and the cultural influence on all age groups as a means of understanding how individuals meet their basic needs. Development of basic skills of nursing assistance to individuals striving to maintain relative states of health as they perform their activities of daily living. (4 hours lecture/9 hours laboratory)

**153
FUNDAMENTAL PHARMACOLOGICAL SKILLS** **Three Credits**

PREREQUISITE: Admission to the Associate Degree Program
Development of skills necessary for the safe preparation and administration of drug dosages. Focus on the metric, apothecary, and household systems of measurements providing practice in determining proper dosages for both adults and children.

**160, 160L
CLINICAL NURSING I** **Nine Credits**

PREREQUISITES: NUR 150, 150L, 153; BIO 165
Introduction to the design and implementation of systems of nursing assistance for individuals experiencing potential and/or actual difficulties in maintaining physiological homeostasis. Development of plans of care based on biopsychosocial-cultural assessment of individuals throughout the life span and implementation of nursing interventions designed to restore homeostatic equilibrium. (5 hours lecture/12 hours laboratory)

**170
CARE OF THE INDIVIDUAL WITH EMERGENT AND CHRONIC DISORDERS** **Three Credits**

PREREQUISITES: NUR 150, 150L, 153; BIO 165L, 166L
Focus on nursing assistance to individuals of all ages, and their significant others, experiencing self-care deficits associated with emergent and chronic disorders. Emphasis on the application of the nursing process for clients experiencing ongoing deviations from wellness.

**199
LPN-RN BRIDGE** **Three Credits**

PREREQUISITE: Admission to the LPN-RN Bridge Program
Focus on identified nursing content that is included in nursing theory and practice basic to preparation of the Associate Degree Program.

**272
CONTEMPORARY TRENDS IN NURSING PRACTICE** **One Credit**

PREREQUISITES: All Freshman Level Courses and NUR 275
COREQUISITES: NUR 285, 287
Survey of nursing practice, its development, present trends and implications for the future. Orientation to the structure of organized nursing, employment opportunities, legal

NURSING – NUR (continued)

implications including licensure, current legislation regarding health-care, and nursing practice.

275, 275L **Nine Credits**
CLINICAL NURSING II
PREREQUISITES: NUR 160, 160L; BIO 165, 166; PSY 210, 215 or 220
COREQUISITE: BIO 163

Focus on nursing assistance to individuals of all ages with increasingly complex self-care deficits. Emphasis on the application of the nursing process to clients experiencing altered self-concept, altered body image, loss, and selected situations of chronicity. (4 hrs. lecture/15 hrs. laboratory.)

285, 285L **Nine Credits**
CLINICAL NURSING III
PREREQUISITES: NUR 275, 275L; BIO 163, 165, 166; PSY 210, 215 or 220
COREQUISITES: NUR 272, 287

Focus on nursing assistance to individuals of all ages experiencing self-care deficits associated with major states of homeostatic disequilibrium. Emphasis on the application of the nursing process for clients experiencing complex multiple stressors. (4 hrs. lecture/ 15 hrs. laboratory)

287 **Two Credit**
SEMINAR
PREREQUISITES: Completion of all Freshman Level Nursing Courses and NUR 275.
COREQUISITES: NUR 272, 285

Small group work in which common nursing problems are identified and solutions are devised. Must pass comprehensive examinations covering the entire nursing curriculum.

321 **Three Credits**
MULTICULTURAL/BIO ETHICS
PREREQUISITE: Admission to the baccalaureate degree program or as approved by the Department Head
 Study of the differences and similarities of culturally diverse people with regard to health and illness. Emphasis on clarification of personal values an appreciation for the values that underpin health decisions made by the consumers of health care.

362, 362L **Four Credits**
ESSENTIALS OF NURSING: SKILLS AND RELATED CONCEPTS
PREREQUISITE: Admission to the Second-degree LPN-BSN Tracks

Study of cognitive and psychomotor skills related to basic nursing assistance of the well individual through the provision of health promotion strategies and care of the individual experiencing minor deviations from wellness resulting in self-care deficits which necessitate the application of beginning and intermediate nursing skills. (2 hrs. lecture/8 hrs. laboratory.)

415 **Three Credits**
HEALTH ASSESSMENT
PREREQUISITE: Open to all Registered Nurses; others by permission; and admission to the second-degree LPN-BSN tracks

Development of expertise in obtaining nursing histories and performing physical assessments on clients throughout the life span experiencing varying levels of wellness. Opportunity for application and refinement of skills in the on-campus laboratory. (2 hrs. lecture/ 2 hrs. laboratory.)

418 **Three Credits**
CONCEPTUAL MODELS FOR NURSING
PREREQUISITE: Admission to the baccalaureate program; completion of Junior level courses; others as approved by Department Head

Introduction to concepts underpinning the practice of professional nursing, including concepts of self-care, nursing process, systems theory, theories of family development and crisis.

419, 419L **Ten Credits**
PROVIDING NURSING SYSTEMS FOR INDIVIDUALS AND SMALL GROUPS
PREREQUISITES: NUR 362, 362L, 415, 418

Focus on designing systems of nursing assistance for clients experiencing significant life cycle events which have a major impact on the lifestyles and activities of the individual and small groups including child-bearing and child-rearing. Also, discussed is the client with selected alterations in psychological homeostasis. (5 hrs. lecture/15 hrs. laboratory.)

429, 429L **Eight Credits**
PROVIDING NURSING SYSTEMS FOR INDIVIDUALS AND LARGE GROUPS
PREREQUISITES: NUR 321, 362, 362L, 415, 418, 419, 419L, 444

Focus on the design and implementation of systems of nursing assistance for individuals, families, and large groups in community and tertiary care settings including clients throughout the life span and of diverse cultural backgrounds, experiencing self-care deficits with multiple etiologic factors and/or have a potential for multiple risk factors. (3 hrs. lecture/15 hrs. laboratory.)

435, 435L **Eight Credits**
PROVIDING NURSING SYSTEMS FOR FAMILIES, GROUPS AND COMMUNITIES
PREREQUISITES: NUR 321, 415, 418, 454, 461; Statistics.
COREQUISITE: NUR 462

Focus on the design and implementation of systems of nursing assistance for families, groups and communities, specifically high-risk populations, throughout the life cycle. Usage of selected conceptual models in assessing, planning, implementing and evaluating nursing care and analyzing the management of care delivery by others in a variety of settings. (3 hrs. lecture/ 15 hrs. laboratory.)

444 **Three credits**
PLANNING NURSING SYSTEMS FOR ADULTS
PREREQUISITES: NUR 362, 362L, 415, 418

Design of systems nursing assistance for diverse groups of individuals and/or aggregates experiencing acute and/or chronic alterations in physiologic homeostasis, which has a major and significant impact upon the life-style and activities of the individual/aggregate. Specific attention to analyzing self-care deficits and planning appropriate nursing assistance based on this analysis.

454 **Three credits**
GROUP INTERVENTIONS
PREREQUISITES: Upper-level students: Admission to the program, and completion of Second-degree LPN-BSN students: NUR 321, 362, 362L, 415, 418, 419, 419L, 444
 Study of knowledge and basic skills needed to conduct group work used as a modality for selected nursing interventions.

461 **Three credits**
NURSING RESEARCH DIMENSIONS
PREREQUISITES: Upper level students: Admission to the program and completion of junior level courses. Second-degree LPN-BSN students: NUR 321, 362, 362L, 415, 418
 Study of research skills used in making inferences relating to nursing practice, understanding the research process, critiquing research articles, utilizing research findings in enhancing, and identifying researchable questions.

462 **Three credits**
NURSING LEADERSHIP AND MANAGEMENT
PREREQUISITES: Upper level students: NUR 321, 415, 418, 418, 454, 461. Second-degree LPN-BSN students: NUR 321, 362, 362L, 418, 419, 419L, 444

Examination of theory and concepts concerning the leadership process, organizational structure, and management strategies. Analysis of complex health-care delivery systems, coordinate efforts for consumer health and nursing service, act as colleagues with other health professionals, evaluate the quality and direction of health and nursing, and encourage change as appropriate.

470 **Three Credits**
SEMINAR ON PROFESSIONAL DEVELOPMENT
PREREQUISITES: Upper level students: NUR 321, 415, 418, 454, 462; Second-degree LPN-BSN students: NUR 321, 362, 362L, 415, 418, 419, 419L, 429, 429L, 444, 454, 461, 462

Attention to forces, which affect health-care delivery and the impact of these changes on the scope of nursing practice. Emphasis on professional accountability, political involvement, and strategies for enhancing the image of the profession with other health professions and the lay public.

475 **Three Credits**
NURSING PROCESS SEMINAR
PREREQUISITES: Second-degree LPN-BSN students: NUR 321, 362, 362L, 415, 418, 419, 419L, 429, 429L, 444, 454, 461, 462

Integration of knowledge and concepts obtained in previous nursing and other discipline-related courses into the design and implementation of nursing systems for groups of individuals and/or aggregates throughout the life span with complex deviations from wellness including an intensive preceptor clinical experience. Must pass comprehensive examinations.

499 **Two Credits**
NURSING ELECTIVE
PREREQUISITES: Upper level students: NUR 321, 415, 418, 454, 461; Statistics, or by permission of Department Head

Study of a variety of interest areas of nursing including selected topics for independent study, complete research projects, special nursing topics courses, or lower level graduate courses in nursing.

OPTICAL ENGINEERING - OEN

100 **Three Credits**
INTRODUCTION TO ENGINEERING
 Introduction to electronics and optical engineering and qualitative and quantitative tools necessary.

200 **Three Credits**
GEOMETRIC AND INSTRUMENTATION OPTICS I
PREREQUISITES: PHY25 1; MTH251
COREQUISITE: OEN 200L

Study of basic principles of geometric optics, refraction and reflection including Gaussian optics of axially symmetrical systems and other related topics, as well as simple optical instruments, such as magnifying lenses, compound microscopes, refracting telescope and other simple optical systems.

200L **One Credit**
GEOMETRIC AND INSTRUMENTATION OPTICS LABORATORY
PREREQUISITE: PHY251L
COREQUISITE: OEN 200

Study of intermediate geometric optics using state-of-the-art laboratory exercises and equipment to do fundamental experiments using lasers, fiber optic systems and diodes.

201 **Three Credits**
GEOMETRIC AND INSTRUMENTATION OPTICS II
COREQUISITES: OEN 200
 Detailed discussion of topics such as interference and interferometers, Fresnel and Fraunhofer diffraction, spectroscopic instrumentation, electro-optic effects and elements of quantum and non-linear behavior.

201L **One Credit**
GEOMETRIC AND INSTRUMENTATION OPTICS II LABORATORY
COREQUISITE: OEN 201
 Study of intermediate geometric optics using state-of-the-art laboratory exercises and equipment to do fundamental experiments.

320 **Three Credits**
OPTICAL SYSTEMS ANALYSIS
PREREQUISITES: OEN 201
 Development of tools and techniques for engineering of optical systems. Study of specifications, system design and analysis, tradeoffs and optimization, manufacturing.

340 **Three Credits**
LASERS AND PHOTONICS
PREREQUISITE: OEN 320
COREQUISITE: OEN 340L
 Discussion of condensed matter physics including issues in solid state physics, laser physics, laser light, laser components and systems and measurements.

340L **One Credit**
LASER AND PHOTONICS LABORATORY
COREQUISITE: OEN 340
 Study of laser and photonics in a laboratory setting.

360 **Three Credits**
INTRODUCTION TO OPTICAL MATERIALS
PREREQUISITES: EEN 257; OEN 201
 Introduction to the optical properties of III-V and IV-VI semi-conducting compounds that are used in optical systems.

380 **Three Credits**
INTRODUCTION TO QUANTUM MECHANICS
PREREQUISITES: EEN 257; PHY 251; PHY 320
 Introduction to the uncertainty principle, the differences between quantum and classical systems, Schroedinger's Equation, free particle wave functions, square wave and simple harmonic oscillator potentials, the hydrogen atom, and other general quantum concepts.

460 **OPTICAL COMMUNICATIONS I** **Three Credits**
PREREQUISITES: OEN 340, 360
COREQUISITE: OEN 460L
 Study of optical communication components and applications to communications systems including fiber attenuation and dispersion, laser modulation, photodetection and noise and coherent communications.

460L **OPTICAL COMMUNICATIONS I LABORATORY** **One Credit**
COREQUISITE: OEN 460
 Study of optical communication components and applications to communications systems in a laboratory setting.

461 **OPTICAL COMMUNICATIONS II** **Three Credits**
PREREQUISITE: OEN 460
 Further discussion of coherent communications.

490 **SENIOR SEMINAR** **One Credit**
PREREQUISITE: Senior Status and Permission of the Instructor
 Discussion of related topics with invited speakers.

498 **SENIOR PROJECT (Stage I)** **Three Credits**
PREREQUISITE: Senior Status and Permission of the Instructor
 Topics selected by the student and his/her research advisors.

499 **SENIOR PROJECT II (STAGE II)** **Three Credits**
PREREQUISITE: OEN 498 and Permission of the Instructor
 Continuation of selected topic resulting in a paper of publishable quality in a revered research journal.

PHYSICAL EDUCATION - PED

100 **FUNDAMENTALS OF FITNESS FOR LIFE** **One Credit**
 Development of knowledge and appreciation for total fitness as an individualized lifetime goal including the improvement in current levels of fitness and the development of positive life-styles.

101, 102 **MODIFIED PHYSICAL EDUCATION** **One Credit Each**
 Individualized programs of instruction for students with handicapping conditions. Medical excuse required.

107 **AEROBICS** **One Credit**
 Introduction to the understanding of basic body alignment and the use of proper posture. Participation in a choreographed exercise regimen geared towards safely raising the heart rate to burn calories.

109 **WATER AEROBICS** **One Credit**
 Development of elements of physical fitness including muscle tone, strength, flexibility, and cardiovascular endurance through participation in full rhythmic and aerobic exercises done in water. Emphasis on the role of nutrition, weight control, stress management, and consumerism as basic components of a health fitness lifestyle. No swimming skills required.

133 **BEGINNING SWIMMING** **One Credit**
 Introduction to levels I, II and III of the American Red Cross Learn to Swim Program including water safety, water acclimation, reaching assists, breath control, prone floating and analysis of movement.

134 **ADVANCED BEGINNING SWIMMING** **One Credit**
PREREQUISITE: Ability to swim 25 yards of front crawl stroke, back crawl stroke and experience in deep water or permission of instructor.
 Study of levels IV and V of the American Red Cross Learn to Swim Program with review of Levels I, II, and III including water safety, improvement in prone swimming (front crawl), back swimming (back crawl and elementary backstroke), introduction to side stroke, analysis of movements and scientific flaws.

151, 152 **RHYTHM AND FOLK DANCES** **One Credit Each**
 Orientation to fundamental skills for basic rhythms, folk and square dance.

158, 159 **FUNDAMENTALS OF PHYSICAL EDUCATION** **One Credit Each**
 Orientation to selected seasonal team sports (soccer, speed ball hockey, basketball, volleyball, softball, track and field). Emphasis on the development of psychomotor skills, physical fitness, and knowledge and appreciation of the selected activities. Above average proficiency required.

179 **FIRST AID** **Two Credits**
 Study of the proper techniques and procedures for administering first aid and CPR.

200 **BEGINNING FITNESS THROUGH WEIGHT TRAINING** **Two Credits**
 Near individualized personal fitness program utilizing the following apparatus and equipment: the variable resistance machines, Olympic free weights, and the pull-up trainer.

204 **TENNIS I** **One Credit**
 Development of basic skills in the game of tennis including techniques, rules, and strategies.

204 **TENNIS II** **One Credit**
 Development of performance skills at the beginning level, the knowledge of rules, terminology, equipment, and safety techniques in tennis.

209 **BOWLING** **One Credit**
 Development of skills and appreciation for bowling, both as a fitness and leisure time activity.

210 **GOLF** **One Credit**
 Development of performance skills at the beginning level, the knowledge of rules, terminology, equipment, and safety techniques in golf.

235 **INTERMEDIATE SWIMMING** **One Credit**
PREREQUISITE: PED 134; ability to swim 25 yards of the front crawl, back crawl, elementary back stroke.
 Study of levels V, VI, VII of the American Red Cross Learn to Swim Program with a review of Levels I through IV including endurance swimming and fitness activities. Preparatory course for Lifeguard Training and Water Safety Instructor.

251, 252 **MODERN DANCE** **One Credit Each**
 Orientation to techniques and principles of modern dance.

253 **GYMNASTICS** **One Credit**
 Development of performance skills and the knowledge of rules, terminology, equipment, safety techniques, and the learning procedures for apparatus work.

254 **JAZZ DANCE** **One Credit**
 Introduction to basic and intermediate dance techniques. Exploration of the cultural and historical contributions of jazz dance including social dances, period dances, and rhythmic dances that engage syncopate and accented rhythmic phrases.

261, 262 **TEAM SPORTS** **One Credit Each**
PREREQUISITES: PED 158, 159
 Development of performance skills at an intermediate level, the knowledge of rules, terminology, equipment, safety techniques in the sports of flag/touch football, soccer/speedball, volleyball, and team handball, and to assess the students' fitness.

271, 272 **INDIVIDUAL SPORTS** **One Credit Each**
PREREQUISITES: PED 158, 159
 Development of skills in archery, golf, tennis, badminton, bowling, racquetball, pickle ball; fitness testing.

280 **INTRODUCTION TO PHYSICAL EDUCATION** **Three Credits**
 Introduction to historical, philosophical, educational, psychological, biological, sociological, and career emphasis related to the field of physical education.

287, 287L **HUMAN ANATOMY** **Four Credits**
PREREQUISITES: BIO 100, 100L
 Introduction to the structure and function of the organ systems of the human body.

288, 288L **HUMAN PHYSIOLOGY** **Four Credits**
PREREQUISITES: PED 287, 287L
 Introduction to the function, regulation, and the integration of organs and organ systems of the human body.

