



*Norfolk State University*<sup>™</sup>  
**UNDERGRADUATE CATALOG**



**2008-2009**

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# **Norfolk State University**

## **2008-2009**

### **Undergraduate Catalog**

700 Park Avenue  
Norfolk, VA 23504  
(757) 823-8600  
(800) 274-1821

<http://www.nsu.edu/catalog/UndergraduateCatalog.html>

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*Achieving With Excellence*

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## 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 specified 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 readmission.
- 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 to the new degree program.
- Students are held 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.

*Norfolk State University is committed to equality of educational opportunity and does not discriminate against applicants, students or employees based on race, color, national origin, religion, gender, age or disability. Moreover, Norfolk State University is an equal opportunity/affirmative action employer.*

*This catalog is effective at the beginning of the academic year.*

*All provisions, regulations, degree programs and course listings are subject to revision without prior notice by the appropriate governing bodies of Norfolk State University. Students pursuing degree programs when such changes are instituted are expected to comply with the revisions that relate to their respective program.*

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# ACADEMIC CALENDARS

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## FALL SEMESTER 2008

Faculty/Staff/School/Department Meetings, Faculty Information Workshops .....	Monday, August 18
Departmental Counseling & Registration .....	Tuesday, August 19 – Friday, August 22
<b>Classes Begin/Late Registration.....</b>	<b>Saturday, August 23</b>
Last Day to Drop a Course and Receive 100% Refund.....	Friday, August 29
Last Day for Late Registration/Adding Courses or Declaring Audit.....	Friday, August 29
Labor Day Holiday (No Classes).....	Monday, September 1
Fall Convocation.....	Thursday, September 4
Mid-Semester Advisory Examination Period.....	Monday, October 6 – Saturday, October 11
Mini-Term 2 (Classes Begin).....	Saturday, October 11
Last Day to Report Mid-Semester Advisory Grades.....	Tuesday, October 14
Last Day to Drop a Course.....	Friday, October 17
Examination of Writing Competency.....	Saturday, October 18
Registration for Spring 2009 Semester begins.....	Monday, October 27 – Friday, January 9
Last Day to Apply for May 2009 Graduation.....	Friday, November 14
Reading Day.....	Wednesday, November 26
Thanksgiving Break.....	Thursday, November 27 – Sunday, November 30
Classes Resume.....	Monday, December 1
<b>Classes End.....</b> <b>(Last Day to Withdraw from the University)</b>	<b>Friday, December 5</b>
Final Examination Period.....	Saturday, December 6 – Friday, December 12
<b>COMMENCEMENT.....</b>	<b>Saturday, December 13</b>
Last Day to Report Final Grades.....	Tuesday, December 16

*Official university calendars, which incorporate modifications as needed, may be accessed at [www.nsu.edu/academiccalendar](http://www.nsu.edu/academiccalendar).  
The catalog is available online at [www.nsu.edu/catalog](http://www.nsu.edu/catalog).*



## Academic Calendars (cont'd)

### SUMMER SESSIONS 2009

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#### MINI-TERM A | MAY 18 – JUNE 26, 2009 (6 WEEK TERM)

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Registration.....	Monday, March 30 – Friday, May 15
<b>Classes Begin/Late Registration.....</b>	<b>Monday, May 18</b>
<b>Last Day to Drop a Course and Receive 100% Refund.....</b>	<b>Thursday, May 21</b>
Last Day for Late Registration/Adding Courses or Declaring Audit.....	Friday, May 22
<b>Memorial Day Holiday (No Classes).....</b>	<b>Monday, May 25</b>
Last Day to Drop a Course and Receive 50% Refund.....	Tuesday, May 26
Last Day to Drop a Course.....	Tuesday, June 16
<b>Classes End.....</b> <b>(Last Day to Withdraw from the University without Academic Penalty)</b>	<b>Thursday, June 25</b>
Final Examination Period.....	Friday, June 26
<b>Last Day to Report Final Grades.....</b>	<b>Tuesday, May 12</b>

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#### MINI-TERM B | JUNE 29 – JULY 24, 2009 (4 WEEK TERM)

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Registration.....	Monday, March 30 – Friday, June 26
<b>Classes Begin/Late Registration.....</b>	<b>Monday, June 29</b>
<b>Last Day to Drop a Course and Receive 100% Refund.....</b>	<b>Wednesday, July 1</b>
Last Day for Late Registration/Adding Courses or Declaring Audit.....	Thursday, July 2
<b>Independence Day Holiday (No Classes).....</b>	<b>Friday, July 3</b>
Last Day to Drop a Course and Receive 50% Refund.....	Monday, July 6
Last Day to Drop a Course.....	Monday, July 13
<b>Classes End.....</b> <b>(Last Day to Withdraw from the University without Academic Penalty)</b>	<b>Thursday, July 23</b>
Final Examination Period.....	Friday, July 24
<b>Last Day to Report Final Grades.....</b>	<b>Tuesday, July 28</b>

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The catalog is available online at [www.nsu.edu/catalog](http://www.nsu.edu/catalog).*

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## Academic Calendars (cont'd)

### SPRING SEMESTER 2009

Faculty/Staff/School/Department.....	Monday, January 5
Meetings, Faculty Information Workshops	
Departmental Counseling & Registration.....	Tuesday, January 6 – Friday, January 9
<b>Classes Begin/Late Registration.....</b>	<b>Saturday, January 10</b>
<b>Last Day to Drop a Course and Receive 100% Refund.....</b>	<b>Friday, January 16</b>
Last Day for Late Registration/Adding Courses or Declaring Audit.....	Friday, January 16
<b>Martin Luther King Jr. Holiday (No Classes).....</b>	<b>Monday, January 19</b>
Last Day to Drop a Course and Receive 50% Refund.....	Thursday, January 22
Mid-Semester Advisory Examination Period.....	Monday, March 2 – Saturday, March 7
Mini-Term 2 (Classes begin).....	Saturday, March 7
SPRING BREAK FOR STUDENTS.....	Monday, March 9 – Sunday, March 15
Last Day to Report Mid-Semester Advisory Grades.....	Tuesday, March 10
Last Day to Drop a Course.....	Friday, March 27
Examination of Writing Competency.....	Saturday, March 28
Registration for Summer and Fall 2009 Semester.....	Monday, March 30 – Friday, August 28
Last Day to Apply for December 2009 Graduation.....	Monday, March 30 – Friday, August 28
<b>Classes End.....</b>	<b>Friday, May 1</b>
<b>(Last Day to Withdraw from the University)</b>	
Final Examination Period.....	Saturday, May 2 – Friday, May 8
<b>COMMENCEMENT.....</b>	<b>Saturday, May 9</b>
<b>Faculty Conference.....</b>	<b>Monday, May 11</b>
<b>Last Day to Report Final Grades.....</b>	<b>Tuesday, May 12</b>

*Official university calendars, which incorporate modifications as needed, may be accessed at [www.nsu.edu/academiccalendar](http://www.nsu.edu/academiccalendar).  
The catalog is available online at [www.nsu.edu/catalog](http://www.nsu.edu/catalog).*

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*Office of the President*  
700 Park Avenue, Room 320, Norfolk, Virginia 23514  
Tel: (757) 823-2470 Fax: (757) 823-2342  
Web: [www.nsu.edu](http://www.nsu.edu)



Dear University Community:

Welcome to Norfolk State University! Since its founding in 1935, Norfolk State University has endeavored to provide an environment for students that allows them to give expression to their goals and aspirations. For more than seventy years, NSU has succeeded in serving as the catalyst that has spurred the achievements of so many promising young people. We are extremely proud of our history of making dreams become reality, and we will continue to build on the concept that learning is a life-long process.

The programs and courses outlined in this catalog reflect the degree to which Norfolk State has progressed in providing a wealth of useful information about the requirements of academic programs, activities, and services. The University's mission of preparing students to compete in a rapidly changing global society is at the heart of our educational program. Norfolk State's core mission is to provide educational opportunities for students to help them become the leaders of tomorrow. We take great pride in our quality academic programs, our talented faculty members, and our commitment to excellence. Our Spartan school spirit is unique to that at other institutions in the region.

The year 2008 marks a yearlong celebration of the achievements of our world renowned faculty, outstanding alumni and exceptional students. Norfolk State University is poised for an exciting future. As we move "forever upward" in our aspirations, we are preparing ourselves to compete on the cutting edge of innovative programs and services and to place this institution at the forefront in science and technology, while expanding our commitment to our liberal arts roots. As you review the Norfolk State University catalog, please know that we are here to be of service to you as you pursue and embrace a quality education.

Sincerely,

Carolyn W. Meyers, Ph.D.  
President

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## BOARD OF VISITORS

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Mr. Bobby Norris Vassar  
*Rector*



Mrs. Viola M. Madison  
*Vice Rector*



Ms. Virginia M. Board  
*Secretary*



Mr. Willie L. Brown



Mr. Peter G. Decker, Jr.



Mr. Stanley Green, Jr.



Mr. Howard R. Kern



Mr. Henry D. Light



Mr. Gary T. McCollum



Mr. Wade W. Perry



Ms. Judith L. Rosenblatt



Mr. Donald W. Seale



Dr. Lauren R. Tucker

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# WELCOME TO NORFOLK STATE UNIVERSITY

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**N**orfolk 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 expression 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.

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## OUR MISSION

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Norfolk State University's mission is to provide an affordable, high-quality education for an ethnically and culturally diverse student population, equipping students 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 rate.
- 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

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## INSTITUTIONAL GOALS

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

- 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.
- The University shall continue to utilize its assembled expertise in research and public service to develop programs specifically related to urban needs.
- The University shall continue to develop its management capability in order to provide adequate, efficient, and timely services to its constituents.
- The University shall continue to maintain an environment which encourages its graduates to assume leadership roles in the community, state, nation, and world.

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## ACCREDITATIONS AND AFFILIATIONS

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### Regional Accreditation

Norfolk State University is accredited by the Commission on Colleges (COC) of the Southern Association of Colleges and Schools (SACS) to award the associate, baccalaureate, master's and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Norfolk State University.

## SPECIALIZED ACCREDITATIONS

ACCREDITING AGENCY AND DISCIPLINE
<b>Accreditation Board for Engineering and Technology, Inc. (ABET)</b> <ul style="list-style-type: none"> <li>– Electronics Engineering (BS)</li> <li>– Electronics Engineering (MS)</li> <li>– Optical Engineering (BS)</li> <li>– Optical Engineering (MS)</li> </ul>
<b>Accrediting Council on Education in Journalism and Mass Communications (ACEJMC)</b> <ul style="list-style-type: none"> <li>– Journalism (BA)</li> <li>– Mass Communications (BS)</li> </ul>
<b>American Chemical Society (ACS)</b> <ul style="list-style-type: none"> <li>– Chemistry (BS)</li> </ul>
<b>Commission on Accreditation for Dietetics Education, American Dietetic Association</b> <ul style="list-style-type: none"> <li>– Food Science and Nutrition (BS)</li> </ul>
<b>American Psychological Association</b> <ul style="list-style-type: none"> <li>– Clinical Psychology (Psy.D.)</li> </ul>
<b>Association to Advance Collegiate Schools of Business (AACSB)</b> <ul style="list-style-type: none"> <li>– Accounting (BS)</li> <li>– Business (BS) in Management Information Systems</li> </ul>
<b>Commission on Accreditation of Allied Health Education Programs, American Kinesiotherapy Association</b> <ul style="list-style-type: none"> <li>– Physical Education/Exercise Science (BS)</li> </ul>
<b>Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (CAC of ABET)</b> <ul style="list-style-type: none"> <li>– Computer Science (BS)</li> </ul>
<b>Council on Social Work Education (CSWE)</b> <ul style="list-style-type: none"> <li>– Social Work (BSW)</li> <li>– Social Work (MSW)</li> </ul>
<b>National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)</b> <ul style="list-style-type: none"> <li>– Medical Technology (BS)</li> </ul>
<b>National Association of Industrial Technology (NAIT)</b> <ul style="list-style-type: none"> <li>– Vocational/Industrial Education (BS)</li> <li>– Building Construction Technology (BS)</li> <li>– Computer Technology (BS)</li> <li>– Design Technology (BS)</li> <li>– Electronic Technology (BS)</li> <li>– Architectural Drafting (AS)</li> </ul>
<b>National Association of Schools of Art and Design (NASAD)</b> <ul style="list-style-type: none"> <li>– Visual Studies (MA/MFA)</li> </ul>
<b>National Association of Schools of Music (NASM)</b> <ul style="list-style-type: none"> <li>– Music Education (BMus)</li> <li>– Music (MMus)</li> </ul>
<b>National Council for Accreditation of Teacher Education (NCATE)</b> <ul style="list-style-type: none"> <li>– Business Education (BS)</li> <li>– Pre-Elementary Education (MA)</li> <li>– Secondary Education (MA)</li> <li>– Urban Education (MA)</li> <li>– Teaching (MA)</li> <li>– Severe Disabilities (MA)</li> </ul>

## ACCREDITING AGENCY AND DISCIPLINE

<b>National League for Nursing Accrediting Commission (NLNAC)</b> <ul style="list-style-type: none"> <li>– Nursing (AS)</li> <li>– Nursing (BS)</li> </ul>
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## AFFILIATIONS

### MEMBERSHIP AFFILIATION

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 and Council of Graduate Schools
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
Cluster Program
College Placement Council
Conference of Southern Graduate Schools
Council for Advancement and Support of Education
Council of Historically Black Graduate Schools
Council on Social Work Education
Intercollegiate Music Association
Mid Atlantic Association for School, College and University Staffing and Group for the Advancement of Doctorial Education
National Alliance of Business College/Industry Relations
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 Region II, ALAW
Southern Regional Education Board
Virginia Association of Allied Health

MEMBERSHIP AFFILIATION
Virginia Association of College Nursing
Virginia Council of Graduate Schools

MEMBERSHIP AFFILIATION
Virginia Public Health Association

## CAMPUS LIBRARY

### Lyman Beecher Brooks Library (757) 823-8873

The Lyman Beecher Brooks Library provides services and resources to meet the scholarly and informational needs of the Norfolk State University community. Students and faculty can access online resources, including the library catalog, electronic full-text journals, and e-books, either remotely or via any campus computer. The Reference Research area in the library not only provides research assistance, but also provides access to additional computer workstations, which students can use for research needs. 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.