300 **ADVANCED FITNESS THROUGH WEIGHT TRAINING** **Two Credits**
PREREQUISITE: PED 200
 Advanced experiences while working with the pull-up trainer, Olympic free weights, and the variable resistance machines.

325 **LIFEGUARD TRAINING** **Three Credits**
 Study of the American Red Cross Senior Life Saving course outline. Satisfactory completion leads to Red Cross certification.

335 **TECHNIQUES FOR TEACHING SKILLS IN SPORTS** **Three Credits**
 Study of skills used to identify development sequences for learning skills and teaching techniques in individual/dual and team sports that can be used to develop effective lesson and unit plans.

350 **METHODS OF TEACHING PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS** **Three Credits**
PREREQUISITES: PED 158, 159, 253, 261, 262, 271, 272, 356, 365, 477; Students must pass PRAXIS I.
 Study of methods and techniques of presenting physical education to elementary school children.

356 **KINESIOLOGY** **Three Credits**
PREREQUISITES: PED 287, 287L, 288, and 288L
 Study of the basic anatomical kinesiology and mechanical principles of movement as they apply to the human body including anatomical details and neuromuscular function of the body, equilibrium and motion, and how these principles are influenced by various environmental mediums.

357 **ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION PROGRAMS** **Three Credits**
PREREQUISITES: PED 158, 159, 253, 261, 262, 271, 272, 350, 356, 365, 477
 Study of the structure and operations of a physical education program based on the philosophies, aims, objectives, policies, and procedures that provide maximum contributions to the total school program.

***358** **METHODS AND MATERIALS OF TEACHING PHYSICAL EDUCATION IN SECONDARY SCHOOL** **Three Credits**
PREREQUISITES: PED 158, 159, 253, 261, 262, 271, 272, 350, 356, 365, 477; Students must pass Praxis I.
 Study of methods and procedures for designing unit plans and lesson plans for physical education theory and activity classes in a secondary physical education program.

361 **ATHLETIC COACHING AND OFFICIATING** **One Credit**
PREREQUISITES: PED 158, 159, 261, 262
 Study of the fundamentals, techniques, and strategies of coaching and officiating team and individual sports.

362 **PREREQUISITES:** PED 158, 159, 261, 262, and 361 **One Credit**
 Opportunities to acquire knowledge of various sports, rules, and regulations (baseball or softball, basketball, track and field, soccer, football, volleyball, field hockey, tennis, wrestling, and swimming) and the development of beginner level skills in officiating individual and team sports.

365 **ADAPTED PHYSICAL EDUCATION** **Three Credits**
PREREQUISITES: PED 287, 288 or equivalents
 Study of principles and practices of Physical Education with emphasis on the nature, needs, and abilities of challenged individuals. Activities modified to meet the needs of these individuals.

369 **MEASUREMENT AND EVALUATION** **Three Credits**
PREREQUISITE: General Math Course
 Analysis of test and measurements commonly used in physical education. Introduction to basic statistical procedures for test selection, construction, and administration.

PHYSICAL EDUCATION – PED (continued)

441 **DRIVER EDUCATION: FOUNDATIONS OF TRAFFIC SAFETY** **Three Credits**
PREREQUISITE: PED 440
 Study of methods used for teaching driver education in public schools.

444 **PRINCIPLES AND METHODS OF CLASSROOM AND IN-CAR INSTRUCTION** **Three Credits**
 Hands-on experiences in the understanding and application of principles and methodologies for teaching evasive maneuvers of driving. Practicum includes both simulation and in-car experiences.

447 **PHYSIOLOGICAL BASIS OF EXERCISE** **Three Credits**
 Study of physiological responses, adjustments, and adaptations to the acute stress of exercise and physical activity, and the chronic stress of physical training.

450 **MOTOR LEARNING** **Three Credits**
 Study of theories of motor learning and their respective relevance to planning of programs for school age children and a theoretical basis for developing effective strategies for teaching motor skills.

451 **PSYCHOLOGICAL ASPECTS OF SPORTS** **Three Credits**
 Study of both the psychological factors that influence participation in sports and exercises and the psychological effects derived from that participation including motivation, personality, aggression, violence, and leadership through group dynamics of exercise and well-being.

477 **PHYSIOLOGY OF MUSCLE EXERCISE** **Three Credits**
PREREQUISITES: PED 287, 287L, 288, 288L, and 356
 Study of physiological responses, adjustments, and adaptations to the acute stress of exercise, physical activity, and the chronic stress of physical training.

480 **PRINCIPLES OF PHYSICAL EDUCATION** **Three Credits**
PREREQUISITE: PED 280
 Study of the scope and significance of physical education through the development of a basic philosophy of education. Discussion and reflection on issues relevant to contemporary physical education, including multiculturalism, aggression in sport, women in sports, and physical activity promotion for girls and minority populations. Emphasis on resume building and interviewing skills for careers in physical education.

499 **DIRECTED TEACHING SEMINAR** **Three Credits**
PREREQUISITES: Completion of ALL Coursework
 Forum for continuous self-analysis and evaluation of the experiences encountered in student teaching, including special readings, activities, and discussion from the professional literature.

*Enrollment requires completion of requirements for admission to teacher education.

PHYSICS - PHY

100 **PHYSICAL SCIENCE** **Three Credits**
PREREQUISITES: ENG 101, MTH 103
 Survey of the unity of the physical sciences (astronomy, physics, chemistry, and geology) rather than arbitrary divisions. Emphasis on knowledge of selected facts, principles and methods of science, and the place of science in our modern world.

150, 151 **GENERAL PHYSICS** **Three Credits Each**
PREREQUISITE: MTH 151 or equivalent
COREQUISITE: PHY 150L, 151L
 Study of the fundamentals of mechanics, heat, light, sound, electricity, and magnetism with emphasis on principles and their application in industry. (1 hour lecture and demonstration/2 hours recitation and quiz)

150L, 151L **GENERAL PHYSICS LABORATORY** **One Credit Each**
PREREQUISITES: MTH 153 or Permission of Instructor
COREQUISITE: PHY 150, 151
 Emphasis on observational techniques and observations.

152, 153 **GENERAL PHYSICS** **Three Credits Each**
PREREQUISITE: MTH 153
COREQUISITE: PHY 152L, 153L
 Study of mechanics, heat, and sound during the first semester, electricity, magnetism, light, and modern physics during the second semester. (2 hours lecture/1 hour recitation)

152L, 153L **GENERAL PHYSICS LABORATORY** **One Credit Each**
PREREQUISITE: PHY 152, 153
 Opportunity to investigate the laws and principles of physics and to make conclusions based on observations and analysis.

154 **PHYSICS OF MUSIC** **Three Credits**
PREREQUISITE: MTH 153

Team-taught study of mechanical vibrations, sound, acoustics of halls and musical instruments, electroacoustics, electronic music, musical scales, waveform analysis, recording and reproduction of musical sounds. (1 hour lecture, 2 hours experiment, project recitation)

160, 161 **UNIVERSITY PHYSICS** **Four Credits Each**
COREQUISITE: MTH 184, PHY 160L, PHY 161L
 Study of mechanics, heat, sound, light, electricity and magnetism, and modern physics. Emphasis on analytical methods with application of calculus and problem solving.

160L, 161L **UNIVERSITY PHYSICS LABORATORY** **One Credit Each**
COREQUISITES: PHY 250, 251
 Opportunity to investigate the laws and principles of physics and to make conclusions based on observations and analysis.

241 **SEMINAR** **One Credit**
PREREQUISITES: PHY 160, 161
 Presentation and discussion of current topics in all areas of physics. Required of sophomore physics majors.

260 **UNIVERSITY PHYSICS III** **Four Credits**
PREREQUISITES: PHY 160, 161
 Study of basic concepts and principles oscillatory motion, mechanical waves, electro-magnetic waves, geometrical optics, physical optics, and special relativity. Calculus and vector methods used throughout the course.

297 **INTRODUCTION TO RESEARCH** **Three Credits**
PREREQUISITE: Sophomore Status and Permission of Instructor
 Acquisition of fundamental skills in experiment design, data analysis, and other research skills. Undergraduate research supervised by a faculty member.

320 **WAVES** **Three Credits**
PREREQUISITES: PHY 160, 161; MTH 252
COREQUISITE: MTH 372

In-depth study of mechanical and electromagnetic wave phenomena including traveling waves, standing waves, reflection and transmission, interference, diffraction, polarization, and wave packets. Applications of calculus and differential equations to physical phenomena are emphasized.

345 **Mathematical Methods for Physical Sciences I** **Three Credits**
PREREQUISITES: PHY 160, 161; MTH 252
 Introduction to advanced mathematical topics including complex numbers, vectors matrices, series, and differential equations with special emphasis on applications to physics.

445 **MATHEMATICAL METHODS FOR PHYSICAL SCIENCES II** **Three Credits**
PREREQUISITES: PHY 345; MTH 372
 Study of advanced mathematical topics including Fourier series, calculus of variations, series solutions of differential equations, and partial differential equation, with special emphasis on applications to physics topics.

350 **MODERN PHYSICS** **Three Credits**
PREREQUISITES: PHY 160, 161; MTH 251
COREQUISITE: MTH 252
 Introduction to modern physics including relativity, atomic structure, nuclear structure, radioactivity, nuclear reactions,

and elementary particles.

351 **EXPERIMENTAL CONCEPTS IN MODERN PHYSICS** **Two Credits**
PREREQUISITES: PHY 350; MTH 252
 Emphasis on experimental techniques, including G.M. counters, flow counters, absorption of radiation, half-life, range of alpha particles spectroscopy, selected experiments in neutron physics, and selected experiments in radiochemistry. (One hour lecture, three hours laboratory per week).

353 **INTRODUCTION TO SOLID STATE PHYSICS** **Three Credits**
PREREQUISITES: MTH 252; PHY 350
 Introduction to the theory of solids, including introductory wave mechanics; electronic energy levels in atoms and molecules; wave mechanics of the hydrogen atom; motion of electron in a periodic lattice; structure, elastic properties, and dynamic properties of crystals; motion of electrons in solids; energy bands and the band theory of solids; theory and application of semiconductors, Hall effect, p-n junctions; semiconducting rectifiers and semiconducting devices, and electrical and magnetic properties of solid superconductors.

356 **HEAT AND THERMODYNAMICS** **Three Credits**
PREREQUISITES: PHY 250, 251; MTH 252
COREQUISITE: MTH 372

Examination of thermal equilibrium and the concepts of temperature, thermodynamic systems, work, heat, and the Laws of Thermodynamics, thermal properties of materials, heat engines, reversibility, Carnot's theorem, enthalpy, and the Helmholtz and Gibbs functions. Applications are made to surfaces, pure substances, magnetic materials in a magnetic field, flow processes, chemical reactions, mixture of gases and fuel cells, steam engines and turbines.

365, 366 **PHYSICAL MECHANICS I, II** **Three Credits Each**
PREREQUISITES: PHY 320, 350; MTH 372
 Study of elements of vector analysis, laws of dynamics and statics of particles, cables and rigid bodies, central forces and celestial mechanics, theory of vibrations, and special relativity. Survey of mechanics comparable to the classical Newtonian approach utilizing topics such as generalized coordinates.

375 **ELECTRICITY AND MAGNETISM I** **Three Credits**
PREREQUISITES: PHY 350; MTH 252, 372
 Introduction to classical electromagnetic theory. Topics include elements of vector analysis, static and time-dependent electric and magnetic fields, electric and magnetic properties of matter, electromagnetic induction, and Maxwell's equations.

380 **QUANTUM MECHANICS I** **Three Credits**
PREREQUISITES: PHY 320, 350; MTH 372
 Introduction to Schrodinger's equation and topics, including free particle wave functions, square well and simple harmonic oscillator potentials, the hydrogen atom, and identical particles.

397 **INTRODUCTION TO RESEARCH** **Three Credits**
PREREQUISITE: Junior Status and Permission of Instructor
 Development in the skills of research, including preparations, fabrication, design and execution of experiments, data analysis. Undergraduate research supervised by a faculty member.

399 **ADVANCED LABORATORY** **Two Credits**
PREREQUISITES: PHY 350, 351, 365
 Introduction to techniques of advanced experimentation, developing research skills and skills in technical writing. Experiments in mechanics, heat, electronics, optical spectroscopy, and atomic and nuclear physics.

468 **OPTICS** **Three Credits**
PREREQUISITES: PHY 350; MTH 252
 Focus on topics from geometrical and physical optics including circular and elliptical polarization, thick lens equations, Fresnel and Fraunhofer diffraction, interference and dispersion of electromagnetic waves, fiber optics, and optical pumping.

475 **ELECTRICITY AND MAGNETISM II** **Three Credits**
PREREQUISITE: PHY 375
 Advanced treatment of classical electromagnetic theory including electrostatic and magnetostatic fields, electric and magnetic properties of matter, Maxwell's equations and time-dependent electric and magnetic fields, electromagnetic

waves, and radiation.

480 **QUANTUM MECHANICS II** **Three Credits**

PREREQUISITE: PHY 380

Advanced treatment of Schrodinger equation and topics including free particle wave functions, square well and simple harmonic oscillator potentials, the hydrogen atom, identical particles, perturbation theory, and collision theory. Emphasis on applications to nuclei, atoms, molecules, and solids.

490 **PHYSICS DEMONSTRATIONS** **Three Credits**

PREREQUISITE: Permission of Instructor

Presentation and discussion of classical and modern demonstration experiments used in the teaching of general and intermediate physics. Exercises in mechanics, heat, optics, electricity, magnetism, and modern physics.

491 **EXPERIMENTAL CONCEPTS IN PHYSICS** **Three Credits**

PREREQUISITE: Permission of Instructor

Introduction to the techniques of intermediate and advanced experimentation and skills in technical writing. Experiments in mechanics, heat, optics, electricity, magnetism, and modern physics.

495 **PHYSICS EDUCATION RESEARCH** **One Credit**

PREREQUISITE: Senior Status and Permission of Instructor

Supervised investigation of a physics education research problem, including planning, execution, and analysis. Report preparation, oral presentation, and completion of senior assessment examination required.

498 **SENIOR PROJECT I** **One Credit**

PREREQUISITE: Senior Status and Permission of Instructor

Preparation and presentation of Senior Project proposal planned with a faculty mentor. Oral report describing the plan is required. A faculty review panel offers suggestions for revisions where needed.

499 **SENIOR PROJECT II** **Two Credits**

PREREQUISITE: PHY 399

Supervised investigation of a research problem, including planning, execution, and analysis. Preparation of report, oral presentation, and completion of senior assessment examination required.

590 **PHYSICS DEMONSTRATIONS** **Three Credits**

PREREQUISITE: Permission of Instructor

Presentation and discussion of classical and modern demonstration experiments used in the teaching of general and intermediate physics. Exercises in mechanics, heat, optics, electricity, magnetism, and modern physics.

591 **EXPERIMENTAL CONCEPTS IN PHYSICS** **Three Credits**

PREREQUISITE: Permission of Instructor

Introduction to the techniques of intermediate and advanced experimentation and skills in technical writing. Experiments in mechanics, heat, optics, electricity, magnetism, and modern physics.

POLITICAL SCIENCE - POS

100 **AMERICAN NATIONAL GOVERNMENT** **Three Credits**

Coordinated study of the development of American government including the historical development of the United States and the organization and functions of government.

180 **INTRODUCTION TO POLITICAL SCIENCE** **Three Credits**

Introduction to the basic concepts and fundamental substantive divisions of the field of political science.

230 **AMERICAN PUBLIC POLICY** **Three Credits**

Introduction to the basic theories and concepts of policy analysis, with particular emphasis on the policy-making process at the federal level; examines such selected policy issues as welfare, health insurance, and housing; and seeks to assess the impact of policy decisions on various groups in American society.

231 **AMERICAN STATE AND LOCAL GOVERNMENT** **Three Credits**

Intensive study of the legal and political processes of the subsystems of state and local government. Detailed emphasis on federal-state, interstate, and state-local relations.

250 **INTRODUCTION TO PUBLIC ADMINISTRATION** **Three Credits**

PREREQUISITE: POS 230

Focus on the organization, responsibility, personnel management, fiscal processes, functions and problems of public administration.

310 **METROPOLITAN AND REGIONAL DEVELOPMENT** **Three Credits**

Analysis of the impact of metropolitan growth on municipalities, with focus on revenues, public services and political empowerment.

315 **AFRICAN-AMERICAN POLITICS** **Three Credits**

Systematic examination of the African-American in the American political system covering various periods of the African-American political experience.

320 **THE AMERICAN PARTY SYSTEM** **Three Credits**

Study of the nature, function, evolution, and organization of political parties in the United States. Special emphasis on the relation of pressure groups to the party system.

323 **COMPARATIVE GOVERNMENT** **Three Credits Each**

Study of the organization, structure, and politics of the major European governments. Special emphasis on the political systems of Great Britain, France, West Germany, and the Soviet Union.

325, 326 **AMERICAN FOREIGN POLICY** **Three Credits**

Study of the background, responsibilities, and consequences of United States foreign policy from 1787 to present. Special emphasis on the diplomatic origins of the major wars, the peacemaking efforts which followed each war, and assessment of the role of diplomacy and the diplomat in a democratic society.

332 **INTRODUCTION TO JURISPRUDENCE** **Three Credits**

Intensive examination of the schools and theories of jurisprudence, historical development of legal systems, legal reasoning, and juristic processes.

333 **METHODS OF RESEARCH** **Three Credits**

Focus on the problems of methodology in empirical research, emphasizing hypothesis testing and the quantification of data. Provides experience in the use of the public documents, aggregate data, and survey data in research designs and policy evaluation.