## CAMPUS ARCHIVES

### Harrison B. Wilson Archives

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

### Herbert A. Marshall Collection

The Herbert A. Marshall Collection is a Special Collection of approximately ten thousand (10,000) items pertaining to African-American history, folklore, and culture.

### Lois E. Woods Museum

The Lois E. Woods Museum houses a collection of African art from 14 countries representing 40 groups and cultures. Included in the museum is a reference library that features over 400 books on African art, folklore, and history.



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## ADMINISTRATIVE OFFICES

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The administrative offices help the university carry out its mission efficiently and effectively. The University is organized into 5 divisions: Office of the Provost, Finance and Business, Research and Economic Development, Student Affairs, and University Advancement. Each division is led by a vice president who is responsible for implementing programs and services that are essential for the management of the University.

### OFFICE OF THE PROVOST

**Dr. Y.T. Shah, Provost**  
**(757) 823-8408**

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

The Office is made up of two colleges, three professional schools, an off-campus center, and academic support programs. The colleges are the College of Liberal Arts and the College of Science, Engineering, and Technology. The schools are the School of Business, the School of Education, and the Ethelyn R. Strong School of Social Work. Thirty bachelor's degree programs, two associate degree programs, sixteen master's degree programs, and three doctoral degree programs are offered through these schools. Continuing Norfolk State University's tradition of service, the Office of the Provost promotes and encourages community involvement. The Office of the Provost provides a variety of programs and opportunities in which the students, faculty and staff may demonstrate altruistic spirit.

The goal of student success guides all academic policies and processes. The Office of the Provost 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 Office of the Provost works in concert with the faculty to ensure that the

curriculum supports the University's mission and strategic imperatives.

To that end, the Provost has developed the following goals:

1. Enhance the Collegial Environment – identify correct Rules of Engagement
2. Enrollment Growth in Quality and Quantity – increase student enrollment from 6,000 to 9,000 with improved quality during 2008-2013
3. Improve freshman to sophomore retention rate by at least 15% and Six-year; and increase Graduation Rate from 31% to 60%
4. Implement Teacher/Scholar Model for the faculty – improve sponsored research and NSU role in economic development
5. Implement Performance Based Management Model - ensure accountability at all levels

The implementation plan for these goals including targeted initiatives, action steps and resource needs, are available in the Office of the Provost, Suite 460, Harrison B. Wilson Hall (757) 823-8408. Programs under the Office of the Provost include, but not limited to, the programs/services which follow.

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### COOPERATIVE EDUCATION/ INTERNSHIP PROGRAM

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Cooperative Education at Norfolk State University is a 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 by 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 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:

COURSE NO.	CREDIT HOURS
CED 250	1 credit hour
CED 350	3 credit hours
CED 450	3 credit hours

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) 823-8462

## THE HONORS COLLEGE

The Honors College 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 College 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 (30 hours out of the 120 required for graduation). 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 College. Sophomores, juniors, and seniors may enter Honors courses with a 3.0-3.49 GPA if they obtain the permission of the course instructor. All students in Honors courses are part of the NSU Honors College and therefore are expected to participate in program activities.

Students in the NSU Honors College are eligible for scholarships of \$500 per academic year. Students receiving the Dozoretz National Institute for Mathematics and Applied Sciences (DNIMAS), Presidential Scholarships, or Board of Visitors Scholarships are required to take Honors Courses. Students receiving Craig Scholarships are strongly advised to do so.

The NSU Honors College is not an honor society but a regular facet of the University's academic offerings. Honors College students are encouraged to participate in honor societies in their respective fields. Honors College courses are open to all full-time undergraduates, including participants in other special programs such as ROTC.

The DNIMAS program is unique. All of its students are supported by full, four-year scholarship/grant aid that is renewed on an annual basis. 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 four week pre-matriculation summer session, intensive science curricula, research internships, field trips, projects, career counseling, seminars, and a peer mentor-tutoring program.

## PARSONS PRESIDENTIAL AND PARSONS VICE 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 College.
- 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 College 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.

For additional information, please contact the Director of the Honors College at 823-8208.

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### **INTER-INSTITUTIONAL EXCHANGE PROGRAM WITH OLD DOMINION UNIVERSITY**

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

Graduate and undergraduate students are eligible to participate in the Exchange Program. For degree purposes, credits earned will be considered resident credit 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 a cumulative grade point average of 2.00 or better. The approval of the school dean is required.

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.

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

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### **VIRGINIA TIDEWATER CONSORTIUM CROSS REGISTRATION PROGRAM**

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

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 normally limited to courses not available to students at the home institution during the current semester.

For further information, contact the Office of the Registrar at (757) 823-8229.

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### **INTERNSHIP/SUMMER POSITIONS**

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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.

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### **OFFICE OF INFORMATION TECHNOLOGY**

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#### **(757) 823-8678 – Help Desk**

The Office of Information Technology (OIT) manages the administrative and academic information technology resources for Norfolk State University. OIT provides ubiquitous access to technology over a highly secured wired and wireless CISCO-based network, utilizing a gigabit fiber optic backbone for voice, video, data, and security. A port-per-pillow, computer labs, and wireless access are provided in all the residence halls.

The Enterprise Information Systems (EIS) administrative computing unit includes the Student Information System (Datatel/Colleague), the Financial Administration System (IFAS), and university web development. SpartanShield is a Datatel web-based tool for online registration, grades, unofficial transcripts, financial aid information, and online payments.

OIT also works closely with the Office of eLearning and the Division of Financial Services on Blackboard's course management and dining and vending systems.

NSU's state-of-the-art Data Center houses over 100 enterprise-wide servers and a supercomputing Internet2 environment managed through a high-end Networking Operations and Security Center. The new Virtualization and Collaboration Center provides an environment conducive for onsite and remote collaborations, visualization, and training in support of a wide variety of opportunities.

E-mail is provided through a Microsoft Exchange Enterprise Email System.

Television/video/multimedia technology specialists provide on-site event coverage and production support to meet both institutional and instructional needs of the University. The Telecommunications Unit is responsible for all telecommunication services on campus, including cellular and desk phones. The development of a Supercomputing environment using Internet2 in the new McDemmond Center provides NSU with the latest cutting edge technology for research.

Faculty and Staff receive IFAS, Colleague, technical, and applications software training through the OIT Training unit. Since flexibility is a key consideration, various types of training are offered including: general classroom, departmental, one-to-one, and online tutorials.

Faculty, students, and staff of Norfolk State University must comply with all University, Office of Information Technology (OIT), and school/department policies and procedures relating to the use of technological resources operated for administrative, academic/instructional, and research purposes. Current University and OIT policies are found at the following websites:  
<http://www.nsu.edu/policies/> and  
<http://www.nsu.edu/oit/policies/>.

## RESERVE OFFICERS TRAINING CORPS PROGRAMS

### AROTC

The Army Reserve Officers Training Corps (ROTC) was established at Norfolk State University on July 1, 1948, in the Military Science Department. Army ROTC is one of the best leadership courses in the country and is part of the college curriculum. During classes and field training, students will learn first-hand what it takes to lead others, motivate groups, and how to conduct missions as an officer in the Army. Upon graduation from Army ROTC, students will earn the bar of a Second Lieutenant and become a leader for life.

### 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.

## OFF-CAMPUS CENTER

### Virginia Beach Higher Education Center (VBHEC)

1881 University Drive  
 Virginia Beach, Virginia 23453  
 (757) 368-4150

Mr. Dennis Montgomery, J.D.  
 Director  
[dlmontgomery@nsu.edu](mailto:dlmontgomery@nsu.edu)

The mission of NSU programs and services at the 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, VBHEC strives to develop and disseminate educational programming, training programs, and selected technological information to its adult constituents outside the traditional credit delivery formats.

The Virginia Beach Higher Education Center, operated cooperatively by Norfolk State University and Old Dominion University, primarily offers graduate-level courses for Norfolk State University in criminal justice, secondary education, urban education (counseling), 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.

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.

## DIVISION OF FINANCE AND BUSINESS

Mr. Ralph Johnson, Vice President for  
 Finance and Business  
 (757) 823-8011

The Division of Finance and Business provides leadership for the administration of the institution's fiscal and business services and protects its financial and capital resources. These services include providing leadership for an array of initiatives and services that sustain and enhance the University's living, learning, and working environments for students, faculty, and staff. The Division's priorities and goals are service oriented attitude, operational efficiency and effectiveness, and financial accountability. The institution's

commitment to academic excellence and fiscal soundness is reflected in its stewardship of resources, integrity in activities and customer-friendly interactions with constituents.

The Division ensures that the University complies with applicable state and federal requirements and sustains credible fiscal and operational management. The Division's support services include Administration; Auxiliary Services; Bursar; Controller; Environmental Health, Safety and Risk Management; Facilities Management; Finance; Human Resources; Parking and Transportation Services; Procurement Services, and University Police. As the University maintains its credibility as a well-managed, fiscally sound institution of higher education, its goal is to promote greater efficiency and effectiveness in administration, while taking a proactive approach to emerging issues and new challenges.

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## **BOOKSTORE**

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The Bookstore is a service element owned by Norfolk State University and operated by Barnes and Noble Bookstore. 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 at competitive prices, with particular attention being paid to academic requirements.

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## **FACILITIES MANAGEMENT DEPARTMENT**

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The Facilities Management Department has four major areas, namely Operations and Maintenance, Capital Planning and Improvements, Administrative Services and Environmental Health, Safety and Risk Management. The area of Operations and Maintenance provides services needed to operate and maintain all university facilities. These services are provided by carpenters, painters, mason plasterers, plumbers, electricians, HVAC mechanics, locksmiths, housekeeping workers, grounds persons, laborers, engineers, administrative, work management center, and supervisory personnel. The Department is also responsible for electrical and other utilities distribution. In addition to operating and maintaining the facility plant, the department provides labor services such as sound setups and moving and hauling for the entire university community.

The area of Capital Planning and Improvements provides services for space utilization, design, planning, bidding, and contracting services for capital outlay projects and minor renovations and alterations to existing facilities.

The area of Administrative Services provides financial, budgeting, and administrative services to the operating units within facilities. Services provided include budget, finance, payroll, postal services, inventory control, property disposal, receiving, warehousing, billing, payment of all utility and vendor invoices, construction contract administration, and funding for all new planning and construction projects.

The area of Environmental Health, Safety and Risk Management provides oversight to mandated programs; provides safety consultations to faculty and staff, and conducts training, incident investigations; monitors and coordinates evaluations for fire safety systems; manages liability and property damage claims; appraises and issues certificates of insurance coverage; coordinates hazardous waste storage and disposal. This area also designs and assesses response procedures for emergency situations.

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## **DINING SERVICES**

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NSU Dining Services prepares home-style cooked meals for meal plan participants and customers. Meals are served at Scott Dozier Dining Hall and West Dining Hall, which are conveniently located for students. Traditional meals are also served in the Faculty Dining Hall located adjacent to Scott Dozier Hall. All facilities are operated by Thompson Hospitality/Compass Group.

NSU Dining Services offers branded retail outlets such as Pizza Hut, Freshens, Origins, Coyote Jacks Grill, and Chick-Fil-A. 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 and students. NSU Dining Services also sponsors two Campus C-Stores to meet the needs of staff and students. There is an Outtakes Kiosk located in Wilson Hall Administration Building.

Catering services also are provided by NSU Dining Services. It is committed to accommodating customers and students with quality products and to providing incomparable service.

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## **INCLEMENT WEATHER**

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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 Acting Executive Director of Communications and Marketing via the area's media outlets.

During times of inclement weather (e.g., hurricanes, tornadoes, etc.), employees and students may



obtain information regarding NSU closing and cancellation of classes from the following:

RADIO STATIONS	TELEVISION STATIONS
WNSB FM 91.1	WTKR TV 3
WOWI FM 102.9	WAVY TV 10
WJCD FM 105.3	WVEC TV 13
WHRV FM 89.5	WVBT TV 43

For more information on this policy, please call the office of Communications and Marketing at (757) 823-8373, the office of Finance and Business at (757) 823-8011, the office of Risk Management at (757) 823-9142, the switchboard at (757) 823-8600 or the SpartanLine at (757) 823-2600.

### POSTAL SERVICES

The Postal Service provides University faculty, staff, and students with quality services when processing official campus and off-campus mail, and provides 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 are also provided.

### UNIVERSITY POLICE DEPARTMENT

Norfolk State University Police Department has primary responsibility for security on campus. The 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 and 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.

## DIVISION OF RESEARCH AND ECONOMIC DEVELOPMENT

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

The mission of the Division of Research and Economic Development is to be a responsive and

responsible customer-centric organization that enables and empowers its client (the Norfolk State University community and its stakeholders) to effectively accomplish its business unit goals.

### OVERVIEW

The Division of Research and Economic Development is primarily responsible for acquiring external funding support for sponsored program activities and for 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 Economic Development in that RISE Campus activity is underpinned by technology and research. Also, the Division provides a critical interface between Norfolk State University (NSU) and the Enterprise and Empowerment Foundation (E2F) that oversees the RISE project.

The Division of Research and Economic Development includes the Office of Sponsored Programs (OSP).

### OFFICE OF SPONSORED PROGRAMS (OSP)

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

Sponsored Programs is the primary interface for all departments and units within the University for local, state, federal, and quasi-governmental agencies, for corporations, foundations and other entities that provide support for research projects and other sponsored program categories. 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 the Office 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 activities for all research and other sponsored programs, University-wide.

### PLANNED STUDENT SECURITY MESSAGE

Personal information posted on public newsgroups, public chat groups, community websites and even

private or commercial on-line sites may be accessible by anyone on the Internet. Such personal information may be indexed and cached by search engines such as Google or Yahoo and may remain available on search engines even after the original website has removed the information. Please keep this in mind when posting personal information on public websites.

## **DIVISION OF STUDENT AFFAIRS**

**Mrs. Sharon B. Lowe, Vice President for Student Affairs**  
**(757) 823-8141**

The Division of Student Affairs is the central administrative unit responsible for the coordination and direction of student programs, services, and activities outside the classroom. The departments within the Division are dedicated to recognizing and providing for the needs of each student while stimulating student development outside the classroom. Other goals are aimed at preserving the rights of each individual student; fostering respect and communication among different cultures; maintaining a continued process of self-assessment; and adapting objectives to meet the needs of the student body while supporting the educational mission of the University.

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### **CAREER SERVICES**

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**(757) 823-8462**

Career Services is responsible for the overall planning, development, and implementation of the University's career services program for students and alumni. The office is located in rooms 306/311, Mills E. Godwin, Jr. Student Center.

Functions include:

1. Identifying and developing employment opportunities;
2. Maintaining e-Campus Recruiter, a database of job opportunities that allows students to upload resumes and apply for jobs;
3. Providing career counseling and advising;
4. Preparing students to successfully transition from the classroom to a professional career, including the development of job search strategies, resume writing, and interview skills;
5. Planning and conducting professional seminars;
6. Planning and coordinating on-campus recruitment programs and job fairs;

7. Developing internships and co-operative education opportunities.

Students must register with Career Services to receive all available services. Seniors are encouraged to register and maintain a credentials file with the office as they seek career positions upon graduation.

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### **COUNSELING CENTER**

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**(757) 823-8173**

The Counseling Center provides a range of counseling services for Norfolk State University students at no charge. Services include individual, group, and crisis counseling, as well as educational outreach programming.

Counseling Services are confidential. The Counseling Center does not release information about a student without the student's written permission, except in cases of imminent danger to self or others, child/dependent abuse, court order, or otherwise required by law. Counseling records are not part of academic records, and access to them is limited to authorized staff in the Counseling Center. As required by Virginia law, student counseling records are maintained for at least seven (7) years.

Counselors are available to consult with students, parents, and staff about issues that affect student life. Adjustment difficulties, depression, troubled relationships, and the inability to manage stress are a few reasons students seek counseling services. During a crisis, counselors are dispatched to provide emergency intervention and support for affected community members. Crisis counseling is available to students 24 hours per day, seven days per week.

The Counseling Center staff includes both male and female professional counselors as well as graduate student interns working under close supervision. All counselors are trained and experienced in addressing issues common among university students. Appointments can be made by phone or in person. For additional information, please visit the Counseling Center in Room 309, Mills E. Godwin Student Center, or call (757) 823-8173.

#### **Substance Abuse Services**

The Counseling Center offers substance abuse services in the form of assessment and individual and group counseling. The staff is trained to respond effectively to students who are personally affected by alcohol or drug use. Substance abuse education and prevention programs, including National Alcohol Screening Day, are also administered by the Counseling Center.

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## **DISABILITY SERVICES DEPARTMENT (DSD)**

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**(757) 823-2014/2409**

The mission of the Disability Services Department is to promote the academic success of students with disabilities (SWD) through high-quality educational assistance; faculty and staff seminars; workshops and training, and assistive technology training for students, faculty, staff, and administrators. The department is committed to complying with both the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973.

### **Supporting Students Through Disability Services (SSDS)**

The SSDS program assists currently enrolled students with documented disabilities including physical disabilities, psychological disabilities, traumatic head injuries, learning disabilities, and other health concerns. Services include counseling, rehabilitation, note-sharing, and priority seating.

All contacts with SSDS are held in strict confidence, and information is released only with the student's permission.

### **Assistive Technology Laboratory (AT Lab)**

The AT Lab exists to support the enhancement of student outcomes through the delivery of information, training, and support through the use of assistive technologies. Students with documented disabilities who are enrolled in the SSDS program are given access to the AT Lab where they are able to utilize specialized hardware, software, and other technologies that level the playing field in their endeavor to excel.

A complete list of services and accommodations provided through the SSDS program and within the AT Lab is available from Disability Services and the Norfolk State University Student Handbook.

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## **INTERNATIONAL STUDENT AND SCHOLAR SERVICES**

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**(757) 823-8447**

The Office of International Student and Scholar Services assists international students and scholars with matters related to immigration promoting international education and intercultural understanding. The office circulates immigration information and acts as a referral source for students, staff, faculty, and the community. Services include issuing visa documents; advising students, scholars, and faculty; processing immigration petitions; serving as a liaison between the international student/scholar and the university/government agencies; and providing

support services and education to enhance student success.

More information is available from the Office of International Student and Scholar Services and the Norfolk State University Student Handbook. The office is located in Room 330, Harrison B. Wilson Hall.

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## **JUDICIAL AFFAIRS**

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**(757) 823-8222**

The NSU Judicial System serves to maintain order and discipline essential to student success. The Office of Judicial Affairs oversees proceedings in accordance with Student Disciplinary Policies and Procedures.

Students are expected to make themselves aware of and abide by the University community's standards of behavior as articulated in the NSU Student Disciplinary Policies and Procedures and in related policy statements. Students accept the rights and responsibilities of membership in the NSU community when they are admitted to the University. For more information, visit the Office of Student Services/Judicial Affairs in Room 325, Godwin Student Center.

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## **RESIDENCE LIFE AND HOUSING**

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**(757) 823-8407**

Living in the residence halls provides a great opportunity for students to interact with people from different backgrounds, get involved with campus life, enhance personal growth and development, and create friendships that will last a lifetime. Resident students share the responsibility for abiding by all University policies and respecting the rights of other residents.

### **Staff**

Each residence hall is staffed with a residence hall director, a graduate assistant (GA), several administrative office specialists, and a student resident assistant (RA) assigned to each floor. The residence hall staff has the responsibility of administering and enforcing University policies and regulations, while acting as a listener, mediator, and resource person.

### **Living on Campus**

All students who live in residence halls are members of the Residence Hall Association (RHA). Freshmen On-Campus Achieving Success (FOCAS) is a program designed for freshman resident students to assist with the transition from high school to college life. This program focuses on four key areas of concentration: academics, socialization, multiculturalism, and mentorship. The



program is voluntary and is administered by the Office of Residence Life and Housing. Students may sign up for the program by contacting [housing@nsu.edu](mailto:housing@nsu.edu) or (757) 823-8407.

**Payment of Fees**

A non-refundable housing deposit of \$300.00 must be received from the student by the deadline date, (May 31<sup>st</sup> for fall entry, November 1<sup>st</sup> for spring entry) to reserve on-campus housing. Only applications accompanied by deposits will be considered. No bed spaces are guaranteed after the deadline dates.

Upon receipt of a bill from NSU, the entire room and board balance must be paid in full or payment arrangements made with the Office of Student Accounts by the respective May 31<sup>st</sup>/November 1<sup>st</sup> deadline date. To inquire about individual accounts, students should contact Student Financial Services at (757) 823-8381.

Cashier's checks or money orders should be made payable to Norfolk State University. The student's social security number and name must be included on the money order or cashier's check. Personal checks are accepted for first-time freshmen only.

Students are required to occupy the assigned room on or before the first day of classes. Failure to do so could result in the loss of on-campus housing.

**Roommate Request(s)**

Requests for roommates will be honored, to the extent possible, provided the request is mutual and in writing, deadlines for fees are met, and each person making the request meets all requirements for living in the desired residence hall.

**Occupancy of Rooms**

Students are required to occupy rooms on or before the first day of classes or forfeit the room reservation.

**Check-In**

Prior to checking into the residence hall, each student should have completed all financial arrangements at the Business Office. All discrepancies in the room must be noted and reported to the residence staff prior to occupancy to avoid unwarranted charges. The staff will issue keys/combination and telephone numbers to the respective residence hall.

**Housing During Breaks**

All residence halls will be officially closed during the Thanksgiving, winter, spring and summer breaks (except Spartan Suites). Continuing residents and graduates will receive updated information with specific dates and times to vacate the respective residence hall.

**Withdrawal Procedures**

Those who withdraw from an NSU residence hall must contact the assigned residence hall personnel. Residents are responsible for removing all personal

possessions and for cleaning their rooms, which must be verified by the residence hall director. The student is responsible for completing all paperwork to finish the withdrawal process.

There will be a \$100 charge for all rooms/suites not cleaned and a \$75 per key charge for all keys not returned. Both offenses are subject to possible sanctioning that could prohibit future residency in the residence halls. In addition, students withdrawing from the residence halls will incur a \$50 charge for improper check-out if they fail to complete any part of the withdrawal process. Students should contact their respective graduate assistant or residence hall director if they have questions.

**Check-Out Procedures**

Prior to student check-in and upon checkout, each residence hall will have staff assigned to check the condition of the room/suite. Damages and other discrepancies will be noted on the back of the resident's card. Normal wear is not penalized. Should the resident in violation not be known, all residents assigned to the room will be charged. Each resident assigned to a room/suite is responsible for cleaning his or her side of the room. Rooms and/or suites must be clean and free of all trash. Students housed in suites must ensure that the bathrooms are clean. Charges will be assessed for broken, damaged, misplaced, or out of area furniture. Failure to follow correct check-out procedures will result in a fine and possible sanctioning that prohibits future residency in the residence halls.

**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 the landlord and not Norfolk State University. Students are urged to make living arrangements well in advance of the beginning of the semester.

**Violation of Residence Hall Rules and Regulations**

It is recognized that living in groups requires a certain level of tolerance and conformity by all concerned. In order to enhance the safety and comfort of everyone living in the residence halls, rules controlling conduct within housing are controlled by the Office of Residence Life and Housing. These rules, along with procedures for their enforcement and applicable sanctions, are published in the Residence Hall Handbook available from the Office of Residence Life and Housing. The Norfolk State University Code of Student Conduct and disciplinary procedures apply to all students, including those who live in the residence halls. Alleged violations of the Code by residence hall

students will be forwarded to the Vice President for Student Affairs or his/her designee.

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## SPARTAN HEALTH CENTER

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**(757) 623-3090**

Student health services are provided by InoMedic. Basic health services provided under the student health program include diagnosis and treatment of minor illnesses and injuries, provision of selected over-the-counter medication and medical supplies, supervised care in designated observation beds, general and emergency medical services, health education counseling, maintenance of immunization/ health history records, provision of forms and materials on preventive health, mental health, and other health-related areas, and injections of allergy serum (at students' expense). Should a student require consultation with a specialist, the health care provider at the Center will refer the student to a local practitioner. Students insured under the Norfolk State health plan will be referred within the Beech Street Network when possible. The Center is staffed with highly skilled health care professionals including physicians, nurse practitioners, and nurses.

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 that exceeds the services listed above must be paid by the student. Students are encouraged to purchase health insurance to cover the cost of specialty referrals or hospitalization.

It is recommended that any necessary dental and/or eye examinations be done prior to coming to the University, as the Health Center cannot provide these services.

The Spartan Health Center does not operate a pharmacy. Prescriptions may be filled at local pharmacies.

### Emergency Care

When a serious or life-threatening illness or injury occurs on campus, the NSU Campus Police Department should be contacted immediately by calling 823-9000. If emergency medical transportation is needed, the University Police Department will make the necessary arrangements to ensure that the individual is taken to the nearest urgent health care facility. The expense of this care will be borne by the student.

### Location and Office Hours

The Spartan Health Center is housed in the Spartan Station at the east end of the campus. It is open Monday through Friday from 8:00 a.m. to 5:00 p.m. Students who become ill after hours of operation should call 623-3090 for instructions. Sick-call hours will be from 8:00 a.m. to 10:00 a.m. for the acutely ill. Acutely ill is defined as new onset of sickness

such as fever, diarrhea, urinary problems, and upper respiratory problems.

### Appointments

Students should call for an appointment to ensure prompt treatment. However, students with new onset illnesses will be seen on a walk-in basis between scheduled appointments, whenever possible.

### Confidentiality

The relationship between a clinician and the patient is strictly confidential. To ensure this, the Spartan Health Center will not release files or information to anyone, including university officials, relatives, or prospective employers, without the expressed written consent of the patient. Only upon issuance of a legal subpoena will records be provided without the patient's authorization.