334 **AMERICAN POLITICAL IDEAS** **Three Credits**

Critical analysis of American political ideas in the area of law, government, and the enduring political problems of liberty and authority, oligarchy and democracy, from Puritanism to the present. Emphasis on Hamilton, Jefferson, Marshall, Jackson, Calhoun, Lincoln, Thoreau, Bellamy, Henry George, Wilson, Hoover, Roosevelt, Holmes, Dewey, and others.

337, 338 **AMERICAN CONSTITUTIONAL LAW** **Three Credits Each**

PREREQUISITE: Must be Taken in Sequence

Study of the basic principles of the American constitutional system. Emphasis on the judicial interpretation and application of these principles in construing the powers of the government and the rights of persons. Examines the historical background of major federal court decisions.

340 **URBAN BELIEF SYSTEMS** **Three Credits**

Examination of beliefs, values, and attitudes relevant to political processes in urban areas relative to development, change, and distribution.

345 **STATISTICS AND DATA PROCESSING FOR POLITICAL ANALYSIS** **Three Credits**

Examination of parametric and nonparametric statistics in terms of data description and hypothesis testing in political research and policy analysis, including the capabilities of the computer in data storage, management, and statistical analysis applied to research problems.

350 **ORGANIZATION THEORY AND BEHAVIOR** **Three Credits**

Examination of the structure and functioning of public organizations, with emphasis on theories of administrative hierarchies and evaluation of bureaucracy.

360 **INTERNATIONAL RELATIONS** **Three Credits**

Focus on man as a part of nature, acting in his political environment over time. Examines relationships among nations.

422 **PUBLIC OPINION AND PROPAGANDA** **Three Credits**

Intensive study of the nature, measurement, and function of public opinion. Special emphasis on the problem of symbol manipulation and its relation to the formation of public policy in a democratic society.

428 **VIRGINIA GOVERNMENT AND POLITICS** **Three Credits**

Basic study of Virginia's constitution, political parties, election laws, legislative, executive, and judicial functions, economic services, social services and social welfare.

430 **POLITICAL THEORY** **Three Credits**

Study of the political theories of Plato, Aristotle, selected Greek, Roman, and medieval writers to Machiavelli. Critical analysis of enduring political problems.

431 **MODERN THEORY** **Three Credits**

Critical analysis of enduring political problems in the writings of European theorists from Machiavelli to the present.

435 **MUNICIPAL GOVERNMENT** **Three Credits**

Study of the organizations, functions, problems, and approaches in the solution of problems of urban areas.

442 **INTERNATIONAL LAW** **Three Credits**

Intensive study of the substantive content of the law of international relations. Special emphasis on problems of enforcement.

443 **ADMINISTRATIVE LAW** **Three Credits**

Introduction to the American legal system using a case study approach.

451 **PUBLIC PERSONNEL ADMINISTRATION** **Three Credits**

Focus on the recruitment, examination, placement, remuneration, morale, retirement, training, and other issues that impact the public service.

461 **INTERNATIONAL ORGANIZATION** **Three Credits**

Study of the organization, functions, structure, and problems of the United Nations and other international organizations.

462 **THE NEAR (MIDDLE) EAST IN INTERNATIONAL AFFAIRS** **Three Credits**

Survey of the Near East, focusing on its relation to the struggle for international ascendancy of the Western powers. Emphasis on the nineteenth and early twentieth centuries, as well as the contemporary period.

463 **POLITICS OF AFRICAN NATIONS** **Three Credits**

Examination of the resolution of conflict and promotion of survival of the independent nations south of the Sahara through comparison of political ideologies and through case studies of individual nations. Analysis of traditional African systems and the various colonial systems of the new governments.

466 **READING IN GOVERNMENT AND PROBLEMS IN GOVERNMENT** **One-Three Credits**

PREREQUISITE: Permission of Department for non-Political Science Majors

Independent reading and analytical reporting on works outside the immediate scope of formal courses. Special emphasis on depth of perspective.

467 **INTRODUCTION TO NON-WESTERN POLITICS** **Three Credits**

Introduction to the general patterns of politics in the areas of Latin America, Middle East, Far East, and areas of Africa north of the Sahara. Analysis of political instability, political groups and ideologies, organizations of political authority, and the problems of political integration.

POLITICAL SCIENCE – POS (continued)

468 Three Credits A SURVEY OF CONTEMPORARY GOVERNMENTS OF ASIA

Survey of the governments and the politics of the countries of Asia with attention to geographic, economic, and cultural conditions out of which present governments evolve.

493 Nine Credits PUBLIC ADMINISTRATION INTERNSHIP

PREREQUISITE: For Senior Public Administration Majors Only

Internship in a private or environmental agency. Specific requirements available in Department office.

494 Six Credits PRE-LAW INTERNSHIP

Internship offers an invaluable opportunity to gain knowledge, skills and exposure to the legal profession. 180 clock hours in an approved placement required.

499 Four Credits SENIOR PROJECT

Selected research topic includes collection, analysis, and presentation of an organized statement of data. Research topic chosen must be approved by instructor.

510 Three Credits POLITICS AND ECONOMICS OF AGING

Examination of the implications for the political system of increasing numbers of older people in the population of the United States. Surveys, researches, and analyzes national, state, and local legislation. Legislative and economic impact research conducted.

570 Three Credits SEMINAR IN LAW AND POLITICS

Focus on contemporary problems in legal and governmental spheres. Preparation of research paper required.

PSYCHOLOGY - PSY

210 Three Credits INTRODUCTION TO PSYCHOLOGY

Overview of generally accepted factors that shape behavior. Survey of developmental and social processes, as well as learning and motivation and their relationship to normal and abnormal behavior.

211 Three Credits BASIC PRINCIPLES OF PSYCHOLOGY

PREREQUISITE: PSY 210

Examination of selected topical areas as a continued introduction to psychology.

220 Three Credits CHILD PSYCHOLOGY

Study of the physical growth and the psychological development of the child, emphasis on the significance of physical, social, cognitive, personality, and language development in the early years.

225 Three Credits ADOLESCENT PSYCHOLOGY

Study of adolescents' physical growth, psychological development, and behavior. Emphasis on the major determinants of adolescent development and behavior, the theoretical approaches, concepts, principles, and research findings about adolescence and their applications in real-life situations.

228 Three Credits DEVELOPMENTAL PSYCHOLOGY

PREREQUISITE: PSY 210

Comprehensive study of the psychological development of the individual, including linguistic, social, personality, and cognitive aspects of development from conception through adulthood.

230 Three Credits EDUCATIONAL PSYCHOLOGY

PREREQUISITE: Consent of Instructor

Introduction to the psychological principles relevant to the processes of education and the theory of educational institutions.

245 Three Credits MENTAL HYGIENE

PREREQUISITE: PSY 210

Study of the cause and development of both normal and abnormal personalities. Emphasis on the multidimensional nature of mental health (i.e., cultural, psychological, biological)

and factors involved in the prevention and treatment of mental disorders.

250 Three Credits SOCIAL PSYCHOLOGY

PREREQUISITE: PSY 210

Study of the influence of social factors on behavior of individuals and small groups. Emphasis on interpersonal behavior. Exploration of theories concerning social interaction, social influence, aggression, prejudice and attitude change, and socialization.

270 (370) Three Credits PSYCHOLOGICAL STATISTICS

PREREQUISITES: MTH 103; PSY 210, 211

Study of the basic principles and techniques employed in the fields of descriptive and inferential statistics, as well as the fundamental laws of probability. Emphasis on techniques of summarizing and standardizing data; correlation and regression; sampling distribution; analysis of variance; hypotheses testing using parametric as well as nonparametric tests, and probability.

280 Three Credits ABNORMAL PSYCHOLOGY

PREREQUISITE: PSY 210

Introduction to the various descriptions and classifications of psychopathology and theories of the origin of mental disorders including different approaches to the treatment of abnormal behavior.

311 Three Credits EDUCATIONAL TESTS AND MEASUREMENTS

PREREQUISITE: Consent of Instructor

Study of the general field of tests and measurements, including the application of statistics. Introduction to factors involved in the selection and administration of group tests of achievement, aptitude, mental ability, and personality.

312 Three Credits BEHAVIORAL ANALYSIS

PREREQUISITE: PSY 210

Opportunities to develop skills in the systematic observation and analysis of behavior in an academic situation through classroom observation and videotaped school behavior. Emphasis on behavioral task analysis of academic behavior.

313 Three Credits BEHAVIORAL MANAGEMENT STRATEGIES IN

EDUCATIONAL SETTINGS

PREREQUISITES: PSY 210, 312

Study of learning and behavioral programs for students in educational settings. Emphasis on social learning theory including contingency contracting, token economic, modeling, and similar techniques.

322 Three Credits PSYCHOLOGY OF EXCEPTIONAL CHILDREN

PREREQUISITE: Consent of Instructor

Study of the unique and typically abnormal psycho-social characteristics and stresses encountered by the handicapped child. Analysis of a child's behavior responses and personality development, ranging from normal adjustment mechanisms to the most serious pathological conditions.

331 Three Credits PERSONALITY

PREREQUISITE: PSY 210

Introduction to the nature of personality, its development, and its functioning. Examination of classical and contemporary theories and data.

340 Three Credits PSYCHOLOGY OF THE AFRICAN-AMERICAN

PREREQUISITE: PSY 210

Examination of the critical effects and derivations of the African-American slavery and contemporary American racist social experiences on the mental developments and current functioning of the African-American person.

360 Four Credits EXPERIMENTAL PSYCHOLOGY

PREREQUISITES: PSY 210, 211, 270

Introduction to the application of experimental methods and techniques to psychological problems. Emphasis on experimental design, data collection and analysis, and fundamentals of report writing. (3 hours lecture/ 1 hour lab.)

380 Three Credits PHYSIOLOGICAL PSYCHOLOGY

PREREQUISITES: BIO 100; CHM 100; PHY 100, 360

Study of the physiological processes underlying behavior, with emphasis on the role that the major systems of the body, in particular the nervous system, play in behavior.

381 One-Three Credits TOPICS IN PSYCHOLOGY

PREREQUISITE: Consent of Instructor

Supervised projects selected to suit the needs of the individual student.

390 Three Credits FUNDAMENTALS OF LEARNING

PREREQUISITE: Consent of Instructor

Survey of basic processes and principles of learning, as well as theoretical accounts of these processes. Examination of research findings from both human and animal subjects.

391 One-Three Credits READING IN PSYCHOLOGY

PREREQUISITE: Consent of Instructor

Directed reading and supervised independent study of contemporary issues. Comprehensive coverage of a subject from assigned materials required.

392 One Credit SEMINAR IN COMMUNITY RESOURCES

PREREQUISITE: Consent of Practicum Supervisor

Orientation to the activity of the mental health facility. Provides representatives from agencies to guest lecturers and field trips to various kinds of agencies in the area. Readings and discussions are formats for the seminar.

397 (497) One-Three Credits RESEARCH IN PSYCHOLOGY

PREREQUISITE: Consent of Instructor

Supervised independent research projects aimed at answering empirical questions. Also, intimately involves the student in the conceptualization, design, implementation, and analysis and interpretation of empirical questions and research findings.

410 Three Credits PSYCHOLOGY OF ADJUSTMENT

PREREQUISITES: PSY 210, 280

Study of the multiple aspects of adjustment and mental health, emphasizing the promotion of good adjustment and the prevention and treatment of maladjustment. Analysis of reactions to stress and effective means of coping with stress, emotional control, and positive striving.

420 Three Credits INTRODUCTION TO PSYCHOLOGICAL TESTING

PREREQUISITES: PSY 210, 211, 270

Introduction to the theory and practice of psychological testing. Examination of intelligence, perceptual-motor, and personality tests, along with their use in clinical, educational, and occupational testing settings.

430 Three Credits CLINICAL METHODS IN PSYCHOLOGY

PREREQUISITES: PSY 210, 280, 331

Examination of clinical procedures in psychological evaluation and treatment. Introduction to the uses of psychological tests in making clinical judgments, and an overview of the various theoretical treatment methods such as individual, group, family, and community approaches.

440 Three Credits DRUGS AND BEHAVIOR

PREREQUISITES: PSY 280, 380, or Consent of Instructor

Survey of major principles and mechanisms of drug action including basic pharmacological principles, basic nervous system function and neurochemistry, behavioral analysis techniques, non-pharmacological variables (e.g., psychosocial, cultural), and a survey of specific classes of psychoactive drugs.

450 Three Credits SYSTEMS IN PSYCHOLOGY

Critical survey of systems and theories in psychology, along with a broad overview of the historical and contemporary issues relevant to the study of psychology.

460 Three Credits PERCEPTION

PREREQUISITE: Consent of Instructor

Intensive examination of empirical findings, experimental techniques, and theories related to the study of sensory and perceptual processes.

480 Three Credits MOTIVATION AND EMOTION

PREREQUISITE: Consent of Instructor

Study of processes, which activate behavior and provide major emphasis on the physiological origin of needs, drives, motives, and emotions. Exploration of critical behavioral data from human and animal studies, along with historical and contemporary theories.

492 **Three Credits**
PSYCHOLOGY SEMINAR
PREREQUISITE: Senior Standing
 Presentation of recent experimental and theoretical advances in selected areas of psychology. Class projects prepared and presented in a seminar format.

495, 496 **Three Credits Each**
PRACTICUM IN PSYCHOLOGY
PREREQUISITE: Senior Standing and Consent of Instructor
 Supervised field experience in an applied setting, i.e., a mental health agency or other appropriate institution.

573 **Three Credits**
THE PSYCHOLOGY OF ETHNIC MINORITIES
 Survey of the social science definitions of race and ethnicity including the mental health consequences of racism on the lives of American minorities, with particular emphasis on the African American.

RELIGION - REL

110 **Three Credits**
INTRODUCTION TO THE BIBLE: OLD TESTAMENT
 Examination of the writings, culture and personalities in the ancient literature known as the Old Testament. Survey of both literary and historical perspectives and the possible structures, functions, and meanings of this literature for its original community.

111 **Three Credits**
INTRODUCTION TO THE BIBLE: NEW TESTAMENT
 Survey of the ancient literature of the New Testament section of the Bible. Examination of historical, cultural and theological issues. Exploration of literary and historical perspectives given the possible structures, functions, and meanings of the literature for its original community.

115 **Three Credits**
HISTORY/THEOLOGY OF PROTESTANTISM
 Examination of selected religious movements and problems in the historical development of Protestantism as a cultural, philosophical and religious influence. Key personalities and time periods reviewed.

200 **Three Credits**
MAJOR WORLD RELIGIONS
 Survey of major world religions and selected topics involving theological and cultural developments. Investigation of basic religious structures and the relationship of religious phenomena to their cultural context. The historical, theological and modern impact of the religions studied highlighted.

210 **Three Credits**
MAJOR WORLD RELIGIONS
 Intensive research pertaining to a selected area of religious thought and expression, either contemporary or ancient.

220 **Three Credits**
SYNOPTIC GOSPELS
 Examination of the critically designated documents of the ancient New Testament literature. The historical and modern developments pertaining to dissemination, interpretations and cultural influences reviewed. Emphasis on structures, personalities, and institutional usage within the varied cultural contexts.

310 **Three Credits**
LIFE AND LITERATURE OF PAUL
 Examination of the life and literature associated with the Saul/Paul of ancient biblical and cultural history and the political, religious and social influences, which emerged as relevant in modern society. Research and theological findings reviewed.

320 **Three Credits**
HISTORY AND THEOLOGY OF JUDAISM
 Study in the religious dimension of the Judaic culture, with emphasis on historical, social, and theological perspectives.

330 **Three Credits**
HISTORY AND THEOLOGY OF THE BLACK CHURCH
 Analysis of African-American religious thought through critical study of the historical legacy of events, personalities and institutions which helped shape black religion from Africa to the present.

340 **Three Credits**
SOCIETY AND CHRISTIAN ETHICS
 Examination of ethical issues confronting society and the Christian responses. Consideration given to philosophical and theological perspectives.

410 **Three Credits**
PSYCHOLOGY OF RELIGION
 Introduction to selected themes, issues and problems in the interaction of religion and psychology. Differing points of view considered.

420 **Three Credits**
SOCIOLOGY OF RELIGION
 Study of the treatment of religion as a social institution. Examination of the influence of society on religion and the influence of religious ideas and organizations on other social institutions, and cultures.

440 **Three Credits**
BASIC ISSUES OF RELIGIOUS THOUGHT
 Cross-disciplinary analysis of modes of human awareness through religious meaning and expression. Critical study of writings of selected figures who have helped shape identified religious movements and events across the ages.

450 **Three Credits**
CONTEMPORARY ESCHATOLOGY
 Perennial themes in ancient and modern cultures which take into account individual, societal and cosmic appearances and views of reality, both present and futuristic.

SCIENCE - SCI

100 **Three Credits**
LIFE IN THE UNIVERSE
 Introduction to science, exploring the basic concepts of chemistry and physics, the chemistry of life, the nature of the stars, planets and their atmospheres, the evolution of climate, biological evolution, and the technology of space travel and the workings of radio telescopes.

381 **Three Credits**
SCIENCE FOR TEACHERS
PREREQUISITE: PHY 100 or BIO 100
 Extension of the fundamental concepts of the biological and physical sciences, special emphasis on content material in the physical sciences. Also provides special consideration of selecting methods and applications appropriate to the program of elementary school science. Emphasis on meteorology, astronomy, geology, physics, and biology.

SECONDARY EDUCATION AND LEADERSHIP - SED

201 **Three Credits**
THE AMERICAN SCHOOLS AND THE TEACHING PROFESSION
PREREQUISITE: Sophomore Standing
 Orientation to contemporary elementary and secondary schools in America with on-site experiences in diverse classrooms in local schools. Emphasis on issues raised in current reform movements and on the changing nature of the teaching profession.

233 **Two Credits**
SEMINAR IN ASSESSMENT AND EVALUATION
 Study and application of theories, methods, and materials used in acquiring critical thinking skills. Emphasis on developing critical thinking in specific contexts such as the Core Battery Tests of the National Teacher Examinations, and assessment and evaluation of thinking skills and knowledge.

***380** **Three Credits**
FOUNDATIONS OF SECONDARY SCHOOL METHODS AND MANAGEMENT OF INSTRUCTION
PREREQUISITE: Successful completion of all lower level courses
 Study of concepts related to teaching and learning, classroom management, student-teacher relationships, presentation of subject matter, and testing and evaluation.

***384** **Three Credits**
TEACHING METHODS OF MATHEMATICS/SCIENCE/TECHNOLOGY IN SECONDARY SCHOOLS
PREREQUISITES: SED 380 and a completion of junior level mathematics/sciences courses.
COREQUISITES: MTH 310, MTH 311
 Study of methods designed to assist prospective secondary teachers in defining and implementing the knowledge and skills necessary to effectively perform in the classroom.

***390** **Three Credits**
SECONDARY SOCIAL STUDIES METHODS
 Development of tools and strategies necessary to achieve high standards of learning for teaching social studies courses in secondary classrooms.

UED 405/UED 505 **Three Credits**
READING IN THE CONTENT AREAS
PREREQUISITES: SED 380 and a completion of junior level mathematics/sciences courses.
COREQUISITES: MTH 310, MTH 311
 Comprehensive study of how to strategically use reading as a tool for learning in the content areas incorporating a balance d approach, a realistic and practical usage of reading and methodological issues, theory, research, and historical perspective.

420 **Three Credits**
EDUCATIONAL TECHNOLOGY
 Focus on incorporating multimedia skills needed for competence in K-12 settings. Introduction to Power Point and Microsoft Excel as tools for grading, alongside the innovation of online teacher management applications.

486 **Three Credits**
EDUCATIONAL PSYCHOLOGY AND BEHAVIOR MANAGEMENT
 Study of basic concepts, theories and techniques of sociology and social psychology in analyzing and interpreting the American school institution, functioning in a national society, and constantly confronting and adjusting to problems inherent in social change.

488 **Three Credits**
SCHOOL-COMMUNITY RELATIONS
 Study of the relationships between the local school and the local community, examining the impact of social classes and systems on education, providing opportunity for community field experience, and exploring means by which to involve various proponents of the community in the educative process.

499 **Three Credits**
DIRECTED TEACHING IN SECONDARY SCHOOLS
PREREQUISITE: Completion of all Courses Required for Secondary Majors
 Observation and participation at the secondary level, including off-campus, field-oriented activities (five days per week) under the supervision of cooperating public school/college personnel. Following observation and orientations under the direction of cooperating teachers, students will teach assigned classes. They also attend weekly sessions of discipline specific instructional method conducted by professors associated with the various disciplines.

* Enrollment requires completion of requirements for admission to teacher education.

SOCIAL WORK - SWK

200 **Three Credits**
INTRODUCTION TO SOCIAL WORK
 Introduction to the profession of social work which exposes to social work history, values and ethics, intervention methods, fields of practice and organizational settings. Special emphasis on the nature and functions of social work and the diversity of roles for the generalist practitioner.

207 **Three Credits**
SOCIAL WELFARE POLICIES AND SERVICES I
PREREQUISITE OR COREQUISITE: SWK 200
 Study of social problems and social work commitment to diversity, social and economic justice and populations - at - risk. Specific emphasis on the historical background of social welfare and the emergence of the social work profession.

220 **Three Credits**
HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT
PREREQUISITES: SWK 207; PSY 210; SOC 110 or 101; HED 100; BIO 105
 Examination of the dynamics of multi-level social systems, as they have an impact on the development and well-being of individuals from preconception through childhood. Study of the interaction between and among human biological, social, psychological and cultural systems as they affect and are affected by human behavior. Emphasis on the functions of human behavior, social environment theory and research as they inform social work practice.

300 **Three Credits**
SOCIAL WELFARE POLICIES AND SERVICES II
PREREQUISITE: SWK 207
COREQUISITE: SWK 312
 Study of social problems and social work commitment to diversity, social and economic justice and populations-at-risk. Emphasis on the institutional nature of social welfare, the relationship to other institutions, and social welfare policies implemented into social welfare programs.

SOCIAL WORK – SWK (continued)

309 **Three Credits**
HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT II
PREREQUISITES: SWK 220; PSY 210; BIO 105 or 165; HED 100; SOC 110 or 101;

Examination of the dynamics of multi-level/social systems, as they have an impact on the development of individuals from adolescence through dying and death. Study of interaction between and among human biological, social, psychological and cultural systems as they affect and are affected by human behavior.

312 **Three Credits**
INTRODUCTION TO GENERALIST PRACTICE
PREREQUISITE: SWK 220
COREQUISITE: SWK 300

Study of the foundation knowledge, values and skills that form the holistic conceptual framework of generalist social work practice. Emphasis on generalist practice, development of the professional relationship, promotion of client well being, and social work interviewing skills.

313 **Three Credits**
GENERALIST PRACTICE: INDIVIDUALS/FAMILIES
PREREQUISITE: SWK 312

Study of appropriate application of the General Method of Social Work Practice with individuals and families from diverse populations including generic skills of engagement, data collection, assessment, intervention, evaluation, and termination for effective practice with individuals and families.

314 **Three Credits**
NATURE AND MEANING OF CHILD WELFARE
PREREQUISITE: SWK 300

Study of historical and contemporary issues and developments relative to the status, rights, opportunities, and circumstances of children in American society. Detailed examination of the range, content, policies, and objectives of a myriad of societal initiatives aimed at strengthening and preserving the institution of the family.

315 **Three Credits**
SOCIAL WORK WITH FAMILIES
PREREQUISITE: SWK 312

Introduction to the knowledge of family dynamics and the intervention skills and techniques necessary to serve families efficiently and effectively, especially low-income families. Emphasis on family intervention based upon systems concepts and ecostructural thinking.

318 **Three Credits**
GENERALIST PRACTICE: GROUPS, ORGANIZATIONS AND COMMUNITIES
PREREQUISITE: SWK 313

Examination of theories and methods of social work in macro and mezzo practice. Emphasis on the development of skills related to engagement, data collection, problem identification/assessment, intervention, termination and evaluation in working with groups, organizations and communities.

319 **Three Credits**
HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT III
PREREQUISITE: SWK 313

Examination of the dynamics of multilevel/social systems as they have an impact on the formation and development of the diverse contemporary American family. Emphasis on the interactions between and among family diversity, biological, social, psychological and cultural systems as they relate to the family unit.

321 **Three Credits**
SOCIAL WORK AND THE AGED
PREREQUISITE: SWK 312

Study of the social needs of the aged population, policies required, and the implementation of social services to meet these needs.

324 **Three Credits**
HEALTH CARE AND SOCIAL SERVICES
PREREQUISITE: SWK 313

Overview of health care and its social services delivery system in America. Examination of the value orientation, socio-cultural, racial-ethnic, political, economic, research, and policy aspects of health care. Emphasis on the roles of several health-care deliverers, and the impact of illness, environment, ecology, and nutrition.

326 **Three Credits**
TECHNIQUES OF COUNSELING
PREREQUISITE: SWK 312

Review of the theories of personality and basic concepts of counseling. In- depth study of principles of counseling, the nature and problems of individuals, and the tools and

techniques utilized to counsel individuals and groups. Several approaches will be studied in as much depth as time allows. Opportunities to practice will be provided.

327 **Three Credits**
INTERVIEWING TECHNIQUES

Study of the general principles and techniques of interviewing and recording, which may be applied not only in social work but also in other occupations.

411 **Three Credits**
CONTEMPORARY SOCIAL POLICY ISSUES

PREREQUISITE: Open to senior Social Work majors
 Exploration of the current and controversial problems in social welfare, unmet needs, and the potential policies and programs designed to deal with them.

416 **Three Credits**
GENERALIST PRACTICE: EVALUATION

PREREQUISITES: SOC 344, 355; SWK 318
 Focus on understanding and refining skills in the application of the techniques for evaluation of generalist practice. Emphasis on understanding and refining practice skills that center on evaluation of social work practice. Research procedures and designs studied as a means of objectively assessing the efficiency and efficacy of social work practice intervention. Ethical issues of practice and evaluation practices addressed relative to oppressed populations.

490, 491 **Two Credits**
PRACTICUM SEMINAR

PREREQUISITES: All previously required courses and concurrent enrollment in practicum
 Opportunity to integrate theory with field practice, also assists in evaluating practice performance while exploring personal and professional values and ethics.

492 **Three Credits**
INDEPENDENT STUDY IN SOCIAL WORK

PREREQUISITE: Open to senior Social Work majors
 Opportunities to engage in student and/or faculty-initiated special projects which explore some dimension of social work practice and/or theory.

495, 496 **Ten Credits**
PRACTICUM IN SOCIAL WORK

PREREQUISITES: All previously required courses and concurrent enrollment in seminar
 Internship in a social welfare agency. 225 hours per semester while engaged in a supervised practice experience where generalist skills are utilized required.

497 **Three Credits**
MACRO AND MICRO PERSPECTIVES ON INTERNATIONAL SOCIAL WELFARE

PREREQUISITE: Open to senior Social Work majors
 Exploration of the interplay among macro social systems in selected Western and non-Western societies as they relate to general social welfare.

SOCIOLOGY - SOC

101 **Three Credits**
INTRODUCTION TO THE SOCIAL SCIENCES

Introduction to common and divergent perspectives of the social sciences, including the general methods and special techniques used by social scientists to acquire an understanding of how human beings to behave. Emphasis on the United States as well as a global context.

110 **Three Credits**
INTRODUCTION TO SOCIOLOGY

Introduction to the basic perspectives, concepts, and principles of sociology, with emphasis on basic social processes such as social organization, culture, socialization, deviance, and inequality. Study of the functioning and influences of major social groups, such as the family and government. Application of the principles to understanding the everyday life.

137 **Three Credits**
SOCIAL PROBLEMS

Study of current social issues such as poverty, race and ethnic relations, unemployment, crime, drug use, the elderly, population and environmental problems. Examination of various explanations, consequences, and suggested solutions for each problem.

205 **Three Credits**
HUMAN SEXUALITY

Examination of the sociocultural, psychological and physiological factors related to human sexual behavior. A forum for a scientific examination of the various processes by

which humans develop and manifest their sexual identity and sexual behavior.

225 **Three Credits**
SOCIAL SCIENCE RESEARCH SKILLS

PREREQUISITE: Sophomore Standing
 Development of knowledge of using a large number of library resources to enhance skills in choosing a research topic, making a bibliography, taking notes, writing and outlining, collecting primary data, interpreting tables and graphs, and writing research papers and abstracts.

228 **Three Credits**
DEMOGRAPHIC PRINCIPLES

PREREQUISITE: SOC 110 or Consent of Instructor
 Study of the relationship between population and society; the historic growth of population and its causes; the composition and historic growth of population in terms of age, sex, race, occupation, education, and health; factors influencing birth and death rates; and trends and problems in world population.

234 **Three Credits**
URBAN SOCIOLOGY

PREREQUISITE: SOC 110 or Consent of Instructor
 Study of origin and development of urban life with emphasis on the family, housing, health, education, poverty and dependency, crime and the treatment of the criminal.

237 **Three Credits**
RACIAL AND ETHNIC MINORITIES

Examination of problems and issues characterizing interaction patterns among different racial, ethnic, and religious groups. Study of the concepts of race, nationality, prejudice, and discrimination, including racism, intergroup conflict, segregation, unemployment, crime and juvenile delinquency, education, housing and instability, and poverty in contemporary industrial-urban societies. Focus on psychological, social, and cultural factors that influence interaction between dominant and minority groups, as well as the issues and problems related to blacks in the United States.

242 **Three Credits**
INTRODUCTION TO ANTHROPOLOGY

Study of human evolution, racial origins, prehistoric cultures, modern races and their classifications, problems of race, nationality, language, mixture, and mental differences; growth and spread of religion and culture. Special emphasis on the nature and diversity of culture.

250 **Three Credits**
SOCIETAL USES OF NATURAL RESOURCES

PREREQUISITE: SOC 110 or Equivalent
 Study of social implications of environmental issues, including the current energy situation. Examination of how societies depend on and interact with the natural environment, how they distribute and use natural resources, and how they create and react to pollution problems. Emphasis on social behavior, attitudes, and public policy issues. Evaluation of alternative strategies for solving environmental and energy problems.

301 **Three Credits**
DEMOGRAPHIC METHODS I

Study of the measurement of population size, distribution and age/sex structure, including fertility, mortality, migration, nuptial patterns, and population growth. Emphasis partly on derivation of demographic measures and the interpretation and real-world applications of these measures.

302 **Three Credits**
MIGRATION

Study of migration with emphasis on its measurement, causes and consequences. Discussion of internal and international migration, including the consequences of migration on the "donor" and "host" areas. Examination of migration patterns within the United States, with emphasis on the migration patterns of African-Americans since the turn of the twentieth century. Study of the United States immigration policy with particular reference to refugee and immigration legislation.

303 **Three Credits**
FERTILITY AND FAMILY PLANNING

Survey of fertility concepts, measurements, trends, levels, and explanations. Evaluation of the biological and social components of fertility. Fertility control is discussed with emphasis on intercourse, conception, and gestation variables. Social issues related to fertility are highlighted.

304 **Three Credits**
MORTALITY

Discussion of the components of mortality (life span and longevity). Examination of the causes of death and mortality differentials by gender, occupation, income/education, race/ethnicity, marital status, and urban/rural areas.

Emphasis on infant mortality in developing societies and among the urban poor of industrialized societies.

325 Three Credits
SOCIOLOGY OF BUSINESS AND INTERNATIONALISM
 Study of the relationship between businesses and society, which involves multicultural and international approach, and takes into account the impact of changes in society, business practices and technology on societal structure. Special emphasis on the roles of industrial revolution, modern technology and information science. Analysis of the current international environment, the interconnectedness of businesses, societies and economic processes. Examination of the effect of business practices on environmental problems and possible solutions. Discussion of the ethical issues and business practices that contribute to the development of societies and people's lives.

331 Three Credits
SOCIAL PSYCHOLOGY
 Examination of human social behavior at the individual and interpersonal level. Discussion of socialization, power, attitude formation and change, conformity, and language to provide an understanding of how persons are influenced by interaction with other persons as members of social groups. The focus is primarily basic social science, emphasizing major theoretical ideas and research findings. Applications to everyday life are also considered.

338 Three Credits
SOCIOLOGY OF FAMILIES
PREREQUISITE: SOC 110 or Consent of Instructor
 Study of the family and its function among primitive peoples; the different types of family organizations; history of marriage and divorce in Europe and the United States; changing idea of family life; the functions of the family in the modern world; and contemporary problems.

344 Three Credits
METHODS OF SOCIAL RESEARCH
 This course introduces students to the basic principles and procedures involved in social science research. The major purpose is to assist students in becoming competent consumers of research. Thus, emphasis is placed on understanding the research process, noting the reasons for particular procedures and the errors and limitations inherent in any research project. Topics covered include the scientific method, conceptualization, formulation of hypotheses, research design, analysis and interpretation of research findings, theoretical basis of research, application and evaluation of research, and the nature of science. Students participate in research projects and prepare reports.

355 Three Credits
ELEMENTARY SOCIAL STATISTICS
 Introduction to the parametric and non-parametric techniques of summarizing data, including measures of central tendency and dispersion, measures of association, correlation and regression, and statistical inference. Emphasis on mastering skills needed to apply statistics rather than on theoretic concerns.

356 Three Credits
INTERMEDIATE SOCIAL STATISTICS
PREREQUISITE: SOC 355
 Study of the solid statistical foundations necessary to develop competence in the analysis and interpretation of sociological data. It assumes knowledge of basic statistical principles, including measures of central tendency, measures of dispersion and normal curve probability distribution. Emphasis on hypothesis testing, logic, application, and interpretation of test statistics. Graphic and tabular presentation of data are highlighted. Parametric and nonparametric tests of significance and tests of association are discussed. Special attention is given to regression analysis, with emphasis placed on the derivation and interpretation of coefficients. Extensive use is made of statistical packages, thereby enabling the student to explore complex survey and demographic (Census) data.

393 Six Credits
INTERNSHIP
COREQUISITE: SOC 394
 Various duties in agencies and organizations active in the fields of gerontology, urban affairs, and criminal justice. An agency supervisor and the internship supervisor direct each student in mastering relevant skills to complete the tasks associated with a significant position in the internship agency.

394 Zero Credit
INTERNSHIP SEMINAR
COREQUISITE: SOC 393
 Opportunity to relate intern experiences to a systematic, theoretical body of knowledge. Identifies and discusses common problems and possible solutions.

401 Three Credits
DEMOGRAPHIC METHODS II
PREREQUISITE: SOC 301
 More in-depth treatment of demographic measures, using demographic computer software. Population estimates and projections for small and large areas are undertaken.

402 Three Credits
FAMILY DEMOGRAPHY
 Examination of demographic views on nuptial patterns, fertility, marital formation, marital dissolution, family planning, and household formation. Emphasis on demographic factors facilitating male domination of women in the family. Related social issues of pertinence include female labor force participation, teenage motherhood, illegitimacy, female-headed households, and cohabitation. Focus on Life-cycle changes.

403 Three Credits
POPULATION GROWTH, FOOD AND THE ENVIRONMENT
 Survey of the interrelationships within the environment, which examines the pattern of food production in the world, starting from the Agricultural Revolution to the Green Revolution, and looks closely at the relationship growth. Answers are sought to the often-asked question: Will there be enough food to feed the world's growing population? Emphasis on the harmful effects on the environment of attempting to increase agricultural yield.

404 Three Credits
POPULATION AND SOCIOECONOMIC DEVELOPMENT
 Study of the relationship between population growth and socioeconomic change, especially with regard to the developing societies of Africa, Latin America, and South-East Asia. Examination of the debate as to whether population growth is stimulative or retardative to economic development. Assessment of cross-cultural data on population growth and development indicators. Utilization of country case studies.