### Medical Excuses

Written statements verifying a student's visit to the Health Center will be issued, if necessary, at the discretion of the Health Care Provider. An official university excuse may be obtained from the Office of Student Services/Judicial Affairs.

### Student Accident Insurance Plan

All full time undergraduate students (U.S. citizens and permanent residents) taking 12 or more credit hours and all international students (full and part time, graduate and undergraduate) will automatically be enrolled in the Accident Only Expense Benefit and the Outpatient Prescription Drug Benefit, insured by BCS Insurance Company. This plan is mandatory and no waivers will be allowed. The annual premium of \$100 will be assessed to each qualifying student in two equal installments of \$50 each semester.

Additional coverage for sickness benefit is also available. While enrollment in the Sickness Expense portion of the plan is not mandatory, it is highly recommended for students who do not have adequate insurance for sicknesses. Part-time and graduate students are also eligible to enroll in the Optional Sickness plan. Specific information regarding the student insurance plan can be obtained via the NSU website.

### Health Insurance

Information about the NSU student insurance plan may be obtained at the Spartan Health Center or the Office of Student Services/Judicial Affairs. Health History/Record of Immunizations Virginia State Law (Sec. 23-7.7) and Norfolk State University require all full-time entering and returning students to provide documentation of immunizations and a completed health record form. The information on this health record is needed to both protect the health of the university community and to assist the Spartan Health Center staff in providing comprehensive medical care for students.

## STUDENT ACTIVITIES

**(757) 823-8200**

The Office of Student Activities is responsible for the coordination and implementation of a creative, responsive, and diverse co-curricular program. Norfolk State University strives to cultivate individuals who have not only mastered academic coursework, but have also developed active interests and skills in interpersonal relations. To assist with this mission, the University promotes a wide range of student organizations and activities. Students are encouraged to participate in the following academic, social, athletic, literary, and religious activities:

### Recognized Student Organizations

#### ACCOUNTING ASSOCIATION

Airway Science Club
Alpha Delta Mu National Social Work Honor Society
Alpha Epsilon Rho
Alpha Eta Rho Fraternity, Inc.
Alpha Kappa Alpha Sorority, Inc.
Alpha Kappa Delta
Alpha Kappa Mu Honor Society
Alpha Phi Alpha Fraternity, Inc.
Alpha Phi Sigma National Criminal Justice Honor Society
Alpha Sigma Lambda
American Chemical Society
American Marketing Club
American Physics Society
officially recognized student organizations (cont'd)
American Production and Inventory Control Society
Association for Computing Machinery
Association of Black Communicators
Association of Concerned Sociologists
Association of General Contractors of America
Association of Information Technology Professionals
Athletes in Action
Banking and Finance Club
Baptist Student Union
Beta Gamma Sigma Honor Society
Beta Kappa Chi National Scientific
Beta Psi Biology Society
Caribbean Student Association
Cheerleaders
Chemistry Club
Chess Club
Chi Eta Phi Sorority, Inc.
Circle K International
Collegiate Secretaries International Concert Choir
Consumer Services and Family Studies Club

#### OFFICIALLY RECOGNIZED STUDENT ORGANIZATIONS (CONT'D)

Cooperative Education Club
Council of Independent Organizations (C.I.O.)
Data Processing Management Club
Delta Sigma Theta Sorority, Inc.
Diplomats' Circle, The
DNIMAS Student Association
Early Childhood Education Club
Eboni Rage Fashion Society
Economics Club
Elements of Style
English Club
English and Foreign Languages Major Club
Entrepreneurship Club
Epsilon Tau Sigma
Family and Consumer Sciences
Finance and Banking Association
Food Science and Nutrition Club
French Club
Freshman Class
Girls in Science, Engineering and Technology (GISET)
Golden Key National Honor Society
Gospel Choir
Graduate Student Association Guild of Fine Arts
Habitat for Humanity
Health Information Management
Health Services Management Association
History Club
Hotel, Restaurant and Institutional Management Club
Industrial Education Technology Club
Institute of Electrical and Electronic Engineers
International Food Service Executive Association
International Student Organization
International Technology Education Collegiate Association
Iota Phi Theta Fraternity, Inc.
Junior Class
Kappa Alpha Psi Fraternity, Inc.
Kappa Delta Epsilon
Kappa Kappa Psi Fraternity, Inc.
Kappa Omicron Nu Kappa Omicron Tau Society
Leading the Education of Gay and Straight Individuals (LEGASI)
Lyman B. Brooks Debating Society
Mass Communications Student Association
Material Advantage (ACerS-ASM-TMS)
Mathematics Club
Medical Records Student Association
Medical Technology Society
Minority Association of Pre-Health Students
Music Educators National Conference
National Association for the Advancement of Colored People (NAACP)
National Association of Black Accountants (NABA)
National Association of Blacks in Criminal Justice
National Broadcasting Society
National Council of Negro Women

**OFFICIALLY RECOGNIZED STUDENT ORGANIZATIONS (CONT'D)**

National Pan-Hellenic Council  
 National Society of Black Student Engineers  
 National Society of Minorities in Hospitality  
 National Society of Pershing Angels Sorority, Inc.  
 National Society of Pershing Rifles Fraternity, Inc.  
 National Student Nurses Association  
 The Norfolk Review (formerly The Rhetorician)  
 Omega Psi Phi Fraternity, Inc.  
 Optical Society of America (NSU Student Chapter)  
 Phi Alpha Theta  
 Phi Beta Lambda  
 Phi Beta Sigma Fraternity, Inc.  
 Phi Delta Psi Fraternity, Inc.  
 Phi Mu Alpha  
 Physical Education and Exercise Science Club  
 Physics and Engineering Club  
 Pi Gamma Psi Fraternity, Inc.  
 Pi Sigma Alpha Honor Society  
 Political Science Association  
 Pre-Alumni Club  
 Pre-Medical Society  
 Psi Chi (Psychology)  
 Psychology Club  
 Public Relations Student Society of America  
 Resident Hall Association  
 SDX  
 Senior Class  
 Sigma Gamma Rho Sorority, Inc.  
 Sigma Tau Delta Honor Society  
 Society for the Advancement of Management  
 Society of Manufacturing Engineers  
 Sociology Club  
 Sophomore Class  
 Spanish Club  
 Spartan Alpha Tau  
 Spartan Cavalry/Student Government Association  
 Spartan Legion Marching Band  
 Speech Pathology and Audiology Club  
 Student Affiliate of the American Chemical Society  
 Student Ambassadors  
 Student Government Association  
 Student National Technical Association  
 Student Virginia Education Association  
 Students in Free Enterprise  
 Students Standing 4 Sickle-Cell  
 Taekwondo Club  
 Tau Beta Sigma National Honor Band Sorority, Inc.  
 Technology Education Collegiate Association  
 Thurgood Marshall Pre-Law Club  
 University Dance Theater  
 University Players  
 Veterans Club  
 Virginia Family and Consumer Sciences  
 Vocational Industrial Clubs of America  
 Wesley Westminster Club

**OFFICIALLY RECOGNIZED STUDENT ORGANIZATIONS (CONT'D)**

Whitney Young Social Work Club  
 World Changers  
 Young Democrats  
 Young Republicans  
 Zeta Phi Beta Sorority, Inc.

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## Student Publications

Spartan Echo Newspaper  
 Spartan Reflections Yearbook  
 The Intramural Program

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## 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, the program promotes:

1. Better health through exercise,
2. Social interaction and the development of friendships,
3. Sportsmanship of the highest order, and
4. Important values developed through team spirit and cooperation.

The list of competitive intramural activities includes tennis, coeducational volleyball, men's and women's basketball, flag football, softball, billiards, recreational swimming, bowling, roller skating, and ice skating. Students who do not ordinarily take part in sports are encouraged to participate in and enjoy some type of physical activity. The skills acquired in the intramural program will encourage future sports participation and healthy habits that will last a lifetime.

### Student Government Association

Students are invited to help guide the direction of the University through membership in the Student Government Association (SGA). The purpose of the SGA is to develop a cooperative spirit among students; to promote self-development through personal expression, communication, 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.

**Campus Program Disclaimer**

University organizations frequently invite speakers and performers to campus. The views and opinions of these guests do not necessarily represent those of the University or the sponsoring organization.

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**STUDENT SUPPORT SERVICES**

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**(757) 823-8677**

Student Support Services is a federally-funded program that provides a variety of supportive services for eligible program participants enrolled at Norfolk State University. Program participants are selected according to one or more of the following criteria: (a) family income (b) first-generation college student (c) academic characteristics, or (d) physical disability.

The program provides tutorial services, skill development, counseling, cultural and educational enrichment activities, and a number of other support services to help increase student retention and graduation from Norfolk State University.

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**VETERANS AFFAIRS**

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**(757) 823-2586**

The Office of Veterans Affairs (OVA) provides specialized customer service to members of the various branches of military service, for veterans and eligible family members registration for Veterans Administration (VA) benefits, and counseling and general assistance in admission to the University. The VA Certifying Official for Norfolk State University also assists students with the required VA Educational Plan and serves as a liaison between the University and the regional VA office to provide information on university procedures and to resolve problems regarding eligibility and payment of VA benefits. The OVA also provides basic information about Virginia State Veterans benefits, including the Virginia War Orphans Program.

Each semester, veterans using VA educational benefits must report to the campus OVA after completing the enrollment process. New veterans who are planning to use VA benefits must report to the OVA before enrolling. Veterans must immediately inform the campus OVA if they add, drop, audit, stop attending, have a class or enrollment cancelled, withdraw or are withdrawn from class(es) or the University, are unable to attend classes, or make any changes to their enrollment status.

Educational assistance is available for U.S. military veterans and members of the National Guard and Selected Reserve. In some cases, dependents of veterans in certain categories may be eligible for

these benefits. In all instances, the Department of Veterans Affairs (VA) determines eligibility. The VA sends monthly benefit checks directly to the student following verification of enrollment each semester. Receipt of VA benefits may have an impact on levels of federal and state financial aid for which a student may be eligible; therefore inquiries regarding financial aid eligibility should be directed to the Norfolk State University Office of Financial Aid. Students who will attend school under the sponsorship of the VA Vocational Rehabilitation Program should make initial inquiry to the VA by calling the toll-free number 1-800-827-1000. Norfolk State University 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 start of the semester. The University accepts the College Fee Waiver for students authorized for the Virginia War Orphans Program.



## DIVISION OF UNIVERSITY ADVANCEMENT

**Mr. Phillip Adams, Interim Vice President for University Advancement and Executive Director, NSU Foundation, Inc.  
(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 the institution's 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, and the L. Douglas Wilder Performing Arts Center. The NSU Foundation, Inc. is a separate entity that also advances and supports the University's mission by soliciting, receiving, investing, and administering gift resources for the University. Many need-based scholarships are administered through the NSU Foundation.



# ADMISSIONS

Mr. James Smith, Acting Director  
 Phone: (757) 823-8396  
 Toll Free: 1-800-274-1821  
<http://www.nsu.edu/admissions/>

## GENERAL ADMISSIONS INFORMATION

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

Norfolk State University seeks to admit in-state and out-of-state applicants whose combination of academic preparation, aptitude, achievements, and motivation predict 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, which enriches the educational process and benefits the entire campus community. Further, the University reserves the right to base individual admission in any given year upon a number of factors, including the number of applicants to space availability. In some instances, the academic standards/criteria of some programs exceed the minimum University requirements, due to space limitations, resources, and/or program design.

### UNDERGRADUATE ADMISSIONS CRITERIA

1. Admissions criteria for Norfolk State University require an applicant to have graduated from an accredited high school with a minimum grade point average of 2.3 on a four-point grading scale. Applicants must have obtained a high school diploma or its equivalent. A "program completer" status is not equivalent to a high school diploma.
2. All applicants under the age of 21 must submit Scholastic Achievement Test (SAT) scores or American College Testing (ACT) scores. A minimum combined score of 800 (critical reading and math) on the SAT or a composite score of 17 on the ACT is required.

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

COURSE	CREDIT HOURS
English	4
Mathematics*	3
Science	3
History and Social Sciences	3
Health and Physical Education	2
Fine Arts or Practical Arts	1
Electives	6
<b>TOTAL HOURS REQUIRED</b>	<b>22</b>

*\*Algebra I, Geometry, Algebra II recommended*

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 500. GED graduates may be subject to the requirements outlined above. The University is interested in the quality of the applicant's academic preparation and indicators of overall promise as a student.

The applicant must submit two letters of recommendation.

### ADMISSIONS PRIORITY DEADLINE

The priority application date for fall undergraduate admission is May 31. October 1 is the priority date for spring.

#### Applying as a First-Time Freshman

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

1. An application completed in full and a non-refundable application fee of \$25, payable by certified check or money order or an official fee waiver.
2. An official high school transcript forwarded by the applicant's high school. (It is the student's responsibility to have final grades sent to the Office of Admissions immediately following graduation.)
3. SAT/ACT scores. (Applicants who have reached the age of 21 at the time of enrollment are exempt from this requirement.)
4. An official report of test results issued by the General Education Development (GED) testing center, if applicable.
5. Two letters of recommendation.



6. \$100 non-refundable enrollment deposit following acceptance.
7. A medical history form signed by the student and a physician, submitted prior to the end of the first semester of enrollment. The form must be submitted to the Spartan Health Center.

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 application fee.

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## APPLYING AS A TRANSFER STUDENT

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When applying for admission as a transfer student, the applicant must provide the following:

1. An application completed in full and a non-refundable application fee of \$25, payable by certified check or money order or an official fee waiver.
2. Official transcripts from all colleges attended. Transfer students must be in good standing at the last school attended and must have a minimum cumulative grade point average of 2.0. Information about transfer credit is provided in the next section.
3. High school transcripts, if fewer than 15 semester hours are transferred.
4. SAT/ACT scores, if applicant is under the age of 21 and fewer than 15 semester hours are transferred.
5. \$100 non-refundable enrollment deposit following acceptance.
6. A medical history form signed by the student and a physician, submitted prior to the end of the first semester of enrollment.
7. The form must be submitted to the Spartan Health Center.

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## GUARANTEED ADMISSION

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Virginia Community College System Guaranteed Admission Agreement

Students who have completed an associate's degree and are transferring from a Virginia community college to Norfolk State University may be granted junior status. For a complete description of the agreement, please obtain a copy of the "Transfer Guide" from your academic department or the Office of Admissions.

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## TRANSFER CREDIT

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The Office of Admissions makes the final determination concerning acceptance of transfer credits, after all transcripts from each college attended have been received and reviewed. Transfer credit is accepted for coursework with a grade of "C" or better 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 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. Two copies of the Certificate of Advanced Standing will be generated for all accepted transfer students. The Certificate must be submitted to the academic advisor for review and approval during the transfer orientation session. Academic departments will make the final determination of credits accepted toward the chosen curriculum.

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## OTHER SOURCES OF TRANSFER CREDIT

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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 high school counselors and teachers. All AP scores must be sent to the Office of Admissions prior to enrollment.

2. **College Level Examination Program (CLEP)**

Students who attain satisfactory scores on the Subject Examinations College Level Examination Program (CLEP) under the auspices of the College Entrance Examination Board are eligible to receive course credit on the basis of such tests. However, the CLEP examination must be completed prior to or during enrollment at Norfolk State. Academic advisors should be consulted to determine whether credits can be applied to 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 were administered CLEP through the DANTES program must have CLEP scores reported directly to the University from DANTES.)

Selected CLEP Subject Examinations are offered at nationwide test centers on a monthly basis. CLEP registration information may be obtained from national test centers, from the Educational Testing Service, Princeton, New Jersey, or from the NSU Office of the Registrar.

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 credit through ACT PEP. These examinations are offered at test centers throughout the nation. For more information, contact the Department of Nursing at (757) 823-9013.

4. **Credit for Military Service**

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

5. **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.

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### APPLYING AS AN INTERNATIONAL STUDENT

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When applying for admission as an international student, the applicant must provide the following:

1. An application completed in full and a non-refundable application fee of \$25, payable in U.S. funds, or an official fee waiver.
2. Official or certified copies of all academic work and examination results in native language and in English.
3. Two letters of recommendation.
4. Proof of English language proficiency for non-native English speakers.
5. SAT I or ACT scores for undergraduate applicants under the age of 21.

6. Financial documents, including notarized affidavit of support, student certification form, and bank statements.
7. \$100 non-refundable enrollment deposit following acceptance.
8. A medical history form signed by the student and a physician, submitted prior to the end of the first semester of enrollment. The form must be submitted to the Spartan Health Center.

Additional documents may be required.

Due to the length of time required to obtain U.S. visas, applications for admission must be received 3-4 months prior to the semester applicants wish to enroll. Contact the Office of Admissions for detailed application information and instructions.

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### NON-DEGREE ADMISSION

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Persons who are seeking teacher certification, or who do not wish to pursue a degree program, may enroll in non-degree status at Norfolk State University. Students on academic or disciplinary suspension are ineligible to apply as a non-degree-seeking student. Applicants should be prepared to present official credentials upon request. Financial aid is not available for non-degree students except for those 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 obtain a Certificate of Advanced Standing. A \$25 non-refundable application fee is required. Eligible non-degree-seeking students are required to meet with the department head for each course in which he/she would like to register.

Non-degree international students must submit a copy of TOEFL scores or a transcript showing completion of three semester hours of college-level English with a grade of "C" or better.

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### SPECIAL CIRCUMSTANCES

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#### Admission to the Nursing Program

Admission to the programs within the Department of Nursing is competitive and based on criteria that include completion of either high school or college prerequisites, demonstrated ability in mathematics and the natural sciences, competitive grade point average in previous academic work, and other requirements as specified in literature that 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 assist students who wish to attend NSU but need additional academic preparation prior to engaging in collegiate study. 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.

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**GRADUATE ADMISSIONS**

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Please see the Graduate Catalog for graduate admissions information. The Graduate Catalog may be accessed at:

<http://www.nsu.edu/catalog/GraduateCatalog.html>.

**READMISSION**

Any former undergraduate who has not attended Norfolk State University for two 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 student is 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.

**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.

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 for students 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.

While students returning may pursue any degree program offered by the 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.

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/Office of Continuing Education. For additional information on the Reclamation Project, contact the reclamation advisor at (757) 368-4154.

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**RECLAMATION PROJECT  
READMISSION**

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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 a student's 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 or 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 for graduation.
8. Any student who intends to seek
9. 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).
10. Academic forgiveness cannot be granted if a student has earned a post-secondary degree following his or 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  
1881 University Drive  
Virginia Beach, VA 23453  
(757) 368-4150/4155

## TUITION, FEES, AND FINANCIAL INFORMATION

### VIRGINIA IN-STATE TUITION GUIDELINES

The following guidelines outline eligibility information for obtaining in-state tuition rates in the Commonwealth of Virginia. The information is not comprehensive and should only be used as a general reference.

### DOMICILE

To be eligible for in-state tuition rates, students must be domiciled in Virginia for a minimum of one year preceding the first official day of classes. Domicile is defined as the student's "present, fixed home to where the student returns following temporary absences and to where he or she intends to stay indefinitely." In order to qualify for Virginia in-state tuition, therefore, the student must meet two criteria: he or she must currently reside in Virginia and intend to reside in Virginia indefinitely.

As a minor, a student carries his or her parents' domiciliary status. Once the student reaches the age of 24, he or she is eligible to establish his or her own domicile. However, if a student is over 24 years of age and is financially dependent on his or her parents, normally the parents must be domiciled in Virginia before the student becomes 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 unquestionably determine Virginia domicile. These factors, used to support a case for in-state tuition benefits, must have been present for one year prior to the first official day of classes.

Residence or physical presence in Virginia attained primarily to attend a college or university does not entitle a student to in-state tuition rates. If a student is 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 residing in the state primarily to attend an institution and does not intend to stay indefinitely. Applications for change of domicile are available through the Office of Admissions.

All applications and supporting documents must be received in the Office of Admissions prior to the start of the semester for 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 pertinent Virginia statute and guidelines issued by the State Council of Higher Education for Virginia are on reserve in the University Library. For additional information, contact the Office of Admissions at (757) 823-8396 or 1-800-274-1821.

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## TUITION AND FEES

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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.

The current listing of tuition and fees is located at: <http://www.nsu.edu/admissions/documents/Tuition&FeeSchedule2007-2008.pdf>

### Senior Citizens' Tuition and Fees

Persons 60 years of age or older who are residents of Virginia and whose taxable income is less than \$15,000 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 or her 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.

### Matriculation/Enrollment Fee

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

### Enrollment Deposit Fee

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

### Residential Fees

All students who plan to live on campus must pay a non-refundable housing deposit of \$300.00 by the deadline date, (May 31<sup>st</sup> for fall entry, November 1<sup>st</sup> for spring entry) to reserve on-campus housing. Only applications accompanied by deposits will be considered. No bed spaces are guaranteed after the deadline dates.

### Other Charges

Students enrolled in certain music, physical education, nursing, on-line 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 (<http://www.nsu.edu/schedulebook/>).

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## BOOKS/SUPPLIES

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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.

**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 130.

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**REGISTRATION PAYMENT DUE DATES**

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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 financial aid is awarded 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.

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**DEREGISTRATION**

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If satisfactory payment arrangements are not made by established due dates, a student's registration will be cancelled. Students may re-register during the registration period and may be 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 have filled and, as a result, may be closed.

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**PAYMENT OF TUITION AND FEES**

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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 costs.

- **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](http://www.fafsa.ed.gov).*

- **OPTION 3** Pay monthly through the Campus Partners (CP) Payment Plan, formerly known as Academic Management Services (AMS) and 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
- Combined plan with Financial Aid

There are two easy ways to enroll in the CP Plan:

- *By Mail:* Obtain and complete a CP Enrollment Form. Forms can be obtained from CP or Office of Student Accounts.
- *By Phone:* Call a CP Education Payment Counselor at (800) 635-0120.
- **OPTION 4** Pay by selecting the NSU Spartan Payment Plan. The Spartan Plan is a semester only plan and there is a \$50 processing fee. Subtract awarded financial aid, outside scholarships, private loans, work study, and deposits from total expenses to determine the remaining balance. Divide the remaining balance by 2 to determine the amount to pay now and the amount to pay later. Payments are due October 15 and November 15 for the Fall semester and March 15 and April 15 for the Spring semester. A \$30 late payment fee will be applied if payment is not made by the due date. Students interested in

the NSU Spartan Payment Plan should contact the Office of Student Financial Services at (757) 823-8381 for an application and more information.

Prior balances cannot be put on the CP or NSU Payment Plans.

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## BILLING

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

Questions pertaining to bills or financial aid should be directed to the Office of Student Financial Services, Room 130 H. B. Wilson Hall, (757) 823-8381.

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## DELINQUENT ACCOUNTS

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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.

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## FINANCIAL AID FOR STUDENTS

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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 financial need. Types of aid include scholarships, grants, loans, and employment. Applications and additional information may be obtained at the Financial Aid Office.

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.

Generally, students 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, and certain programs award assistance to less than half time students.

Financial aid is awarded on an annual basis. Students must reapply for financial aid each year and continue to meet eligibility criteria. The priority date for applying for Norfolk State University's administrated financial aid is March 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 during the month of May.

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

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## FINANCIAL AID APPLICATION REQUIREMENTS

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For maximum consideration of financial aid, a student must complete and submit all information no later than March 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. Paper applications take longer to process; therefore it is encouraged that the FAFSA be completed online at <http://www.fafsa.ed.gov>. Paper FAFSAs may still be completed and can be obtained from any high school, public library, or college. The application and assistance for completing the FAFSA is free of charge. 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 current federal tax return and W-2 form(s). Verification of non-taxable income may be required.

3. **Graduate and Professional School Financial Aid Services**

Graduate students are required to complete the FAFSA. Please see the Graduate Catalog for further information.



**4. Student Aid Report (SAR)**

Once the FAFSA is received and processed, the Department of Education will provide the applicant with a Student Aid Report (SAR). The SAR summarizes the information that was reported on the FAFSA. NSU will receive an electronic copy of the document and use the information to determine eligibility for financial aid.

**5. Federal PLUS Applications**

Financial aid funds are limited and cannot meet the demonstrated need of all students applying for financial aid. Because of this, parents may apply for a Parent Loan for Undergraduate Students (PLUS). To apply for a PLUS parents must be approved and complete an application. Visit our website at <http://www.nsu.edu/financialaid> to apply for a PLUS.

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**ENROLLMENT STATUS**


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

CREDIT HOURS	UNDERGRADUATE	GRADUATE
12 or more	Full Time	Full Time
9-11	Three-Quarter	Full Time
6-8	Half Time	Half Time
1-5	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.

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**TO REINSTATE FINANCIAL ASSISTANCE**


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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. SAP is reviewed on an annual basis.

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**RIGHT OF APPEAL**


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To appeal a denial of financial aid, students must submit an Application for Financial Aid Appeal, along with all supporting documentation. The Application for Financial Aid Appeal can be obtained at <http://www.nsu.edu/financialaid>.

To appeal a denial of financial aid, students must submit an Application for Financial Aid Appeal, along with all supporting documentation. The Application for Financial Aid Appeal can be obtained at <http://www.nsu.edu/financialaid>.

In Person:

Financial Aid Appeals Committee  
H.B. Wilson Hall, Suite 120

Via Mail:

Financial Aid Appeals Committee  
Norfolk State University  
700 Park Avenue, Suite 120  
Norfolk, VA 23504

Documents may be faxed to: (757) 823-2057. Include the student's name and ID number on all documents. Effective, fall 2005, the appeals deadline is one month prior to the start of the term. The Financial Aid Appeals Committee will notify students via their official NSU e-mail address. The letter of appeal and supporting documentation will be retained in the student's financial aid file.

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**TYPES OF AID, GRANTS, AND SCHOLARSHIPS**


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**1. Federal Pell Grant**

Federal Pell Grants are available to undergraduate students only and are administered by the Financial Aid Office. Eligibility is determined by the Financial Aid Office based on data submitted by the applicant and/or family. The student must be enrolled for at least one (1) semester hour.

**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. 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. Academic Competitiveness Grant (ACG)**

Academic Competitiveness Grants are awarded to first and second year students who are U.S. Citizens, Pell Grant eligible, enrolled full time in a degree-seeking program, and have completed a rigorous secondary school program of study. Second year students must have a 3.0 cumulative GPA.

**4. National Science and Mathematics Access to Retain Talent Grant (National SMART Grant)**

SMART Grants are awarded to third and fourth year students who are U.S. citizens, Pell Grant eligible, enrolled full time and majoring in an eligible mathematics, science, technology, engineering or critical foreign language program. Students must have at least a 3.0 cumulative GPA.