405 Three Credits
READINGS IN URBAN/DEMOGRAPHY
PREREQUISITE: Approval of the Faculty in Sociology
 Intensive directed reading course for exceptionally able.

406 Three Credits
TOPICS IN URBAN/DEMOGRAPHY
PREREQUISITE: Senior Standing and Consent of Instructor
 Examination of trends and emerging issues in the field of urban/demography.

446 Three Credits
SOCIOLOGICAL THEORY
PREREQUISITE: Junior or Senior Standing
 Survey and analysis of the main types of sociological theory and of the major theoretical concepts in Sociology. Special emphasis on outstanding theorists, past and present, and their works.

458 Three Credits
SOCIAL STRATIFICATION
 Evaluation of the pervasive phenomenon of social inequality in society. Discussion of the various theoretical explanations offered by Karl Marx and other social scientists. Exploration of some of the current and classic research findings. Description of the different kinds of inequality and social structural forms that occur. Examination of the international and American stratification systems is included.

462 Three Credits
COMPLEX ORGANIZATIONS
 Survey of the evolution and dynamics of bureaucratic organization and administration. Analysis of classical writings and findings from empirical research to provide students with broad perspectives of the structure and functions of organizations in a complex industrial-urban society. Special emphasis on unique characteristics of different kinds of organizations. Study of alternative techniques for the assessment of the effectiveness of complex organizations.

485 Three Credits
SEMINAR IN SOCIOLOGY
PREREQUISITE: Junior or Senior Standing and Consent of Instructor
 Review and evaluation of major concepts, literature, and methodology of social research.

491 Three Credits
READINGS IN SOCIOLOGY
PREREQUISITE: Approval of the Faculty in Sociology
 Intensive directed reading course for exceptionally able students.

495 Three Credits
TOPICS IN SOCIOLOGY
PREREQUISITE: Senior Standing and Consent of Instructor
 Examination of trends and emerging issues in a dynamic social world.

499 Three Credits
APPLIED SOCIOLOGY
PREREQUISITE: Senior Standing; SOC 344 and 355
 Empirical investigation of a research problem under direction of the chairman of the department.

SPANISH - SPN

111 Three Credits
ELEMENTARY SPANISH I
 Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

112 Three Credits
ELEMENTARY SPANISH II
PREREQUISITE: SPN 111 or Equivalent
 Continuation of the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

113 Three Credits
BASIC CONVERSATION I
 Emphasis on acquiring conversational skill with minimal involvement with formal study of grammar for those students who have had no previous training in Spanish.

114 Three Credits
BASIC CONVERSATION II
PREREQUISITE: SPN 113 or Permission
 Emphasis on acquiring conversational skill with minimal involvement with formal study of grammar for those students who have had no previous training in Spanish.

211 Three Credits
INTERMEDIATE SPANISH I
PREREQUISITE: SPN 112 or Equivalent
 Review of grammar, reading of moderately difficult prose, oral practice, and written composition.

212 Three Credits
INTERMEDIATE SPANISH II
PREREQUISITE: SPN 211 or Equivalent
 Intensive and extensive study and reading of modern prose, oral practice, and composition.

214 Three Credits
ENTREPRENEURIAL SPANISH
PREREQUISITE: SPN 112
 Study of the concepts of Spanish business language and culture to prepare them to be competitive in an increasingly global marketplace.

215 Three Credits
INTERMEDIATE CONVERSATION
PREREQUISITE: SPN 212 or Equivalent
 Study of oral practice in everyday situations. Special stress on idiomatic expressions and on acquiring fluency. Conducted largely in Spanish.

216 Three Credits
EXPLICATION DE TEXTOS
PREREQUISITE: SPN 215 or Equivalent
 Transitional course designed to prepare students for the study of advanced texts from the literary and linguistic points of view.

220 Three Credits
SPANISH CIVILIZATION
PREREQUISITE: SPN 212 or Equivalent
 Survey of the most important elements of Spanish civilization, geography, economy, political history, arts, sciences, and institutions. Conducted in Spanish.

221 Three Credits
LATIN-AMERICAN CIVILIZATION I
PREREQUISITE: SPN 215 or Equivalent
 Similar in scope and content to SPN 220. Aims to acquaint the student with the essential aspects of the geography, history and culture of Latin America. Conducted in Spanish.

315 Three Credits
ADVANCED CONVERSATION
PREREQUISITE: SPN 215 or Permission of the Instructor
 Intensive and extensive practices in the oral use of Spanish. Conducted in Spanish.

SPANISH – SPN (continued)**320 Three Credits****LATIN-AMERICAN CIVILIZATION II****PREREQUISITE: SPN 215 or Permission of the Instructor**

Survey of the most important elements of contemporary Latin-American culture. Conducted in Spanish.

321 Three Credits**SURVEY OF SPANISH LITERATURE I****PREREQUISITE: SPN 216 or Equivalent**

Study of representative works of Spanish literature from the beginning to the end of the 17th century. Conducted in Spanish.

322 Three Credits**SURVEY OF SPANISH LITERATURE II****PREREQUISITE: SPN 216 or Equivalent**

Study of representative works of Spanish literature from the beginning of the 18th century to the middle of the 20th century.

All literature courses beyond this level are conducted in Spanish.**324 Three Credits****SPANISH-AMERICAN LITERATURE****PREREQUISITE: SPN 216 or Equivalent**

Comprehensive study of the main currents of Spanish-American literature from its origins to the contemporary period. Lectures, discussions, and assigned reports are required.

326 Three Credits**NON-DRAMATIC LITERATURE OF THE GOLDEN AGE****PREREQUISITE: SPN 321**

Critical study of the poetic, novelistic, and didactic styles of the period 1550-1650, exclusive of the works of Cervantes.

332 Three Credits**LITERATURE OF THE 19TH CENTURY****PREREQUISITE: SPN 322**

Includes Romanticism in poetry and drama, Costumbrismo, the regional novel, and the beginning of the modern theatre. Analysis of texts and literary theories in class discussion.

333 Three Credits**LITERATURE OF THE 20TH CENTURY****PREREQUISITE: SPN 322**

Studies the works of significant writers in Spain and Spanish America of the contemporary period. Discussions, reports, and lectures in Spanish and English.

340 Three Credits**DRAMA OF THE GOLDEN AGE****PREREQUISITE: SPN 321**

Investigation of the rise of drama and intensive study of representative drama of Lope de Vega, Tirso de Molina, Alarcon, Moreto, and Calderon.

350 Three Credits**CERVANTES****PREREQUISITE: SPN 321**

Study of Cervantes as dramatist and novelist. Includes study of Don Quixote and of Cervantes' purpose and plans in the presentation.

382/FRN 382 Three Credits**THE TEACHING OF FOREIGN LANGUAGES IN SECONDARY SCHOOLS****PREREQUISITE: SED 380**

Study of methods and materials in the teaching of modern foreign languages.

412 Three Credits**LANGUAGE FOR PROFESSIONALS****PREREQUISITE: SPN 315 or Permission of the Instructor**

Intensive and extensive practice in the language of technical, vocational, and professional areas. All four language skills (comprehension, speaking, reading, and writing) are stressed. Special emphasis upon the student's secondary area of concentration.

413 Three Credits**INDIVIDUALIZED LANGUAGE FOR PROFESSIONALS****PREREQUISITE: SPN 315 or Permission of the Instructor.**

Intensive practice in the language of technical, vocational or professional area.

450 Two Credits**PHONETICS****PREREQUISITE: SPN 215 or Equivalent**

Analysis of the phonetic features of Spanish. Systematic exercises in pronunciation, intonation, and reading of prose and poetry.

454 Three Credits**ADVANCED GRAMMAR AND COMPOSITION****PREREQUISITE: SPN 215 or Equivalent**

Intensive review and application of Spanish grammar. Intensive practice in writing and study of vocabulary and idioms.

485 Two Credits**CONTRASTIVE LINGUISTICS: SPANISH-ENGLISH****PREREQUISITE: SPN 215 or Equivalent**

Introduction to the study of the principal phonological, morphological, syntactical, and lexical contrasts between Spanish and English. No previous work in linguistics is required.

490 Three Credits**SENIOR SEMINAR****PREREQUISITE: Departmental Permission**

Intensive readings and oral and written reports required. Student will complete a senior thesis, that is, do independent research on a topic selected by the student, approved by the student's department and advisor, and completed under the guidance of that advisor.

500 One/Two/Three Credits.**PRACTICUM IN SPANISH****PREREQUISITE: Senior or Graduate Level**

Variable content course in Spanish language, literature, history, or culture for students who wish to study beyond the normal four-semester sequence of foreign language.

SPECIAL EDUCATION - SPE**EDU 101 Three Credits****COLLEGIATE COMMUNICATION LITERACY SKILL**

Introduction to the integrated communication skills required for academic success at the university. Emphasis on basic college survival skills and progresses to specific strategies for reading, writing, note taking, and exam taking.

103 Three Credits**COLLEGIATE QUANTITATIVE LITERACY SKILL**

Reinforcement of basic skills in quantitative literacy and general mathematics, including numerical concepts, algebras, as well as Internet essentials to aid in solving real world problems. Emphasis on study tips and math anxiety reducing strategies.

105 Three Credits**OVERVIEW OF INCLUSION EDUCATION AND SERVICES**

Overview of the planning and delivery of education in inclusive classrooms, including an update on relevant legislation, the functions of the multidisciplinary team, as well as the role and responsibilities of the paraprofessional in the classroom.

107 Three Credit**HUMAN RELATIONS SKILLS AND ETHICS**

Development of human relations skills associated with personal and career success. Examination of ethical principles to guide performance in the workplace.

109 Three Credits**GUIDING CLASSROOM BEHAVIORS OF LEARNERS**

Overview of approaches to promoting positive behaviors and managing challenging behaviors in the classroom. Focus on application of practical strategies.

111 Three Credits**LEARNING THROUGH LITERATURE**

Study of the use of literature for instruction. Varied genres are explored and storytelling is described as a mechanism to increase literacy.

113 Three Credit**FACILITATING READING INSTRUCTION**

Study of some basic understanding of the dynamic involved in the complex activity of reading for the paraprofessional. Emphasis on tips, hints, and strategies for supporting students with reading instruction.

EDU 115 Three Credits**FACILITATING LEARNING MATHEMATICS AND SCIENCE CONCEPTS**

Study of some basic strategies for supporting students with their mathematics and science instruction. Emphasis on an historical approach to undergird the role of mathematics and science in today's classroom.

198 Three Credits**PRACTICUM FOR PARAPROFESSIONAL S****PREREQUISITE: Complete Practicum Application Departmental Endorsement**

Educational experiences in supervised off-site observation and participation with opportunities to interact with individuals from diverse populations.

210 Three Credits**AMERICAN SCHOOLS AND THE TEACHING PROFESSION**

Orientation to contemporary elementary and secondary schools in America with on-site experiences in diverse classrooms. Emphasis on educating exceptional learners about the changing nature of the teaching profession.

213 Three Credits**CRITICAL THINKING AND ASSESSMENT SKILLS**

Development of test taking skills on standardized examinations of education majors. Emphasis on reading, writing, mathematics, and critical thinking skills.

295 Three Credits**PRACTICUM IN VOLUNTEER COMMUNITY SERVICE**

Experience in guided leadership development in community service volunteering. Participation in a community service project sponsored by a recognized community agency in this geographic region. Sixty-five clock hours of service learning experience required.

311 One Credit**PRINCIPLES AND PRACTICES IN MULTICULTURAL EDUCATION**

Introduction to cultural differences among children, youth and adults in a pluralistic society. Opportunity to study and to critically examine differences related to institutional racism, classism, sexism, ageism, and homophobia. Examination of historical and contemporary perspectives of the multicultural competencies required for a teacher to function successfully in today's pluralistic society.

312 Three Credits**EDUCATIONAL PSYCHOLOGY AND BEHAVIOR MANAGEMENT**

Study of basic concepts of behavioral conditioning principles and management of behavior in the classroom. Emphasis on practical applications of learning theories to the teaching learning situation for individuals in home, school, and community environments. (a twenty-hour clinical experience required).

321 Three Credits**CHARACTERISTIC, MEDICAL AND LEGAL ASPECTS IN SPECIAL EDUCATION**

Study of the medical/biological and environmental etiologies of disabling conditions that can occur prenatally, perinatally, and postnatally. Emphasis on preventive, diagnostic, and prescriptive/treatment procedures and the impact of etiologies on learning potential. (a twenty hour clinical experience required).

332 Three Credit s**UNDERSTANDING AND TEACHING LEARNERS WITH MENTAL RETARDATION**

Focus on the nature of and strategies for teaching learners with mental retardation, including terminology and etiological factors, historical perspectives, legal parameters, assessment techniques, influence of cultural variables, current issues, and effective methods of instruction. (a twenty-hour clinical experience required).

334 Three Credits**UNDERSTANDING AND TEACHING LEARNERS WITH EMOTIONAL DISTURBANCE**

Experience in the field of emotional disturbance, including historical and theoretical perspectives, definitions and characteristics, legal and ethical considerations, assessment procedures, program planning, and implementation of instruction for expanding the academic performance of individuals with emotional disturbance. Learning experiences focus on multicultural influences, emotional adjustment, and social development. (a twenty-hour clinical experience required).

336 Three Credits**UNDERSTANDING AND TEACHING STUDENTS WITH LEARNING DISABILITIES**

Experience in the field of learning disabilities, including historical and theoretical perspectives, definitions and characteristics, related effects, legal and ethical considerations, assessment procedures, program planning, and implementation of instruction for expanding literacy and subject area performance. Learning experiences focus on teaching linguistically and culturally diverse individuals with learning disabilities.

344 Three Credits**TEACHING READING TO EXCEPTIONAL LEARNERS**

Study of comprehensive active learning designed to provide a foundation in literacy instruction and content area reading.

Emphases on language acquisition and the interrelated nature of reading, writing, speaking, listening, and thinking to promote the exceptional learner's use and understanding of language. Field experiences facilitate student mastery of developing a balanced reading program.

395H Three Credits
PRACTICUM IN VOLUNTEER COMMUNITY SERVICE
 Experience of leadership development through community service volunteering. Participation in a project sponsored by a community agency as well as forty-five hours of volunteer and service learning required.

440 Three Credits
COLLABORATION, INCLUSION, TRANSITION AND OTHER CURRICULAR ADJUSTMENTS
 Study of curricular development and adjustment procedures for exceptional learners, utilizing curriculum materials, assessment techniques, and instructional approaches to remedial learning and behavioral problems. (twenty hour clinical experience required).

451 Three Credits
PSYCHOEDUCATIONAL DIAGNOSTIC PROCEDURES
 Study of a foundation for understanding the psychoeducational diagnostic process and the skills necessary for conducting meaningful assessments. Emphasis on the testing domains of intelligence, language, perception, academics, overt behavior, affective competence, and vocational assessment. Educational experiences focus on teaching linguistically and culturally diverse learners. (twenty-hour clinical experience required).

461 Three Credits
TEACHING SIGN LANGUAGE
 Introduction to American Sign Language (ASL) and its application within the deaf community. Emphasis on developing receptive and expressive skills for everyday interaction of effectively communicating with deaf/hard of hearing individuals and other non-verbal persons with severe disabilities.

490 Three Credits
ASSESSMENT OF EXCEPTIONAL STUDENTS
 Introduction to components and procedures for educational assessment of exceptional learners. Emphasis on purpose, history, terminology, and basic educational/evaluation concepts. Orientation to formal and informal instruments for measurement and evaluation. (twenty hour clinical experience required).

499A Six Credits
DIRECTED TEACHING – EMOTIONAL DISTURBANCE
PREREQUISITES: Departmental Approval
 Supervised teaching experience with emphasis on increasing responsibility for a given group of individuals with emotional disturbance for a definite period of time. students, plan and write instructional interventions, deliver instruction, monitor and document student progress, and assume all other classroom duties of the cooperating teacher. Opportunities to interact with individuals from diverse populations.

499B Six Credits
DIRECTED TEACHING - LEARNING DISABILITIES
PREREQUISITES: Departmental Approval
 Supervised teaching experience with emphasis on increasing responsibility for a given group of individuals with learning disabilities for a definite period of time. The candidate will assess students, plan and write instructional interventions, deliver instruction, monitor and document student progress, and assume all other classroom duties of the cooperating teacher. Opportunities to interact with individuals from diverse populations.

499C Six Credits
DIRECTED TEACHING - MENTAL RETARDATION
PREREQUISITE: Departmental Approval
 Supervised teaching experience with emphasis on increasing responsibility for a given group of individuals with mental retardation for a definite period of time. The candidate will assess students, plan and write instructional interventions, deliver instruction, monitor and document student progress, and assume all other classroom duties of the cooperating teacher. Opportunities to interact with individuals from diverse populations.

SPEECH COMMUNICATION - SCM

285 Three Credits
PRINCIPLES OF SPEECH
PREREQUISITES: ENG 101 and 102
 Basic communication theory and practice of public speaking, including information processing skills, oral style, and delivery. Practical emphasis on developing verbal and vocal skills through a variety of speech purposes.

310 Three Credits
SPEECH FOR THE CLASSROOM TEACHER
 Study of methods to effectively promoting an environment for effective oral communication in the classroom, including applied speech, speech improvement, and speech rehabilitation. Special unit on phonetics and phonics provides opportunities for recording and evaluating speech and voice patterns.

340 Three Credits
GROUP COMMUNICATION
 Study of the processes of communication in small groups. Examination of theories concerning influence of leadership; group structure; and norms and roles in collaborative decision-making, participation in group discussions, and individual research.

346 Three Credits
ORAL INTERPRETATION OF LITERATURE
 Analysis and presentation of prose, drama, and poetry. Emphasis on discovering and interpreting the elements of oral communication. The fine art of reading literature to an audience.

350 Three Credits
VOICE AND DICTION
 Study of the fundamental speech processes of voice and articulation, with emphasis on refinement of students' speech patterns through small group drill sessions.

351 Three Credits
COMMUNICATION THEORY
 Overview of the models of communication based on perception theory, learning theory, socio-psychological models, cybernetics, and attitude change theories.

380 Three Credits
WOMEN IN ORATORY
 Study of the roles of women who have made impacts on modern times through their public addresses or oratory in such areas as education, politics and social action, and the arts.

390 Three Credits
ORAL BUSINESS COMMUNICATION
 Specialized training in speech communication in a business orientation. Study of basic speech fundamentals with focus on interview techniques. Examination of differentiation between the conference, impromptu session and formal meeting, and parliamentary procedure

400 Three Credits
CONTEMPORARY ISSUES IN INTERPERSONAL RELATIONS
 Examination of the principles of interpersonal communication. Study of theory, skills, and transactional approach to communication.

410/ COM 510 Three Credits
COOPERATIVE ARGUMENTATION AND DECISION MAKING
PREREQUISITE: SCM 285 or Graduate standing
 Exploration of systematic strategies which increases abilities to react critically and to form arguments. Emphasis on the roles arguments play in the fields of business, education, ethics, the arts, politics and life in general.

411/COM 511 Three Credits
INTERPERSONAL COMMUNICATION
PREREQUISITE: ENG 203 or Graduate Standing
 Introduction to substantive material in contemporary communication theory, group dynamics, language and thought, and culture patterns of verbal and non-verbal communication. Development of skills in interpersonal communication.

420 Three Credits
HISTORY AND PHILOSOPHY OF SPEECH
PREREQUISITE: SCM 285
 Identification and analysis of substantive and methodological issues in the field of speech with special emphasis on rhetoric and communications. Reading and guest lectures in history

and philosophy of rhetorical theory, rhetorical criticism, group discussion, oral interpretation, and speech and hearing.

440 Two/Three Credits
SEMINAR IN CONTEMPORARY ORATORS
 Study of contemporary great orators, including an anthology of contemporary writings and messages with emphasis on techniques and styles in relation to social and psychological influences.

485 /COM 585 Three Credits
FAMILY COMMUNICATION
PREREQUISITE: SCM 285 or Graduate standing
 Examination of family and relational communication through a system approach to family/relational roles, rules, and membership. Emphasis on the family in today's world as its communication relates to self-disclosure, power conflicts, and stress.

SWAHILI - SWA

111 Three Credits
ELEMENTARY SWAHILI I
 Study of pronunciation, grammar, structure, vocabulary, and conversation in Swahili. Introduction to Swahili culture and reading material.

112 Three Credits
ELEMENTARY SWAHILI II
PREREQUISITE: SWA 111 or Equivalent.
 Emphasis on reading, writing, and speaking Swahili. Continued study of grammar and vocabulary, incorporating culture and lifestyle of Swahili people.

211 Three Credits
INTERMEDIATE SWAHILI II
PREREQUISITE: SWA 112 or Equivalent.
 Course taught mainly in Swahili. Emphasis on grammar, reading and discussion of moderately difficult prose, oral practice, and composition.

212 Three Credits
INTERMEDIATE SWAHILI II
PREREQUISITE: SWA 211 or Equivalent.
 Intensive and extensive study and reading of modern Swahili prose, oral practice, and composition.

TECHNOLOGY EDUCATION - TED

130 Three Credits
MATERIALS TECHNOLOGY
 Comprehensive study of woods and wood by-products. Focus on a basic understanding of the properties and characteristics of woods, forestry, seasoning, grading, and wood lamination. Development of basic hand tools and machines used in modern woods industry.

131 Three Credits
MATERIAL PROCESSING
 Study of the application of tools, materials, and processes in management procedures for production of goods in a computerized society. Emphasis on development of technological competence through group processes, as well as the use of state-of-the-art equipment in designing and fabricating multiple-materials-products.

135 Three Credits
CONSTRUCTION TECHNOLOGY
 Experience in hands-on work of architects, carpenters, electricians, plumbers, surveyors, contractors, and of a variety of other construction careers, including planning for designing, building, and managing typical construction products. (4 hrs. lab)

170 Three Credits
TECHNOLOGY AND SOCIETY
 Development of an understanding in all aspects of industry and technology springing from the human abilities to reason, solve problems, create, construct, and use materials imaginatively.

215 Three Credits
GRAPHIC ARTS
 Introduction to materials, processes, problems and occupations in graphic arts. Emphasis on the tools and equipment used in letter press, silk-screen process, black printing, offset printing, photographic theory and practice and bookbinding. (4 hrs. lab)

TECHNOLOGY EDUCATION – TED (continued)

274 **INSTRUCTIONAL FOUNDATIONS FOR TECHNOLOGY EDUCATION** **Three Credits**
PREREQUISITE: Sophomore Standing
 Study of recent curriculum developments and practices affecting the design and implementation of technology education programs, including model curriculum development approaches to educational accountability, and individualized instruction. Emphasis on problem-solving activities related to communication, production, and transportation technologies.

275 **TECHNOLOGY EDUCATION IN THE ELEMENTARY SCHOOL** **Two Credits**
 Introduction to technology, existing processes, and trends in industry. Emphasis on hands-on activities which aid understanding of how the technological developments associated with communications, production, energy, power, and transportation have altered man's environment.

330 **COMMUNICATION TECHNOLOGY** **Three Credits**
 Preparation for teacher trainees to combine graphic reproduction, electronics, drawing and design, and photography as a total integrated system in studying the technology used to collect, disseminate, store and use information. Learning activities using materials, processes, and equipment are used in developing useful products. (2 hrs. lec./2 hrs. lab)

350 **TRANSPORTATION TECHNOLOGY** **Three Credits**
 Preparation for teacher trainees to teach the interrelationship of mechanical, electrical, and fluid power within transportation systems of land, sea, air, and space. Emphasis on energy conversion, transmitting power, and controlling power. (2 hrs. lec./2 hrs. lab)

351 **ENERGY AND POWER** **Three Credits**
 Systems-oriented study of energy sources, forms of energy, converting energy, methods for converting and transforming energy, and systems for transmitting, measuring, changing and controlling useful power. (6 hrs. lab)

371 **CURRENT TRENDS IN TECHNOLOGY** **Three Credits**
PREREQUISITE: Permission
 Examination of recent curriculum development and practices in the design and implementation of technology and technology education programs.

485 **TEACHING IN TECHNOLOGY EDUCATION** **Three Credits**
PREREQUISITE: SED 380
 Exploration of instructional approaches and delivery systems appropriate for technology education, focusing on unique approaches and techniques required in contemporary technology learning environments.

THEATRE - DRM

113 **THEATRE MOVEMENT I** **Three Credits**
 Development of performer's physical conditioning and awareness of expressive artistic movement.

114 **INTRODUCTION TO THEATRE** **Three Credits**
 Survey of theatrical forms, techniques, and practices. Reading of selected plays. Attendance at Norfolk State Players' productions required. Lab included.

120 **STAGECRAFT I** **Three Credits**
 Study of practical and theoretical knowledge of scenery, lighting, and sound design for the Theatre. Lab included.

123 **THEORY AND TECHNIQUES OF ACTING** **Three Credits**
 Study of actor's resources including body, mind, and voice. Emphasis on Aristotle's elements of plot, character, diction, thought, rhythm, and spectacle. Focus on play analysis, study of stage practices, gestures, movements, timing, pointing a line, sustaining, and effective characterizations.

200 **INTERMEDIATE ACTING** **Three Credits**
PREREQUISITE: DRM 123
 Study of the physical and vocal demands involved in the creation of a role for the stage.

211 **COMMUNITY THEATRE** **Three Credits**
 Study of the history, organization, and production strategies for operating a community theatre.

212 **IMPROVISATION FOR THE THEATRE** **Three Credits**
 Development of the performer by encouraging spontaneity, including group ensemble work through improvisation.

213 **THEATRE MOVEMENT II** **Three Credits**
 Study of the physical demands involved in various acting styles. Emphasis on movements for classical acting style.

219 **AFRICAN-AMERICAN DRAMA** **Three Credits**
 Study of major African-American, African, and Caribbean playwrights and their plays.

220 **STAGE CRAFT II** **Three Credits**
PREREQUISITE: DRM 120
 In-depth studies of technical direction, carpentry, lighting, properties, sound, welding, and special effects. Advanced study of technical theatre.

226/526 **CHILDREN'S THEATRE** **Three Credits**
 Study of theories and methods of children's theatre with concentration on educational goals. Survey of literature and production techniques. Practical work in production of Children's Theatre.

230 **CREATIVE DRAMATICS** **Three Credits**
PREREQUISITE: DRM 226/526
 Study of theatre principles and creative process with young children. Emphasis on reading comprehension, positive self-concept, awareness of the aesthetic dimension, and vocabulary and problem-solving skills of young children.

238 **STAGE MANAGEMENT** **Three Credits**
 Study of guidelines and practical techniques for effective stage management. Emphasis on the planning, staging, rehearsing, and performing process. Study of Actor's Equity Standards.

240/540 **THEATRE MANAGEMENT** **Three Credits**
 Study of principles and techniques of organizing and managing theatre production programs in educational, community, and commercial settings.

310 **STAGE MAKE-UP** **Three Credits**
 Study of stage make-up techniques/designs, practices and equipment. Demonstration of make-up design for an experimental production required.

315/515 **HISTORY OF THEATRE I** **Three Credits**
 Study of history of the theatre from beginning to 1650.

316/516 **HISTORY OF THEATRE II** **Three Credits**
PREREQUISITE: DRM 315/515
 Study of history of theatre in Europe and America 1650 to the present.

320/520 **LIGHTING DESIGN** **Three Credits**
 Emphasis on sources and control of light, equipment, and light design.

321/521 **SCENERY DESIGN** **Three Credits**
PREREQUISITE: DRM 120
 Experience with floor plans, elevations, models, and perspective designs for theatrical events. Lab included.

324/524 **ADVANCED ACTING THEORY** **Three Credits**
PREREQUISITE: DRM 200
 Focus on acting, theories, advanced techniques in acting, and styles of acting.

328 **CONTEMPORARY DRAMA** **Three Credits**
PREREQUISITE: DRM 219
 Detailed study of the plays, playwrights, and dramatic movements of the post World War II period.

400/500 **COSTUME HISTORY** **Three Credits**
 Study of costume history of Egyptian to modern times. Emphasis on design and construction of costumes for shows. Lab included.

410/510 **COSTUME DESIGN** **Three Credits**
PREREQUISITE: DRM 400
 Study of elements of design in relationship to planning and construction of production design concepts. Lab included.

415 **THEATRE DESIGN WITH COMPUTER** **Three Credits**
 Study of computer aided drafting and design specifically aimed at the theatre. Emphasis on a series of projects in research, analysis, and drafting on the computer.

418/518 **INTERPRETERS THEATRE** **Three Credits**
 Emphasis on script analysis, voicing and staging characters, compiled scripts, and literature as theatre.

425/525 **DIRECTION OF PLAYS** **Three Credits**
PREREQUISITES: DRM 123 and 200
 Emphasis on the origin and development of play direction, basic principles of composition, picturization, movement, rhythm, and pantomimic dramatization. Experience in directing a laboratory production with a cast of three or more.

430/530 **PLAY WRITING** **Three Credits**
 Script development with emphasis on material, characters, conflict, unity, dramatic action, suspense, and dialogue in relationship to plot, character, thought, diction, music, and spectacle.

435/535 **ADVANCED TECHNICAL THEATRE** **Three Credits**
PREREQUISITES: DRM 320/520, 321/521
 Advanced design theory and stage practice. Design of stage lighting, scenery, and sound.

436 **SOUND DESIGN** **Three Credits**
 Exploration of sound equipment: principles, practices, and uses as applied to today's theatre. A series of projects in recording, mixing, editing, and analysis.

450/550 **RESEARCH SEMINAR** **Three Credits**
PREREQUISITE: Senior or Graduate Level
 Research course in which each student completes an independent research project on some aspect of the theatre, such as a playwright, a theatrical movement, or a historical period.

460/560 **DRAMATIC THEORY AND CRITICISM** **Three Credits**
PREREQUISITE: DRM 324/524
 Major critical theories from Aristotle to present.

URBAN PLANNING - URP

192 **INTRODUCTION TO URBAN PLANNING** **Three Credits**
 Study of the role of planning in the development, management, and organization of metropolitan environments. Comprehensive analysis of the overall planning process and how master plans can guide the growth and development of cities and their hinterland.

201 **PLANNING THEORY** **Three Credits**
 Presentation of theories of urban planning and an in-depth analysis of various academic and professional planning viewpoints of planning theory. Discussion of transitional periods in the evolution process in explaining urban phenomena.

285 **URBAN LAND USE PLANNING** **Three Credits**
 Study of management and the use of land in primarily urban centers, including an analysis of the evolution, legislative support, scope and nature of land use planning and management. Emphasis on the evaluation and discussion of various development projects and the public's role in influencing land use development decisions.

292 **Three Credits**
PLANNING LAW
Survey of cases, legislation, and terminology relevant to planning law. Exploration of the social, economic, and environmental interrelationships of the developmental/real estate industry, local government, and the public. Emphasis on the dynamic role of law in planning processes and procedures.

301 **Three Credits**
REGIONAL PLANNING AND THE ENVIRONMENTS
Study of an evolutionary perspective of regional planning on a regional, national, and international level. Emphasis on discussions of population, resource distribution, and economic issues. Examination of the patterns of growth and underdevelopment in the context of regions and cities, including the environmental impacts of urban projects and the public/private sector roles and responsibilities in guiding regional economic and social growth.

315 **Three Credits**
URBAN TRANSPORTATION
Analysis of the role of transportation and transportation systems in the movement of people, goods, and services. Emphasis on an integral and vital component of the overall planning process and as the umbilical cord for the economic growth and stability of the community, metropolis, and nation.

335 **Three Credits**
PLANNING DESIGN, TECHNIQUES AND CONCEPTS
Overview of the history and process of urban design. Focus on the environmental movement and the concerns about environmental quality, historic preservation, and the design/development of residential, downtown, and shopping areas, and the effect of citizen-community participation on urban design and development.

355 **Three Credits**
URBAN ECONOMIC DEVELOPMENT PLANNING
Study of the economic vitality of established central cities in conjunction with their metropolitan regions. Primary emphasis on the internal structure of urban areas, including the dynamics of central city economics. Analysis of the dependence of residents upon unstable private capital formation within a city or region and the deleterious effects which capital migration has upon the quality of life in the central city and its environs.

365 **Three Credits**
HUMAN SERVICES PLANNING AND EVALUATION
Study of the multidisciplinary nature of planning and evaluation of human services, including such elements as social services, physical and mental health care; housing, drug, and alcohol abuse programs; informational services, etc. Evaluation of the effects of various human services programs on the quality of life of the public in general and on specific populations needing such special resources.

380 **Three Credits**
HOUSING AND COMMUNITY DEVELOPMENT
Introduction to both the rationale and techniques for providing assistance in the community development and city development process. Examination of the myriad institutional and market forces, as well as socioeconomic and demographic factors that affect the supply and the demand for housing. Emphasis on the concepts of citizen participation, self-direction, and self-help in real and simulated neighborhood revitalization efforts.

OFFICERS OF ADMINISTRATION

OFFICE OF THE PRESIDENT

MCDEMMOND, MARIE V.	<i>President</i>
B.A., Xavier University; M.Ed., University of New Orleans; Ed. D., University of Massachusetts at Amherst. Further study: State University of New York at Albany. Began service in 1997.	
SCHEXNIDER, ALVIN J.	<i>Executive Vice President</i>
B.A., Grambling State University; M.A., Ph.D., Northwestern University. Began service in 2002.	
CURTIS, JACQUELINE.....	<i>Special Assistant to the President</i>
B.S., Central State University. Further study: College of St. Rose. Began service in 1997.	
ELLIS, ERNEST M.	<i>Internal Auditor</i>
B.S., Norfolk State University; Further study: University of District of Columbia, University of Kentucky at Lexington, University of Nebraska at Omaha; CIA (Certified Internal Auditor) and CFE (Certified Fraud Examiner). Began service in 1982.	
HORSEY, EARLIE P.	<i>Executive Director Planning & Budget</i>
B.S., Norfolk State University. Began service in 1977.	
JOHNSON, KARLA C.	<i>Executive Assistant to the President & Agency Legislative Liaison</i>
B.A., M.P.A., Old Dominion University. Began service in 2000.	
JOHNSON, FRANCINE.....	<i>Compliance Officer/Ombudsperson</i>
B.A., Hampton Institute; M.A., Norfolk State University. Began service in 1980.	
KELLY, PATRICK B.	<i>General Counsel and Special Assistant Attorney General</i>
B.A., Michigan State University; J.D., Wayne State University; State Licensure and Admission to Practice in Virginia, Michigan and Florida. Began service in 2001.	