**5. 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/orphan or ward of the court. The student must also complete at least 12 hours per semester, with at least a 2.0 grade point average to renew the award.

**6. Commonwealth Award**

Commonwealth awards are available to Virginia students who have an overall average of "C" or better and show 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.

**7. 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; students' 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.

**8. 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.

**9. 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. Students nominated for the scholarship must be enrolled full-time. For additional information about the program, call or write the University Advancement Office, Norfolk State University, (757) 823 8323.

**10. Graduate Fellowship (GF)**

Graduate fellowships are limited fellowship awards to graduate full-time students on the basis of merit (3.0 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.

**11. Army ROTC Scholarship Program**

The Naval Reserve Officers Training Corps AROTC 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.

**12. 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, call or write the Navy ROTC Department, Norfolk State University, (757) 823 8895.

**13. Loans****a) Federal Direct Loans**

These loans do not involve private lenders. Students borrow directly from the federal government. Students may 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 \$3,500 for the first year, \$4,500 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, he or she will be responsible for the interest during in-school and deferment periods. Additionally, the maximum unsubsidized loan for freshmen and sophomores is \$4,000, the limit for juniors and seniors is \$5,000, and the maximum for graduate students is \$12,000.

b) **Carl D. Perkins Loans NDSL (Federal Perkins Loan)**

A long term, low interest loan program for needy students. 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.

c) **Federal PLUS Loans**

Annual Loan limits: Cost of attendance minus other aid.

**14. Employment**

a) **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 to 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 on their award letter, and can work a maximum of 6 hours a day not to exceed 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 sheet be submitted to the Office of Financial Aid by 5:00 p.m. of the last working day of each pay period, unless otherwise directed.

b) **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 6 hours a day not to exceed 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 sheet be submitted to the Financial Aid Office by 5:00 p.m. of the last working day of each pay period, unless otherwise directed.

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## OTHER SERVICES

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**1. Active Duty Personnel**

Active duty military personnel may qualify for either VA Assistance or the Tuition Aid Program of the Armed Forces which provides 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.

**2. 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.

**3. Social Security Benefits**

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

**4. 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.

#### 5. **Veterans Benefits**

Students may apply for educational benefits through the **Veterans Administration (VA) Vocational Rehabilitation Program**. Dependents of some disabled or deceased veterans may qualify for educational benefits. For more information, contact the Veterans Affairs Office at (757) 823-2586. 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 **Veterans 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](http://www.nsu.edu) and by checking the federal website at [www.fafsa.ed.gov](http://www.fafsa.ed.gov).

#### 6. **Virginia Military Survivors and Dependent Education Program (VMSDEP)**

The purpose of the VMSDEP is to provide eligible students enrolled in a Virginia public college or university with certain educational benefits in acknowledgement of the military service and sacrifice of their military parent or spouse. To be eligible for assistance under this program, an applicant must meet the following basic eligibility requirements:

- a) A spouse of a qualifying military service member; or
- b) A child, between the ages of 16 and 29, inclusive, of a qualifying military service member
- c) One of the applicant's parents must have served on active duty in the armed forces of the United States during at least one of the following: military operations against terrorism; a peace keeping mission; or as a result of a terrorist act; or any armed conflict subsequent to December 6, 1941.
- d) While serving active duty the applicants parents must meet at least one of the following: was killed; was missing in action; was prisoner of war; or is a veteran who, due to such service has been rated

as permanently disabled or at least 90 percent disabled.

- e) Has one of the qualifying domicile status:
  - i. Virginia domicile at time of entering service or called up from reserves;
  - ii. Virginia domicile for at least five years immediately prior to student applying for VMSDEP;
  - iii. If deceased, was Virginia domicile on, and for at least five years prior to, his death;
  - iv. in the case of a qualifying child, is deceased and the surviving parent has been, at some point previous to marrying the deceased parent, a Virginia domicile for at least five years or is and has been a Virginia domicile for at least five year prior to the student's application for this benefit;
  - v. or in the case of a qualified spouse, is deceased and the surviving spouse had been, at some time previous to marrying the deceased military spouse a Virginia domicile for at least five years prior to student's admission application.

Eligible students, as confirmed by the Virginia Department of Veterans Services (DVS), are guaranteed waiver of all tuition and mandatory fees at a Virginia public college or university regardless of degree program or enrollment level. Summer awards are available if the student did not use the full annual award during the prior fall and spring terms, as funds are available.

Award amounts may be reduced if the number of eligible students exceeds projections. This award is not reduced by receipt of other gift aid, except that, when combined with other gift aid, the combination of assistance cannot exceed the student's cost of attendance. Applications for VMSDEP should be submitted to DVS along with the student's acceptance letter to a Virginia public college. Applications can be obtained at <http://www.dvs.virginia.gov/statebenefits.htm>.

## STUDENT REFUNDS

Students who present a certified check or money order for an amount in excess of their 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.

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## TUITION APPEAL

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Norfolk State University will promptly refund tuition and/or cancel a financial charge from a student's account provided that the student meets the requirements of the University's policy on tuition appeals and submit 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 (757) 823-8229.

## RESIDENCE HALL FINANCIAL INFORMATION

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### RESIDENTIAL FEES

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All students who plan to live on campus must pay a non-refundable housing deposit of \$300.00 by the deadline date, (May 31<sup>st</sup> for fall entry, November 1<sup>st</sup> for spring entry) to reserve on-campus housing. Only applications accompanied by deposits will be considered. No bed spaces are guaranteed after the deadline dates.

Upon receipt of a bill from NSU, the entire room and board balance must be paid in full or payment arrangements made with the Office of Student Accounts by the respective May 31<sup>st</sup>/November 1<sup>st</sup> deadline date. To inquire about individual accounts, students should contact the Student Financial Services at (757) 823-8381.

Cashier's checks or money orders should be made payable to Norfolk State University. The student's social security number and name must be included

on his/her money order or cashier's check. Personal checks are accepted for first-time freshmen.

Students are required to occupy the assigned room on or before the first day of classes. Failure to do so could result in the loss of on-campus housing.

### 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.

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.

### 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 a 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 a student is 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.

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.*

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## **RESIDENCE HALL WITHDRAWAL PROCEDURES**

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Those who withdraw from an NSU residence hall must contact the assigned residence hall personnel. Residents are responsible for removing all personal possessions and for cleaning their rooms, which must be verified by the residence hall director. The student is responsible for completing all paperwork to complete the withdrawal process.

There will be a \$100 charge for all rooms/suites not cleaned and a \$75 per key charge for all keys not returned. Both offenses are subject to possible sanctioning that could prohibit future residency in the residence halls. In addition, students withdrawing from the residence halls will incur a \$50 charge for improper check-out if they fail to complete any part of the withdrawal process. Students should contact their respective graduate assistant or residence hall director if they have questions.



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## ACADEMIC INFORMATION

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### THE ACADEMIC YEAR

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The academic year consists of 30 weeks of instructional time divided into two semesters. The first semester begins in late August and ends before the Christmas holidays; the second semester begins in January and ends in May. See the academic calendars provided in the front of this catalog.

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.

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### THE SUMMER SESSION

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An optional summer session is offered and includes two mini terms; a six-week term and a four-week term. It offers significant opportunities for entering freshmen and 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 summer session begins one week after the conclusion of the Spring semester.

## THE CURRICULUM

The curriculum is the vehicle through which the University seeks to make its most significant impact upon the lives of students. Developing, implementing, and updating curricula is the responsibility of the faculty and academic administrators. Curricular offerings are described in this catalog for each academic program.

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### COURSE NUMBERING

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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.

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### UNIT OF INSTRUCTION

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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.

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### MAJOR COURSE OF STUDY

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Courses 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.

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### ELECTIVE COURSES

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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.

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## MINORS

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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 the 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. 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.

## GENERAL EDUCATION CORE PROGRAM

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 required 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:

- Write and speak logically, clearly, and precisely.
- Read and comprehend written and graphic information.
- Locate, compile, organize, and document information from print and digital sources.

- Understand mathematical and technological thought and conceptualize appropriate logic in problem solving.
- Understand and apply key concepts, principles and processes in the natural and social sciences.
- Demonstrate technological proficiency appropriate to their professional and personal needs.
- Examine, evaluate, and appreciate history's influences on economic, political and social events.
- Understand and appreciate diverse cultures and perspectives.
- Examine and understand the role of personal and responsible citizenship in democratic society.
- Appreciate aesthetics.

## REQUIREMENTS FOR THE ASSOCIATE OF SCIENCE DEGREE

The University awards the associate of science 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 the academic departments and pay the required graduation fee. At least 20 hours of general education core are 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 undergraduate students.

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 in ENG 101 and ENG 102.

Associate degree-seeking students must pass the Examination of Writing Competency no later than one semester prior to the anticipated date of graduation. Additional information is provided under Examination of Writing Competency of the Academic Policies section (see p. 44).

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## GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE

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Norfolk State University offers associate degree programs in Architectural Drafting (see p. 192) and in Nursing (see p. 175). Students seeking an

associate degree are required to complete general education core requirements appropriate to the degree program. See the associate degree program

descriptions and curricula for more information about specific general education core requirements.

## 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 Introduction to University Life (UNI 101)
2. Complete the General Education Core requirements.
3. Have a minimum cumulative grade point average of 2.0.
4. Have a minimum of 120 semester hours of credit.
5. Meet all requirements of the curriculum leading to the degree for which he or she is a candidate.
6. 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.
7. Meet core competency requirements.

Degree-seeking students at the baccalaureate level are required to take the writing examination before completing 90 semester hours. Degree candidates must pass the Examination of Writing Competency no later than one semester prior to the anticipated date of graduation. Additional information is provided under Examination of Writing Competency of the Academic Policies section (see p. 44).

Exceptions to degree requirements may be made only with PRIOR written approval of the Provost upon recommendation of the Department Head and School Dean. Exceptions may not exceed six semester hours of academic credit.

## 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:

### 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)

CLM 165	Computer Literacy for Musicians
CSC 150	Computer Literacy
FIA 180	Computer Literacy for the Arts
IMT 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 for 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
CHM 100	Chemistry: Man and Environment
CHM 100L	Chemistry Lab
PHY 100	Physical Science
PHY 100L	Physical Science Lab
SCI 100	Life in the Universe
BIO 110	General Biology
CHM 110	Basic Concepts in Chemistry

### SOCIAL SCIENCES (6 SEMESTER HOURS)

SOC 101	Introduction to Social Sciences
HIS 100	History of World Societies Part 1
HIS 101	History of World Societies Part 2
HIS 102	United States History to 1865
HIS 103*	United State History 1865 to Present
HIS 335*	African-American History
HIS 336*	African-American History
HIS 371*	African History and Culture
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.

Departments may require specific courses for their majors.

## 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 and to understand that continued financial aid is dependent upon meeting these standards.

### UNDERGRADUATE ACADEMIC STANDARDS

Satisfactory academic progress toward degree completion by the number of semester hours completed and by the number of quality points earned. A minimum of 240 quality points and 120 completed 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 academic progress are:

RESIDENT HOURS	COMPLETED MINIMUM RESIDENT G.P.A.
1-29	1.7000
30-59	1.8000
60 and above	2.0000

### CLASSIFICATION OF UNDERGRADUATE STUDENTS

CLASSIFICATION	DESCRIPTION
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 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 grade point average or above may carry additional hours ONLY with appropriate approval by the academic advisor/department chairperson and school dean. A course load in excess of 19 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.

For graduate students, the normal course load for a full-time graduate student is 9 and no more than 15 semester hours. A course load in excess of 15 semester hours must be approved by the dean of the school. Academic Suspension



## DEANS LIST AND HONOR ROLL

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 DESIGNATION

Students who have completed all degree requirements and have met the following criteria at the time degree requirements have been met will earn an honors designation. The following honors categories for baccalaureate graduates are reflected in the printed Commencement Program:

- **Summa Cum Laude:** cumulative resident GPA 3.7500 - 4.0000
- **Magna Cum Laude:** cumulative resident GPA 3.5000 - 3.7499
- **Cum Laude:** cumulative resident GPA 3.0000 - 3.4999.

The honors designation will be noted on the official transcript.

### Recognition of Honors at Graduation

Honors designations are based on the degree candidate's academic record the semester prior to Commencement. Degree candidates who have earned an honors designation will be recognized in the commencement program provided the honors designation was earned in the semester immediately preceding the anticipated commencement date. For additional information, see Commencement Participation in the Academic Policies section (p. 41).

## GRADE REPORTS

Effective Spring 2006, grades are available online at SpartanShield (<https://spartanshield.nsu.edu>), grade reports are no longer mailed to students. Anyone needing an official grade report for work or other purposes must complete a Request for Official Final Grade Report in the Office of the Registrar. The grade report will be mailed within 2-3 business days.

Information regarding the grading system is described in the Academic Standards section (p. 37). Information regarding the grade appeal process is described in the Academic Policies section (p. 42).

## THE GRADING SYSTEM

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

GRADE	QUALITY POINTS	GRADE	QUALITY POINTS
A	4.0000	C	2.0000
A-	3.7000	C-	1.7000
B+	3.3000	D+	1.3000
B	3.0000	D	1.0000
B-	2.7000	D-	0.7000
C+	2.3000	F	0.0000

*P	None	n/a
**AU	None	Audit
I	None	Incomplete
W	None	Official Withdrawal
NG	None	No Grade Reported
S	None	Satisfactory
#	None	Forgiven

\* 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 quality points earned by the total number of completed semester hours.

### Example Grade Point Average Calculation

COURSE	TOTAL GRADE	CREDIT HOURS	QUALITY POINTS	TOTAL QUALITY POINTS
HIE 264	C	1	2.0	2.0000
HIE 264L	C+	2	2.3	4.6000
HIE 149L	B-	2	2.7	5.4000
HFD 340	B+	3	3.3	9.9000
FIA 180	A-	3	3.7	11.1000
MUS 301	D-	3	0.7	2.1000
<b>Total</b>		<b>14</b>		<b>35.1000</b>

- Total quality points = semester hours multiplied by quality points
- G.P.A. = Sum of total quality Points divided by total semester hours

### Example:

35.1000 total quality points divided by 14 total semester hours equals **2.5071 G.P.A.**

### Removal of Incomplete (I) Grades

The "I" (Incomplete) grade is used by the instructor when the course requirements have not been met because of illness or some other extenuating circumstances 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'. If no time limit established, students have a time limit of one year to remove the "I" or the grade will change to "F" (failure).

No student will be allowed to graduate with an "I" on the record.

### 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. Students must pass all courses in the major with a grade of C or higher.

## STANDARDS OF SATISFACTORY ACADEMIC PROGRESS

### Undergraduate Students

Students must complete at least 67% of all courses attempted in order to maintain satisfactory academic progress. Courses that are not considered as "completed," but still count as hours attempted are failed (F) courses, incomplete (I) courses, dropped (D) courses and withdrawn (W) courses. Repeated courses will count toward hours earned if:

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

### Academic Classification for Full-Time Undergraduate Students

LEVEL	TOTAL CREDIT HOURS EARNED	CUMULATIVE G.P.A.
Freshman	Fewer than 30	1.7 or higher
Sophomore	30-59	1.8 or higher
Junior	60-89	2.0 or higher
Senior	90 or more	2.0 or higher
Graduate		3.0 or higher

These minimum standards must be met in order for a student 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.

Also, students must not exceed 150% of the number of credits needed to complete a degree.

## ACADEMIC PROBATION AND SUSPENSION

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

### 1<sup>st</sup> Warning

Upon receipt of First Warning Probation Letter, the student must schedule an appointment with ACCESS and meet with an ACCESS advisor to:

1. Develop and sign an Academic Performance Contract
2. 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).
3. Enroll in and complete the Study Skills Seminar conducted by the ACCESS Department.

### 2<sup>nd</sup> Warning

Upon receipt of Second Warning Probation Letter, the student must:

1. Complete an Academic Performance Contract
2. See advisor to revise course schedule or assist with course selection and registration
3. Enroll in required Study Skills Seminar with the ACCESS Department.

### NOTE: 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.*

### Suspension

Students who are on probation and do not achieve the required grade point average after two warnings are subject to suspension from the University. A letter of suspension will be issued to the student.

### Appealing Academic Suspension: Policy and Procedures

If a student wishes to appeal a suspension decision, a written letter of appeal must be faxed or mailed to the Office of the Registrar by the Wednesday prior to the beginning of classes. Any appeals received after this date will be deferred until the following semester. The appeal is submitted to the

Suspension Appeals Committee and its decision is final. Notification of the outcome will be provided by the Office of the Registrar.

**Readmission after Restoration of Academic Eligibility**

Students suspended from the University for academic reasons must appeal the suspension prior to being re-admitted. It is strongly suggested that students adhere to the following requirements prior to appeal:

Take courses (minimum: 6 credit hours) during the University's summer session and maintain a GPA of 2.0 or better.

Leave the University for one or more semesters (which may include one summer) complete a minimum of 6 credit hours of academic work at another college or university, and earn a grade point average of 2.0 or better each semester.

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**UNIVERSITY CORE COMPETENCIES**

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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, information literacy, 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 section below 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.

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**COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)**

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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 students 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.

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## ACADEMIC POLICIES

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### ACADEMIC HONESTY

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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, and 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.

Additional 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.

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### ATTENDANCE POLICIES

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#### **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.

#### **Class Attendance Policy**

The University expects students to attend all classes. While 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 course 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 percent of scheduled class meetings for the semester may receive a grade of F for the course.

Students have the responsibility to confer with instructors regarding all absences or intended absences. If a 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 (e.g. 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.

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## CHANGE OF MAJOR

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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 a major without approval of the department from which and to which a transfer is made.

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## COMMENCEMENT POLICY

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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.

Students must resolve deficiencies and/or discrepancies in the academic record with the department heads within prescribed guidelines. Failure to do so may result in deferring graduation.

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## COMMENCEMENT PARTICIPATION

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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 the semester prior to Commencement.

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

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## CONTINUOUS ENROLLMENT

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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 or 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.

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## COURSE SUBSTITUTIONS

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Course substitutions allow a department to use an NSU course or transfer course (C or better grade) to meet a degree requirement when the required course is not being taught within a particular semester or is no longer offered. A request for a course substitution requires approval by the student's advisor, the department head, and the school dean.

Substitution is not to be confused with waiver. Substitution is an option to meet a requirement, while waiver implies exemption. Waivers for requirements in the major are not granted.

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

### **General Education Core - 6 hours**

MLS 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) MLS and NSC courses may be used provided the student is enrolled in the appropriate Military Science or Naval Science Program when substitutions are requested.



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## DUAL DEGREE POLICY

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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 for a student 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.

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## GRADE APPEAL

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The instructor has the responsibility for evaluating coursework and determining grades; however, the student has the right to appeal a grade believed to be in error. The appeal process may involve the following steps and 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.

When the above steps do not resolve the issue, the student may initiate a formal written appeal through the Faculty/Student Grievance Committee to the Provost for its review and recommendation. Appeals should not be taken lightly by either the student or the instructor.

The student is responsible for verifying the accuracy of his or 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.

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## OFF-CAMPUS CLASS TRIPS

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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 Provost 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.

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## SECOND BACCALAUREATE DEGREE

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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.

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## STUDENT LEARNING OUTCOMES ASSESSMENT REQUIREMENT

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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 are not reported and will remain confidential. Information from the assessment activities will be used by faculty and administrators to improve programs and services.

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## WITHDRAWAL FROM THE UNIVERSITY

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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 by the last day of class. 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 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 all 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
Eight 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 (FDSLSP)
- 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.

### WRITING COMPETENCY ASSESSMENT

All first-time freshmen and readmitted students entering Fall 2001 and thereafter and transfer students entering Fall 2002 and thereafter are required to take an exit examination to assess writing competency. After completing ENG 102, students must register for ENG 299 (no credit, no charge) until successfully passing the Examination of Writing Competency. The 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). Degree-seeking students at the baccalaureate level are required to take the writing examination before completing 90 semester hours. Associate degree-seeking students must take the exam no later than one semester prior to the anticipated date of graduation. 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.

## REGISTRATION PROCEDURES

The Registrar is the official custodian of academic records and is responsible for the process of enrolling students in courses, providing registration statements (which include 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. For more information please contact the Office of the Registrar at 757-823-8229.

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 registration information booklet outlining registration policies and procedures, final examination schedules, and other information pertaining to

registration for a given semester or summer school is available in the Office of the Registrar or online at [www.nsu.edu/registrar](http://www.nsu.edu/registrar). Class schedules are available online under Search for Classes using <https://spartanshield.nsu.edu>. 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 registration information booklet, and other official publications.

First-time freshmen and transfer students 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. Returning students must consult with their advisor and agree upon a schedule of courses in order for the advisor to release the WEBNO hold for online registration using SpartanShield (<https://spartanshield.nsu.edu>).

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### EARLY REGISTRATION

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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.

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### LATE REGISTRATION

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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.

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.

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### CHANGES IN CLASS SCHEDULE (ADD/DROP)

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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 College 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.

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### AUDITING COURSES

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Students who desire to attend classes but do not plan to receive credit may audit courses. A grade of AU is 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.

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### CHANGE OF NAME AND ADDRESS

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It is the obligation of the student to notify the Office of the Registrar of any change in name (legal documentation required) or address.

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### TRANSCRIPT OF RECORD

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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. The check or money order should be made payable to NSU. Students should allow 3 to 5 business days for processing (except during registration – then allow 5 to 7 business days).

Online requests for transcripts may be placed at [www.nsu.edu/registrar/transcripts](http://www.nsu.edu/registrar/transcripts). The cost for online transcript requests is \$5.00 per copy which must be paid using a valid credit card. The same processing times apply for online requests.

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

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## RELEASE OF STUDENT INFORMATION

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*(In accordance with FERPA)*

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

1. **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, enrollment status, degree, honors and awards received, and previous educational agency or institution attended.

2. **"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.

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## RETENTION AND DISPOSITION OF RECORDS

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The Office of the Registrar adheres to the following disposal schedule as recommended by the Library of Virginia's Records Retention and Disposition Schedule, General Schedule No. 111, College and University Records (effective September 2007).

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## ACADEMIC RESOURCES AND SERVICES

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### ACADEMY FOR COLLEGIATE EXCELLENCE AND STUDENT SUCCESS (ACCESS)

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**James A. Bowser Building, Room 118  
757-823-8507**

The Academy for Collegiate Excellence and Student Success (ACCESS) Program is a multi-faceted comprehensive program designed to support student success, retention, and graduation. ACCESS services emphasize 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/](http://www.nsu.edu/access/).

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### CHILD DEVELOPMENT LABORATORY

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**James Bowser Building, Room 113-A  
757-823-8111**

The Child Development Laboratory is part of Early Childhood Education program in the School of Education. The laboratory provides training and observation facility for class assignments, research, student teaching and field work. It provides a readiness curriculum for ages 2.5 to 5 years. Hours of operation are 7:30 a.m. to 5:30 p.m. Monday through Friday. For more information contact 757-823-8111 or 757-823-9241.

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### COMMUNICATION SCIENCES AND DISORDERS LABORATORY

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**J. Hugo Madison Hall, Room 114  
757-823-2836**

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. For more information, contact Dr. Ronald Jones at 757-823-2836.

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### COMPREHENSIVE LANGUAGE LEARNING CENTER

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**J. Hugo Madison Hall, Room 240  
757-823-8891**

The Comprehensive Language Learning Center 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.

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### ERNEST M. HODGE CENTER FOR ENTREPRENEURSHIP

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**McDemmond Center for Applied Research  
757-823-2655**

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

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### OFFICE OF FIRST YEAR EXPERIENCE

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**James A. Bowser Building, Room 118  
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 undergraduate students.

The Office of 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 First Year Experience offers discipline-specific freshman seminar courses. The University Life 101 courses are designed to help first year undergraduate students adjust to the University, develop a better understanding of the college environment, and acquire essential academic success skills.

The Alpha Lambda Delta Honor Society for First Year Students is sponsored by the Office of First Year Experience.

The following academic support programs are provided by the Office of First Year Experience in collaboration with the Academy for Collegiate Excellence and Student Success (ACCESS)

- Academic Advising
- ACCESS Plus Summer Bridge Program
- Career Exploration Courses – GST 180
- Computer Lab Instruction
- Male and Female Mentoring
- Peer Mentoring
- Study Skills Courses – GST 200
- Supplemental Instruction
- Tutoring

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## GLOBAL LEADERSHIP DEVELOPMENT CENTER

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**Brown Memorial Hall, Room A-240**  
**757-823-8920**

This center is equipped with state-of-the-art audio visual equipment to facilitate teleconferencing. It is primarily available to School of Business faculty for professional development activities.

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## MATHEMATICS MEDIA CENTER

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**Brown Memorial Hall, Room C-227**  
**757-823-8820**

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

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## MATHEMATICS TESTING CENTER

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**Brown Memorial Hall, Room C-227**  
**757-823-8820**

The mission of the Mathematics Testing Center is to:

1. Monitor computer pretests for the MTH 101 Elementary Algebra Lab Component;
2. Evaluate and record results of pretest mastery for MTH 101 faculty;
3. Diagnose deficiencies of students enrolled in MTH 101; and
4. Provide tutorial assistance for all pre-calculus courses.

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## NEW STUDENT ORIENTATION

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**Enrollment Management**  
**Wilson Hall, 1<sup>st</sup> Floor**  
**757-823-8679**

New Student Orientation introduces new students to the NSU campus. Orientation is a process designed to assist new students in making a successful transition to college life at NSU, whether you are a new first-year or transfer student.

New Student Orientation affords new students the opportunity to learn about what college courses are like at NSU, what student life is all about, what services are available to assist them and what unique opportunities exist to help them broaden their experience. Students will learn how to take full advantage of all that NSU has to offer both inside and outside the classroom.

Orientation is a time for new students to experience what it is like to register for NSU courses, become familiar with the technology that is utilized in many courses, visit the residence halls on campus, learn about the student activities that are available and to tour the campus.

During New Student Orientation, students will meet faculty, staff, administrators, other students and register for classes. It is a time to make acquaintances and new friends while also getting a

good start towards having a successful first semester at NSU.

The New Student Orientation website is <http://www.nsu.edu/newstudentorientation/>. The web site provides information such as:

- Reading lists from the various schools
- Orientation dates and locations
- Class schedule information for upcoming semesters
- Welcome messages from the various schools
- University contact information and directions to campus

The New Student Orientation web site also allows students to RSVP for a particular orientation date online. For more information about New Student Orientation, please call the Enrollment Management Office at 757-823-8679.

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## PLANETARIUM

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**Wood Science Building Room 119  
757-823-8909**

The Norfolk State University 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.