ACADEMIC AFFAIRS

BARNES, ELSIE M.	<i>Vice President for Academic Affairs</i>
B.S., North Carolina A&T State University; M.A.T., Indiana University of Bloomington; D.A., Government, Lehigh University. Further Study: University of North Carolina at Chapel Hill. Began service in 1973.	
CUEVAS, NURIA	<i>Associate Vice President for Academic Affairs/Director, Institutional Effectiveness and Assessment</i>
B.S., Southwestern Union College; M.S., University of Memphis; Ph.D., Kent State University. Began service in 2000.	
JONES, DOROTHY L. R.....	<i>Associate Vice President for Academic Affairs</i>
B.S., Albany State College; M.A., Ph.D., The Ohio State University. Harvard University, Institute for Management and Leadership. Began service in 1993.	
AKOMOLAFE, OLUSUJI	<i>Director, Global Education</i>
B.A. University of Lagos; M.S. University of Ife; Ph.D. University of Bordeaux. Began service in 2003.	
ATKINS, DEBRA.....	<i>Acting Director, Brambleton Outreach Center</i>
B.A., M.S.W., Norfolk State University. Began service in 1996.	
AZEKE, MERCY	<i>Executive Director, Office of First Year Experience</i>
B.S., University of Nigeria; M.ED & Ed.D., Temple University. Began service in 1999.	
BOGGER, TOMMY L.	<i>Director, Archives and Special Collections</i>
B.A., Norfolk State University; M.A., Carnegie-Mellon University; Ph.D., University of Virginia. Began service in 1965.	
BRACEY-MILLER, KATRINA D.....	<i>Director, Title III</i>
B.A., Virginia Union University; M.A., Norfolk State University. Began service in 1991.	
COKER, JOYCE	<i>Events Coordinator, L. D. Wilder Performing Arts Center</i>
B.A., Norfolk State University. Began service in 1987.	
FINCHER, GARY	<i>Registrar</i>
B.A., M.S.Ed., Western Illinois University; Further study: University of Arkansas, Louisiana State University. Began service in 2003.	
KEANE-DAWES, JENNIFER.....	<i>Director, Graduate Studies</i>
B.A., University of West Indies; M.A., Ph.D., Howard University. Began service in 2001.	
LAMPKIN, ANTIONETTE K.	<i>Director of New Student Orientation</i>
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LANGLEY, CURTIS TILMON	<i>Director, NSU/ODU Tri-Cities Center</i>
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LAWS, PAGE	<i>Director, Honors Program</i>
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DEANS

BRAXTON, JEAN *Dean, School of Education*
 B.S., Bennett College; M.A., Hampton Institute; E.D., University of North Carolina at Greensboro.
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SHELTON, PAUL E. *Vice President of University Advancement and Executive Director of NSU Foundation*
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B.A., Hampton University. Began service in 2003.	
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HORSEY, EARLIE P.	<i>Executive Director, Planning and Budget</i>
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SASS, TERRICITA	<i>Executive Director, Enrollment Management and Director, Institutional Research</i>
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JONES, SHELIA A.	<i>Budget Director</i>
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APPLETON, KEVIN, CPA.	<i>Vice President for Finance and Business</i>
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BOZEMAN, JOYCE E.	<i>Assistant Vice President for Finance</i>
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VALENTINE, TONY	<i>Assistant Vice President for Business</i>
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BARRETT, KAREN	<i>Acting Director, Physical Plant</i>
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Virginia Port Authority Police Academy. Began service in 1978.	
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HARDING, ESTHERINE J.	<i>Director, Financial Aid</i>
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LAMB, RONITA	<i>Postal Services Supervisor</i>
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B.S., Norfolk State University. Began service in 1996.	
ORR, CHERYL D.	<i>Director, Human Resources</i>
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WILLIAMS, DAVIDA H.	<i>Director, Auxiliary Enterprises</i>
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RESEARCH AND TECHNOLOGY

- OLADIPUPO, ADEBISI *Vice President for Research and Technology*
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- DAVIS-TARIQ, ALLISON *Associate Director of Enterprise Information Systems*
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- SHAW, PAULA D. *Director, Office of Sponsored Programs*
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- SMITH, OBIE *Associate Director of Media Services*
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STUDENT AFFAIRS

- CURTIS, LARRY *Vice President for Student Affairs*
B.A., University of Cincinnati; M.A., State University of New York; College of New Paltz. Began service in 1997.
- MILLER, MARTY *Associate Vice President for Student Affairs*
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- LOWE, SHARON B. *Assistant Vice President for Student Affairs*
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- ROBINSON, JANNIE *Assistant Vice President for Student Affairs*
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- ELLIS, BENJAMIN *Director, Career Services and Coordinator*
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- FITZGERALD, FAITH *Director, Residential Life*
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- GREAVES, CURTIS *Director, Counseling Center*
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- HARRIS, BEVERLY B. *Director, Disability Services*
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- HOLMES, VALERIE *Director, Student Support Services*
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- LUGO, MARIA *Director, International Student and Scholar Services*
B.S., Virginia Polytechnic Institute and State University. M.Ed., Old Dominion University. Began service in 2001
- MARABLE, MICHELLE *Director, Admissions*
B.S., Norfolk State University; M.A., The Ohio State University. Began Service in 1983
- PERRY, TANYA *Director, Upward Bound Program*
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PROFESSORS

- ABATENA, HAILU *Social Work*
M.S.W., Tata Institute of Social Services; M.A., Ph.D., Syracuse University. Began service in 1997.
- ABBASI, SAMI M. *Management & Decision Science*
B.S., M.B.A., Middle Tennessee State University; D.B.A., Mississippi State University.
Began service in 1992.
- ADAMS, DANNY *Interdisciplinary Studies*
B.A., Marshall University; M.S., Ed.D., Northern Illinois University. Began service in 1993.
- AGYEI, WILLIAM, K.A. *Sociology*
B.A., California State University; M.A., Loma Linda University, Johns Hopkins University; Ph.D., University of Maryland.
Began service in 1995.
- AKOMOLAFE, OLUSUJI *Political Science*
B.A., University of Lagos; M.S., University of Ife; Ph.D., University of Bordeaux. Began service in 2003
- ALEXANDER, WILLIAM H. *History*
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- BAKER, HOLLIE *Mathematics*
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Further study: University of North Carolina at Chapel Hill. Began service in 1970.
- BANATTE, JEAN M. *Accounting*
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- BARNES, ELSIE M. *Political Science*
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Further Study: University of North Carolina at Chapel Hill. Began Service in 1973.
- BOGGER, TOMMY L. *History and Geography*
B.A., Norfolk State University; M.A., Carnegie-Mellon; Ph.D., University of Virginia. Began Service in 1969.
- BOWMAN, ARTHUR W. *Biology*
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- BRAXTON, JEAN B. *Health, Physical Education and Exercise Science*
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- BROWN, ERNEST *Music*
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- BRUMAGE, NORMA WRIGHT *Secondary Education & School Leadership*
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- BYRNE, WILLIAM A. *History*
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- BYRD, HELEN BESSERT *Special Education*
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D.MUS.A., University of Maryland at College Park. Began service in 1973.
- CARON-SHEPPARD, JUDI A. *Sociology*
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- CHEN, JIM *Management Information Systems*
B.S., National Chung Hsing University; M.B.A., West Texas State University; Ph.D., North Texas State University. Began service in 1984.
- COLEMAN, ANTIONETTE *Social Work*
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- COLEMAN, CLARENCE D. *Chemistry*
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- COOLEY, JOY *Psychology*
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- DAMTEW, DESTA *Accounting*
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- DANCY, JOSEPH JR. *Social Work*
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- DANDRIDGE, RITA B. *English and Foreign Languages*
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- DELOATCH, SANDRA J. *Computer Science*
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- ESCOFFERY, BERTHA T. *English and Foreign Languages*
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- EULE, EDWARD E. *Sociology*
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- FEIT, MARVIN *Social Work*
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- FULLER, MILDRED KEELS *Allied Health*
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- GRIFFIN, VESTA *Music*
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- HARRIS, WELDON B. *Military Science (Army ROTC)*
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- HARRISON, GEORGE C. *Computer Science*
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- JORDAN, LAWRENCE *Fine Arts*
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- KANNARKAT, JOY PAPPACGAN *Psychology*
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- KIAH, ROSALIE *English and Foreign Languages*
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- KIM, DONG SOO *Social Work*
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MORRIS, CAROLE V.	<i>Special Education</i>
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MURRAY, CLARENCE	<i>English and Foreign Languages</i>
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NOLAN, JAMES ANTHONY	<i>Sociology</i>
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OKOLI, EMEKA	<i>Mass Communications and Journalism</i>
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OKONKWO, AUGUSTINE	<i>Biology</i>
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OLADIPUPO, ADEBISI	<i>Engineering</i>
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PARSON, WILLAR WHITE	<i>Nursing</i>
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- PERRY, RUTH ANNA..... *English and Foreign Languages*
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- PUNJABI, VINA..... *Physics*
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- RAVENELL, PATRICIA B..... *Biology*
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Began service in 1974.
- ROBINSON, DELANYARD..... *Psychology*
B.S., Tuskegee Institute; M.A., St. Mary's university; M.S., Ph.D., Rutgers University. Began service in 1984.
- ROSENMAN, JOHN B. *English and Foreign Languages*
B.A., Hiram College; M.A., Ph.D., Kent State University. Began service in 1982.
- ROWE, H. ALAN *Chemistry*
B.S., University of North Carolina; Ph.D., North Carolina State University. Further study: Bowman Gray School of Medicine.
Began service in 1984.
- SAGALDO, CARLOS *Chemistry*
M.S., Ph.D., Michigan State University. Began service in 1994.
- SAWYER, MARTHA BRACEY..... *Social Work*
B.S., Norfolk State University; M.S.W., Catholic University; D.S.W., Howard University. Further study: Mt. Zion Hospital and Medical Center.
Began service 1976.
- SCHIELE, JEROME E. *Social Work*
B.A., Hampton University; M.S.W., D.S.W., Howard University. Began service in 2002.
- SHAH, SHANTILAL N. *Computer Science*
B.S., University of Baroda, India; M.S., The College of William and Mary; Ph.D., Syracuse University. Began service in 1986.
- SHANE, H. MARTIN *Management & Decision Science*
B.S., Northern Illinois University; M.B.A., Northern Illinois University; Ph.D., University of Iowa. Began service in 2004.
- SHIAU, LIANG-RONG..... *Finance and Entrepreneurship*
B.A., Soochow University; M.S., University of Southern Mississippi; Ph.D., University of Arkansas. Began service in 1972.
- SPURLIN, JOHN H., *Technology*
Ph.D., M.S.E.E., M.Ed., Wayne State University; B.S.E.E., Cooks Institute. Began service in 2004.
- THOMAS, ERWIN K. *Mass Communications and Journalism*
B.S., University of Oregon; M.S., Brooklyn College; Ph.D., University of Missouri. Began service in 1981.
- THORNTON, MONA..... *Early Childhood/Elementary Education*
B.S., M.S., Howard University; Ed.D., University of Massachusetts/Amherst. Began service in 1979.
- TICKTON, STANLEY DAVID..... *Mass Communications and Journalism*
B.A., Wayne State University; M.A., University of Wisconsin; Ph.D., University of Michigan. Began service in 1974.
- TOMPKINS, CHRISTOPHER *Fine Arts*
B.S., M.F.A., Louisiana State University. Further study: Pratt Institute. Began service in 1977.
- TUCKER, DELANO..... *Health, Physical Education and Exercise Science*
B.S., Virginia State University; M.A., The George Washington University; Ed.D., The George Washington University.
Began service in 2000.
- WALL, CURTISS E..... *Mathematics*
B.S., Alma College; M.A.T., Ph.D., Michigan State University. Began service in 1991.
- WALTON, LOUISE M. *Social Work*
B.A., Virginia State College; M.S.W., Virginia Commonwealth University; Ph.D., University of Virginia. Began service in 1986.
- WHALEY, GARY *Management & Decision Science*
B.S., M.B.A., Miami University, Ohio; Ph.D., State University of New York, Buffalo. Began service in 1984.
- WILSON, ROWENA..... *Social Work*
B.A., West Virginia State College; M.S.W., D.S.W., Howard University. Began service in 1986.
- WILSON, RUDOLPH *Political Science*
B.A., Howard Univ ersity; M.A., Political Science, SUNY, Binghamton; Ph.D., Political Science, Atlanta University. Began service in 1986.
- WRIGHT, OTHA..... *Social Work*
B.S., Tennessee State University; M.S.W., University of Tennessee; Ed. D, University of Virginia. Began service in 1971.

- YOUSSEF, MOHAMED *Management & Decision Science*
B. Comm., Cairo University; M.B.A., Baruch College of CUNY; M. Phil., The City University of New York;
Ph.D., The City University of New York. Began service in 1995.
- ZEMEDKUN, WOLD *Finance and Entrepreneurship*
B.S., Haile Sellassie I. University; M.A., Williams College; Ph.D., University of Cincinnati. Began service in 1986.

ASSOCIATE PROFESSORS

- AGIRI, BABATUNDE *History*
B.A., University of London; M.A., University of Ibadan; Ph.D., University of Wisconsin. Began Service in 1997.
- AHMAD, AFTAB *Computer Science*
B.S., The University of Engineering and Technology, Lahore; M.S., Ph.D., George Washington University. Began service in 2003.
- AIRD, STEVEN D. *Chemistry*
B.S., Montana State University; M.S., Northern Arizona State University; Ph.D., Colorado State University. Began service in 2002.
- BANKS, CARRAY *Technology*
B.S., Elizabeth City State University; Ball State University; Ph.D., Pennsylvania State University. Began service in 1991.
- BASAPPA, PRATHAP *Engineering*
B.S., University of Mysore; M.S., Indian Institute of Science; Ph.D., Indian Institute of Science. Began service in 1999.
- BELHADJALI, MONCEF *Management Information Systems*
B.S., University of Tunis; M.A., Ph.D., The Wharton School, University of Pennsylvania. Began service in 1989.
- BENNETT, GLADYS M. *Psychology*
B.S., M.S., DePaul University; Ph.D., University of New Mexico. Began service in 1994.
- BERQUIST, ROBERT *Special Education*
B.S., Ed., Union College; M.Ed., Boston University. Began service in 1996.
- BLACK, SUELY *Chemistry*
B.S., M.Sc., Rio de Janeiro Federal University Brazil; M.Ph., Ph.D., Columbia University. Began service in 1996.
- BONNER, CARL E. *Chemistry*
B.S., M.S., Howard University; Ph.D., University of Rochester. Began service in 1995.
- BRIGGS, PAULA CLARK *Mass Communications and Journalism*
B.A., Hampton University; M.A., University of Missouri-Columbia; Ph.D., Howard University. Began service in 1986.
- BROADUS-GAY, MARILYN *Interdisciplinary Studies*
B.A., M.S.W., University of Kentucky; D.A., George Mason University;
Bryn Mawr College Summer Institute for Women in Higher Education Administration. Began service in 1999.
- BROCKINGTON, WANDA G *Mass Communications and Journalism*
B.A., M.A., North Carolina Central University; Ph.D., Howard University. Further study: University of Arizona. Began service in 1979.
- BROWN, CHARLOTTE A. *English and Foreign Languages*
B.S., University of Tennessee; M.S., University of North Florida. Further study at Old Dominion University. Began Service in 1978.
- BROWN, JAMES P. *History*
B.A., Illinois Wesleyan University; M.A., Indiana University. Further Study: Mexico City College; Illinois State University; U.C.L.A.
Began Service in 1968.
- BROWN, ROGERS N. *Music*
B.A., Louisiana Tech University; M.M., University of Michigan. Began service in 1980.
- CHAKKA, RAM *Computer Science*
B.Sc., Andhra/Nagarjuna University; M.S., Indian Institute of Science, Ph.D., University of Newcastle upon Tyne. Began service in 2000.
- CHAUDHURY, S. RAJ *Physics*
B.A., Vassar College; M.S., Ph.D., University of California, Los Angeles. Began service in 1995.
- CHESTER, MICHAEL C. *Accounting*
B.A., North Carolina State University; M.S., University of North Carolina, Greensboro;
Ph.D., Virginia Commonwealth University; Certified Public Accountant. Began service in 1976.
- COAN, BOYD *Mathematics*
B.S., State University of New York at Brockport; M.S., Syracuse University; Ph.D., University of North Carolina at Chapel Hill.
Began service in 1999.
- COLSON, DARLENE G. *Psychology*
B.A., M.A., Case Western Reserve University; Ph.D., University of North Carolina at Chapel Hill. Began service in 1980.
- DABNEY, DONNA W. *Secondary Education and School Leadership*
B.S., Texas Woman's University; M.S., Prairie View A&M University; Ph.D., Walden University. Began service in 2003.
- DANEK, ROBERT *English and Foreign Languages*
B.A., Stanford University; M.L.S., University of Oklahoma; Ph.D., Indiana University. Began service in 1999.
- DONDETI, VENKATESWARA R. *Management & Decision Science*
B.S., Regional Eng College (India); M.S., Ph.D., Case Western University. Began service in 1989.

DORSEY, SAM	..... <i>Music</i>
B.M., University of North Carolina, Greensboro; M.M., Virginia Commonwealth University. Began service in 1984.	
EARL, ARCHIE W., SR.	..... <i>Mathematics</i>
B.S., Norfolk State University; M.A., Hampton University; Ed.D., The College of William and Mary. Began service in 1991.	
FAISON, KAREN	..... <i>Nursing</i>
B.S.N., Hampton University; MSN/FNP-University of North Carolina at Chapel Hill; Certificate in Health Administration, Old Dominion University; Ph.D., Virginia Commonwealth University. Began service in 1999.	
FERGUSON, MILTON WINSTON	..... <i>Physics</i>
B.S., Norfolk State University; M.S., Purdue University. Further study: Purdue University; University of Michigan. Began service in 1965.	
FORD, CHARLES H.	..... <i>History</i>
B.A., University of Pittsburgh; M.A., Ph.D., Vanderbilt University. Began Service in 1992.	
GOLEMBIEWSKI, WALTER	..... <i>Technology</i>
B.S.E.E., Gannon University; M.S., Pennsylvania State University; Ed.D., University of Pittsburg. Began service in 1996.	
HAILE-MARIAM, YACOB	..... <i>Finance and Entrepreneurship</i>
LL.B., Addis University; LL.M., University of California, Los Angeles; D.B.A., U. S. International University. Began service in 1984.	
HALL, JOSEPH	..... <i>Chemistry</i>
B.S., Roanoke College; M.S., Old Dominion University; Ph.D., Kent State University. Began service in 1997.	
HARRIS, JUNE L.	..... <i>Special Education</i>
B.S., North Carolina Central University; M.A., Atlanta University; Ph.D., University of Maryland, College Park. Further Study: John Hopkins University; University of Alabama; Loyola College. Began service in 2003	
HARVEY, JOYCE B.	..... <i>Allied Health</i>
B.S., Christian Brothers College; B.S., University of Tennessee; M.S., Norfolk State University; Ph.D., Old Dominion University. Began service in 1981.	
HOLMES, GWENDOLYN V.	..... <i>Health, Physical Education and Exercise Science</i>
B.S., Norfolk State University; M.A., Hampton University; CAGS, Virginia Polytechnic & State University, Ed.D., Virginia Tech. Began service in 2000.	
HSIEH, CHUNG-CHU	..... <i>Computer Science</i>
B.S., National Tsing Hua University; M.S., Ph.D., Northwestern University. Began service in 2002.	
HUNT, CHARLES RAY	..... <i>Technology</i>
B.S., Jackson State College; M.A., Ball State University; C.A.S., Northern Illinois University. Further study: Virginia State University; Old Dominion University. Began service in 1970.	
IBRAHIM, ADEM H.	..... <i>Engineering</i>
M.S., Royal Institute of Technology, Stockholm, Sweden; Ph.D., Old Dominion University. Began service in 1997.	
JACKSON-HEARD, MARY F.	..... <i>Accounting</i>
B.S., Howard University; M.B.A., Rutgers University; Ph.D., New York University. Certified Public Accountant. Began service in 1994.	
JENKS, NELSON GARY	..... <i>Fine Arts</i>
B. F. A., Ohio State University; M.A., University of Northern Iowa; Further study Xavier University and Illinois State University. Began service in 1992.	
KEEVE, MICHAEL O	..... <i>Mathematics</i>
B.A., Hampton University; M.S., University of Virginia; Ph.D., Georgia Institute of Technology. Began service in 1987.	
KHAN, MUSHTAQ A.	..... <i>Mathematics</i>
M.S., University of Punjab; M.S., University of Pakistan; Ph.D., Old Dominion University. Began service in 1987.	
KHANDAKER, MAHBUB A.	..... <i>Physics</i>
B.A., Brandeis University; M.S., Ph.D., University of Washington. Began service in 1995.	
KNIGHT, MARGARET D.	..... <i>Secondary Education and School Leadership</i>
B.S., Virginia State University; Ed.S., Ed. D., The George Washington University. Began service in 2002.	
LAVERDIERE, RAYMOND G.	..... <i>Accounting</i>
B.S., M.B.A., University of Rhode Island; Ph.D., Pennsylvania State University; Certified Fraud Examiner. Began service in 1990.	
MARTIN, MATILDA J.	..... <i>Early Childhood/Elementary Education</i>
B.S., Fayetteville State University; M.S., Kansas State; Ph.D., University of Florida. Began service in 1973.	
MASEMBE, HARRIET	..... <i>English and Foreign Languages</i>
B.A., M.A., Makerere University; Ph.D., University of Wisconsin. Began service in 2001.	
MITCHELL, DIANE	..... <i>Army ROTC</i>
B.S., Saint Joseph's University; M.B.A., Eastern University. Began service in 2004.	
MOOSAVIZADEH, SHAROOZ	..... <i>Mathematics</i>
B.S., M.S., Ph.D., Old Dominion University. Began service in 1992.	
NEWBY-ALEXANDER, CASSANDRA	..... <i>History</i>
B.A., University of Virginia; M.A., Old Dominion University; Ph.D., The College of William and Mary. Began Service in 1992.	

NOGINOV, MIKHAIL A.	Physics
M.S., Moscow Institute for Physics and Technology; P.D., General Physics Institute of the USSR. Further Study: Old Dominion University. Began service in 1997.	
NWEKE, ANTHONY	Chemistry
B.S., University of Benin, Nigeria; Ph.D., University of Maryland, College Park. Began service in 1988.	
OKALA, CHINEDU	Fine Arts
D. I. M. T., H. N. D. I. M. T., Institute of Management and Technology, Enugu, Nigeria; M. F. A., Howard University. Began service in 1992.	
OKEREAFOEZEKE, NONSO	Sociology
LL.B., University of Nigeria; B. L. Nigerian Law School; M. A. University of Detroit; Ph. D. Indiana University of Pennsylvania. Began Service in 2003.	
PACE, WILLIAM H., JR.	English and Foreign Languages
B.A., Rollins College; M.A., University of North Carolina at Chapel Hill; Ph.D., University of Arkansas. Further study; American University; Western Carolina University. Began service in 1973.	
PARKER, WILLIAM H., JR.	Mathematics
B.S., St. Paul's College; M.S., Old Dominion University; M. Div., Virginia Union University; Ed.D., Virginia Polytechnic and State University. Began service in 1992.	
PETERSON, SANDRA LOUISE	Computer Science
B.A., M.B.A., M.S., Ph.D., College of William & Mary. Began service in 1998.	
POLLEY, PAULETTE	Marketing
B.S., Howard University; M.B.A., Kent State University; Ph.D., Kent State University. Began service in 1996.	
PRETLOW, CAROL J.	Political Science
B.A., Fisk University; M.A., Norfolk State University; J.D., Washington College of Law at American University; LL.M., American University. Began service in 1995	
RAKHIMOV, RAKHIM	Chemistry
B.S., Moscow Institute of Physics and Technology; M.S., Moscow Institute of Physics and Technology; Ph.D., Institute of Chemical Physics, Moscow; Dr. S, Institute of Chemical Physics, Moscow. Began service in 1996.	
RANSOM, HARRISON LEROY	Physics
B.A., Virginia State University; M.A., Boston University. Further study: American University; Boston University. Began service in 1958.	
RENCE, MARIS	English and Foreign Languages
Technical Director, Wilder Center B.A., Cleveland State University; M.F.A., Tulane University. Began service in 1997.	
ROSS-HAMMOND, AMELIA	Music
B.S., Ithaca College; M.M., College of New Jersey; Ph.D., University of Denver. Began service in 1997.	
SANFORD, O'NEIL	Music
B.S., Southern University; M.Med., VanderCook College of Music. Began service in 1998.	
SAWYER-WATSON, BERNICE	Allied Health
B.A., Fisk University; M.B.A., University of Miami. Began service in 1979.	
SHEEN, JEENSON	Technology
B.S., Tamkang University, Taiwan; M.S., Ph.D., Old Dominion University. Began service in 1997.	
SIRJANI, MOJTABA	Mathematics
B.S., Old Dominion University; M.S., North Carolina State University; Ph.D., Old Dominion University. Began service in 1994.	
SITES, ROBERT	Fine Arts
B. F. A., University of Kansas; M. F. A., Cranbrook Academy of Art. Further study Syracuse University. Began service in 1976.	
SOCOLOVSKY, EDUARDO A.	Mathematics
B.S., M.S., University of Buenos Aires; Ph.D., Carnegie-Melon University. Began service in 2002.	
SONG, KYO D.	Technology
B.S., Inha University; M.S., Hampton University; Ph.D., University of Nebraska. Began service in 1993.	
SUN, SAM-SHAJING	Chemistry
B.S., Peking University; M.S., California State University at Northridge; Ph.D., University of Southern California. Began service in 1998.	
THOMAS, RONALD E.	Psychology
B.A., Lake Forest College; M.A., Ph.D., Boston University. Began service in 1981.	
THOMPSON, DENISE-MARGARET	Finance and Entrepreneurship
B.S., University of West Indies; M.S., Stanford University; Ph.D., University of Southern Florida. Began service in 1999.	
UNSETH, ALLAN D.	Accounting
B.A., University of Minnesota; M.A., Minnesota State University; Certified Public Accountant. Began service in 1973.	
VERMA, RENUKA	Mathematics
B.S., M.S., B.Ed., Utkai University; Ph.D., Indian Institute of Technology. Began service in 2002.	

WARD, SHELIA.....	<i>Health, Physical Education and Exercise Science</i>
B.S., Indiana University; M.Ed., Temple University; Ph.D., Temple University. Began service in 1995.	
WARNER, SEAN	<i>Secondary Education and School Leadership</i>
B.A., City College of New York (CUNY); M.Ed., University of Massachusetts; Ed.D., University of Massachusetts. Began service in 2000.	
WARREN, NATHANIEL, JR.	<i>Athletics</i>
B.S., M.A., Norfolk State University. Began service in 1992.	
WASHINGTON, CHRISTOPHER	<i>Engineering</i>
B.S., Hampton University; M.E., Ph.D., University of Virginia. Began service in 2002.	
WILLIAMS, EDGAR	<i>Management and Marketing</i>
B.A., Lincoln University; M.B.A., Ph.D., University of Utah. Began service in 1984.	
WILLIAMS, JOHN F.	<i>Army ROTC</i>
B.S.ME, Georgia Tech, M.BA Capital University. Began service in 2002	
WITZE, KARA A.	<i>Health, Physical Education and Exercise Science</i>
B.A., Biola University; M.S., California State University at Fullerton; Ph.D., Oregon State University. Began service in 2000.	
ZAPATERO, ENRIQUE.....	<i>Management Information Systems</i>
B.S., Hampton University; M.B.A., Hampton University; Ph.D., Virginia Commonwealth University. Began service in 1995.	

ASSISTANT PROFESSORS

ADAMS, LEROY	<i>Special Education</i>
B.S., Huston-Tillotson College; M.A., The George Washington University; Ed.D., The George Washington University. Began service in 1995.	
ADAMS, PAUL	<i>Music</i>
B.S., Southern University; M.Med., Louisiana State University. Began service in 2000.	
AGBAKPE, PETER TSE.....	<i>Mathematics</i>
B.Sc., University of Science & Technology, Kumasi, Ghana; M.S., Ph.D., Hampton University. Began service in 1998.	
AKAMIRO, CHIJOKE E.	<i>Technology</i>
B.S., M.S., West Virginia University. Further study: Old Dominion University. Began service in 1987.	
AMOS, GLORIA LEE	<i>Music</i>
B.S., Southern University; M.M., Indiana university; Fulbright Scholar Certificate. Further study: Stuttgarer Hochschule fur Musik, Stuttgart, Germany. Began service in 1969.	
ANDERSON, WANELLE J.	<i>English and Foreign Languages</i>
B.A., Virginia State University; M.A., Norfolk State University; Ph.D., Regent University. Began service in 2000.	
ARMSTRONG, LENORA.....	<i>Health, Physical Education and Exercise Science</i>
B.S., Hampton University; M.Ed., Temple University. Began service in 2000.	
ASKEW, ROBERT.....	<i>Finance and Entrepreneurship</i>
B.A., Cuttington College; M.S.M., Arthur D. Little Management Education Institute. Began service in 1997.	
BEATHEA, WILLIAM	<i>Music</i>
B.A., Ball University; M.A., Eastern Illinois University. Began service in 2000.	
BOYKINS-WINROW, CAROLLYN.....	<i>Biology</i>
B.S., Fisk University; M.S., Tennessee State University; Ph.D., Michigan State University. Began service in 2000.	
BRYANT-SHANKLIN, MONA.....	<i>Early Childhood/Elementary Education</i>
B.S., North Carolina Central University; M.S., Kansas State University; Ph.D., University of North Carolina at Chapel Hill. Began service in 1997.	
BURKE, THEODORE.....	<i>Social Work</i>
B.S., Villanova University; M.S.W., Boston College. Began service in 1993.	
BYRD, MELENDEZ O.	<i>Secondary Education and School Leadership</i>
B.S., Ma.Ed., Ph.D., Virginia Tech. Began service in 2002	
CAGEAO-LUCHETTI	<i>Biology</i>
B.S., M.S., University of Buenos Aires; Ph.D., Old Dominion University & Eastern Virginia Medical School. Began service in 2001.	
CALLAHAN, ANDREA.....	<i>Special Education</i>
B.S., M.A., Norfolk State University. Began service in 1991.	
CANNON, SHELIA.....	<i>Nursing</i>
B.S.W., M.S.N., University of Virginia. Ph.D., Hampton University. Began service in 1999.	
COOMBS-REYES, JEROME D.....	<i>Mathematics</i>
B.S., Morehouse College; B.S., M.S., Ph.D., Georgia Institute of Technology. Began service in 2004.	
COOPER, PHYLLIS E.	<i>English and Foreign Languages</i>
B.S., Central State University ; M.A., Old Dominion University; Ph.D., Pennsylvania State University. Began service in 1999.	

CROMWELL, BERTHENIA	Nursing
B.S.N., M.S.N., Hampton University. Began service in 2000.	
DAS, RABINDRA N.	Chemistry
B.S., Burdwan University; M.S., Ph.D., Indian Institute of Technology. Began service in 2003.	
DAVENPORT, CAROL	English and Foreign Languages
B.A., Norfolk State University; M.A., Old Dominion University; Ph.D., Pennsylvania State University. Began service in 1999.	
DOUGLAS, RANSOM	Technology
B.B.A., University of Texas; M.B.A., Golden Gate University; D. Ed., George Washington University. Began service in 1998.	
EPPLEIN, LAWRENCE E.	Tourism and Hospitality Management
B.S., University of Baltimore; M.B.A., George Washington University. Began service in 1993.	
EXUM, BRENDA	Social Work
B.A., M.S.W., Norfolk State University. Began service in 1993.	
FAIRFAX, COLITA NICHOLS.	Social Work
B.S., Howard University; M.S.W., Rutgers University; M.A., Temple University. Further study: Temple University. Began service in 1999.	
FALLS, III, IRA W.	English and Foreign Languages
B.S., M.S., Norfolk State University; Ph.D., Old Dominion University. Began service in 1987.	
FANG, MING	Mathematics
B.S., Hunan University; M.S., and Ph.D., University of Delaware. Began service in 2003.	
FOSTER, JOYCE A.	Sociology
B.S., Norfolk State University; M.A., Purdue University. Began service in 1969.	
GAINES, RODNEY P.	Health, Physical Education and Exercise Science
B.S., M.S., Ph.D., Virginia Tech. Began service in 2002.	
GEDDIS, DEMETRIS L.	Engineering
B.S., Hampton University; M.S., Ph.D., Georgia Institute of Technology. Began service in 2004.	
GRAHAM, JONATHAN, JR.	Computer Science
B.S., University of Wisconsin; M.S., Jackson State University. Further study: The College of William and Mary. Began service in 1984.	
GRIFFIN, WILFORD	English and Foreign Languages
B.A., M.A., Morgan State University. Further study: Howard University, University of Pennsylvania, Indiana University of Pennsylvania. Began service in 1977	
HACKER, DESIDERIA	Psychology
B.A., Emory University; M.S., Ph.D., University of Georgia. Began service in 2000.	
HAROLD, ALMA	English and Foreign Languages
B.S., M.A., Hampton University. Began service in 1989.	
HARRIS, MELINDA D.	Finance and Entrepreneurship
B.A., Lincoln University; M.B.A., University of Phoenix, San Jose Campus. Further study: Case Western Reserve University. Began service in 1993.	
HAYNES, GWENDOLYN SHAW	English and Foreign Languages
B.A., M.A., Norfolk State University. Further study: Regent University. Began service in 1998.	
HOU, JIASHI	Mathematics
B.S., Shanghai University; M.S., Ph.D., Rensselaer Polytechnic Institute. Began service in 2002.	
HU, NING	Computer Science
B.S., Jinzhon Teachers College; M.S., D.Sc., Washington University. Began service in 2002.	
JACKSON, CATHY M.	Mass Communications and Journalism
B.S., Jackson State University; M.A., University of Michigan; Ph.D., University of Missouri. Began service in 1998.	
JAMES, IONEY	Early Childhood /Elementary Education
B.A., University of West Indies; M.Sci., Central Connecticut State University; Ph.D., University of Albany (SUNY). Began service in 2002.	
JERVEY, TABMITHA Y.	Biology
B.S., Norfolk State University; Ph.D., Eastern Virginia Medical School/Old Dominion University. Began service in 2002.	
JOHNSON, LINDA E.	English and Foreign Languages
B.S., M.S., Norfolk State University. Further Study: Old Dominion University, Norfolk State University. Began service in 1972.	
KEREKES, MARGARET D.	Social Work
B.A., The College of William and Mary; M.S.W., Norfolk State University. Further study: Old Dominion University. Began service in 1977.	
KOONCE, RICHARD J.	Mass Communications and Journalism
B.A., Norfolk State University; M.A., Michigan State University. Began service in 1998.	
LANGLEY, THALIA	Social Work
B.A., Texas Southern University; M.S.W., University of Washington. Began service in 1984.	

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- LITTLEJOHN, JEFFREY L. *History*
B.A., Belmont University; M.A., Ph.D., University of Arkansas. Began service in 2001.
- LONERGAN, PAMELA A. *Allied Health*
B.S., M.S., Old Dominion University; Certification in Medical Technology, Norfolk General Hospital, Virginia;
Further study: Old Dominion University. Began service in 1989.
- LONG, JACQUELYN ELIZABETH *Computer Science*
B.S., Fisk University; M.S., Syracuse University. Further study: University of Maryland. Began service in 1972.
- MCCALL, BARBARA C. *English and Foreign Languages*
B.S., M.A., Norfolk State University. Began service 1966.
- MILLER, KHADIJAH O *Interdisciplinary Studies*
B.A., New York University; M.A., Graduate Certificate in Women's Studies; Ph.D., Temple University.
Began service in 2002
- MORSI, RASHA M. *Engineering*
B.Eng., King's College, London; M.E., Ph.D., Old Dominion University. Began service in 2003.
- MURRAY, BETTY *Biology*
B.S., South Carolina University; M.S., Bowling Green State University. Further Study: Old Dominion University. Began service in 2000.
- NELSON, CAROL RHODES *Early Childhood/Elementary Education*
B.A., Elizabeth City State University; M.A., University of Connecticut. Further study: University of Connecticut. Began service in 1974.
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