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## THE CENTER FOR APPLIED RESEARCH AND PUBLIC POLICY

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**Brown Memorial Hall, C-142  
757-823-9575**

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. For more

information, please contact Dr. Rudolph Wilson at 757-823-9575.

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## STARS (SCIENCE AND TECHNOLOGY ACADEMICIANS ON THE ROAD TO SUCCESS) TUTORING CENTER

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**Robinson Technology Center, Suite 100  
757-823-2891**

The STARS Peer Tutoring Program offers free, one-on-one tutoring or group tutoring for students taking courses in biology, chemistry, computer science, engineering nursing, physics, mathematics, and technology. Tutoring is provided by graduate and undergraduate peer tutors who have been trained in effective tutoring techniques in accordance with College Reading and Learning Association Guidelines.

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## TEACHER EDUCATION RESOURCE CENTER (TERECE)

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**Bozeman Education Building, Room 225  
757-823-8715**

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. For more information, please contact Dr. Margaret Knight at 757-823-8715.

# LIST OF DEGREE PROGRAMS

DIVISION	UNDERGRADUATE	MINORS	CERTIFICATION / TEACHER LICENSURE ENDORSEMENTS	GRADUATE
SCHOOL OF BUSINESS	<b>BACHELOR OF SCIENCE</b> <ul style="list-style-type: none"> <li>– Accountancy</li> <li>– Business</li> <li>– Tourism and Hospitality Management</li> </ul>	<ul style="list-style-type: none"> <li>– Accountancy</li> <li>– Business</li> </ul>		
SCHOOL OF EDUCATION	<b>BACHELOR OF SCIENCE</b> <ul style="list-style-type: none"> <li>– Business Education</li> <li>– Early Childhood Education (Non-Certification Option)</li> <li>– Exercise Science/Physical Education</li> </ul>		<ul style="list-style-type: none"> <li>– Driver Education</li> <li>– Early Childhood/Primary</li> <li>– Elementary Education (PreK-6)</li> <li>– Health</li> <li>– Secondary Education</li> <li>– Special Education</li> </ul>	<b>MASTER OF ARTS</b> <ul style="list-style-type: none"> <li>– Pre-Elementary Education</li> <li>– Severe Disabilities</li> <li>– Urban Education</li> </ul> <b>MASTER OF ARTS IN TEACHING</b> <ul style="list-style-type: none"> <li>– Teaching</li> </ul>
COLLEGE OF LIBERAL ARTS	<b>BACHELOR OF ARTS</b> <ul style="list-style-type: none"> <li>– English</li> <li>– Fine Arts and Graphic Design</li> <li>– History</li> <li>– Journalism</li> <li>– Political Science</li> <li>– Psychology</li> <li>– Sociology</li> </ul> <b>BACHELOR OF MUSIC</b> <ul style="list-style-type: none"> <li>– Music Education</li> </ul> <b>BACHELOR OF SCIENCE</b> <ul style="list-style-type: none"> <li>– Interdisciplinary Studies</li> <li>– Mass Communications</li> </ul>	<ul style="list-style-type: none"> <li>– English</li> <li>– Fine Arts</li> <li>– French</li> <li>– History</li> <li>– Interdisciplinary Studies</li> <li>– Journalism</li> <li>– Mass Communications</li> <li>– Political Science</li> <li>– Psychology</li> <li>– Sociology</li> <li>– Spanish</li> </ul>		<b>MASTER OF ARTS</b> <ul style="list-style-type: none"> <li>– Applied Sociology</li> <li>– Community/Clinical Psychology</li> <li>– Criminal Justice</li> <li>– Media and Communications</li> <li>– Urban Affairs</li> <li>– Visual Studies</li> </ul>

## List of Degree Programs (cont'd)

DIVISION	UNDERGRADUATE	MINORS	CERTIFICATION / TEACHER LICENSURE ENDORSEMENTS	GRADUATE
COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY	<b>ASSOCIATE OF SCIENCE</b> – Architectural Drafting – Nursing  <b>BACHELOR OF SCIENCE</b> – Biology – Building Construction Technology – Chemistry – Computer Science – Computer Technology – Electronics Engineering – Electronics Technology – Health Services Management – Mathematics – Medical Technology – Nursing – Optical Engineering – Physics	– Astronomy – Biology – Computer Science – Mathematics – Physics	– Biology – Chemistry – Mathematics – Physics	<b>MASTER OF SCIENCE</b> – Computer Science – Electronics Engineering – Materials Science – Optical Engineering
SCHOOL OF SOCIAL WORK	<b>BACHELOR OF SOCIAL WORK</b> – Social Work			<b>MASTER OF SOCIAL WORK</b> – Social Work  <b>DOCTOR OF PHILOSOPHY</b> – Social Work

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## SCHOOL OF BUSINESS

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**Dr. Gary L. Whaley, Dean**  
**Dr. Moncef Belhadjali, Associate Dean**  
**(757) 823-8920**

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### NORFOLK STATE UNIVERSITY MISSION STATEMENT

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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.

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### THE SCHOOL OF BUSINESS MISSION STATEMENT

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To prepare students for careers in all types of organizations and for continued academic study. This is accomplished in a learner-centered community that promotes academic achievement, professional growth, and recognition of the importance of diversity, technology, globalization, and ethics in the workplace and society. The faculty is engaged in intellectual contributions and professional development to remain current in their teaching fields and to promote student success. The faculty is also committed to university and community service.

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### ACCREDITATION

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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.

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### PROGRAMS OF STUDY

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The School of Business grants three different baccalaureate degrees. The Bachelor of Science (B.S.) degree is offered in Accountancy, in Business, and in Tourism and Hospitality Management. The B.S. degree in Business has career tracks in Entrepreneurship, Finance, Management, Management Information Systems, and Marketing.

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### ADMISSION REQUIREMENTS

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**1. School of Business Majors**

The School of Business uses the same standards for admission as the University. Non-matriculating students may not take courses in the School of Business without consent of the Department Chair and Dean.

**2. Accountancy and Business Majors**

Students transferring courses to NSU 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. At least 50 percent of business course credits must be earned at NSU.



## BUSINESS CORE

Students who pursue a B.S. degree in either Accountancy or Business must complete the following core courses. These courses are intended to give the student a fundamental understanding of the essential areas of business management. Students should complete all lower-level (100 and 200-level series) Core courses prior to enrolling in courses numbered 300 or higher.

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 175	Intro to Business & Entrepreneurship	3
BUS 281	Legal Environment for Business	3
BUS 330	Business Communications	3
DSC 270	Business Statistics	3
DSC 376	Statistics & Quantitative Methods	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
MGT 365	Organizational Behavior and Theory	3
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
MIS 375	Management Information Systems & E-Commerce	3
MKG 366	Principles of Marketing	3
XXX XXX	Business Core Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>51</b>

## 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. 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 "C" or higher must be earned in the following non-business courses:

COURSE NO.	COURSE TITLE
ENG 101	Communication Skills I
ENG 102	Communication Skills II
MTH 131	Pre-calculus for Non-Science Majors
MTH 132	Calculus for Non-Science Majors
SCM 285	Principles of Speech
CSC XXX	(Management Information Systems Track only)

## TRANSFER CREDIT

Credits transferred to Norfolk State University from other AACSB-International-accredited colleges or universities may be accepted as substitutes for equivalent courses in a School of Business curriculum at NSU, without restriction. Credits transferred to NSU 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 a School of Business curriculum at NSU. Credits transferred to NSU from the Virginia Community College System (VCCS) will be accepted as substitutes for equivalent courses in a School of Business 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.

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## ATTENDANCE POLICY

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

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## COURSE LOAD

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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 are suggested:

CUMULATIVE GPA	MAXIMUM HOURS
Below 2.0000	12
2.0000– 2.4900	15
2.5000 or above	18

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## SCHOLARSHIPS

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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 Bank of America, Disney, El-Fayoumy, SM Perkins, Thelma M. Hayes Endowment, Wal-Mart Leadership, Haughton Scholarship fund, Holley/Osborne Endowment, Virginia Hospitality and Travel Association (VHTA), and Thompson Hospitality Scholarships. Students interested in applying for scholarships may contact the School of Business Dean or Associate Dean.

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## STUDENT ORGANIZATIONS

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Various student organizations exist in the School of Business and are designed (1) to develop competent and assertive business leaders; (2) to create an interest in various career opportunities in business, industry, and government; and (3) to encourage improvement in scholarship and community/professional service. Student organizations include the following:

- Pi Sigma Epsilon(Marketing)
- Beta Gamma Sigma (Honors Society)
- Finance and Banking Club
- Association for Information Technology Professionals (AITP)
- National Association of Black Accountants (NABA)
- National Coalition of Black Meeting Planners
- National Society of Minorities in Hospitality (NSMH)
- Society for the Advancement of Management (SAM)
- Students in Free Enterprise (SIFE)

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## SCHOOL OF BUSINESS ADVISORY COUNCIL

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The School of Business Advisory Council operates as an external group to review policies, procedures, and programs offered by the School of Business. The Council also advises the Dean on strategic issues and the establishment of partnerships with the community.

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**ERNEST M. HODGE CENTER FOR ENTREPRENEURSHIP**


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**Dr. Melinda Harris, Director**  
**(757) 823-2655**

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

Students are 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, serves to build confidence and stimulate the entrepreneurial spirit.

All majors are welcome. The faculty members aligned with the Center bring a wealth of 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.

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## Minor in Accountancy

A business or a non-business student is required to take five courses (15 hours) to earn a minor in Accountancy. This will include three required courses (9 hours) and two elective courses (6 hours) as follows:

### REQUIRED COURSES

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
ACC 301	Intermediate Accounting I	3

### ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 302	Intermediate Accounting II	3
ACC 315	Federal Income Tax I	3
ACC 330	Accounting Systems	3
ACC 413	Cost Accounting	3
ACC 414	Auditing	3

**TOTAL DEGREE HOURS REQUIRED 15**

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## 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) as follows:

### REQUIRED COURSES

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 175	Intro to Business & Entrepreneurship	3
ACC 201	Principles of Financial Accounting	3
MGT 365	Organizational Behavior & Theory	3
MKG 366	Principles of Marketing	3
MIS 375	MIS and E-Commerce	3

### ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
MGT 370	Total Quality Management	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3

**TOTAL DEGREE HOURS REQUIRED 18**

## B.S. in Accountancy

### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 301	Intermediate Accounting I	3
ACC 302	Intermediate Accounting II	3
ACC 315	Federal Income Tax I	3
ACC 413	Cost Accounting	3
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
MGT 365	Organizational Behavior and Theory	3
MKG 366	Principles of Marketing	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 330	Accounting Systems	3
ACC 411	Intermediate Accounting III	3
ACC 414	Auditing	3
MIS 375	Management Information Systems & E-Commerce	3
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
SOC 325	Society, Business, and Internationalism	3
XXX XXX	Global/Cultural & Language Elective (See Note C)	3
XXX XXX	Business Core Elective (See Note D)	3
XXX XXX	Free Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>121</b>

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## CERTIFICATIONS IN ACCOUNTING

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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 exam 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 Accountancy, Finance, and Information Management has for meeting this requirement.

One option is to enroll in one of two NSU dual degree programs. A student will be able to pursue degrees in accounting and business (with a concentration in information management or finance). Each program has a 30-semester hour curriculum for the 5<sup>th</sup> 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.

In addition to the CPA exam, graduates of our program may also take the Certified Management Accountant (CMA) exam, Certified Internal Auditor (CIA) exam, Certified Information Systems Auditor (CISA) exam and others. Students interested in taking one of these exams are encouraged to talk to an advisor during their junior year to determine the necessary requirements for taking the exam.



## B.S. in Business - Entrepreneurship

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 386	New Venture Finance	3
ENT 387	Intro to Entrepreneurship	3
FNC 360	Corporate Finance	3
MIS 375	Management Information Systems & E-Commerce	3
MGT 365	Organizational Behavior and Theory	3
MKG 366	Principles of Marketing	3
SOC 325	Society, Business, and Internationalism	3
XXX XXX	Global/Cultural & Language Elective (See Note C)	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENT 465	Small Business Management	3
ENT 476	Franchising	3
ENT 482	Managing Growing Ventures	3
ENT 484	Creativity Innovation and Change Management	3
ENT 495	International Entrepreneurship	3
ENT XXX	Entrepreneurship Elective (See Note K)	3
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
XXX XXX	Business Core Electives (See Note G)	3
XXX XXX	Free Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>120</b>

## B. S. in Business - Finance

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
FNC 310	Risk Management	3
FNC 362	Investments	3
MGT 365	Organizational Behavior and Theory	3
MKG 366	Principles of Marketing	3
SOC 325	Society, Business & Internationalism	3
XXX XXX	Business Core Elective (See Note E)	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
FNC 363	Financial Institutions	3
FNC 395	Introduction to Personal Finance Planning	3
FNC 488	International Finance	3
FNC 474	Intermediate Financial Management	3
FNC 499	Cases in Financial Management	3
MIS 375	Management Information Systems & E-Commerce	3
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
XXX XXX	Global/Cultural & Language Elective (See Note C)	3
XXX XXX	Free Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>121</b>

## B.S. in Business - Management Information Systems

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
MIS 375	Management Information Systems & E-Commerce	3
MIS 390	Business Database Management	3
MIS XXX	MIS Elective (See Note J)	3
MGT 365	Organizational Behavior and Theory	3
MKG 366	Principles of Marketing	3
SOC 325	Society, Business, & Internationalism	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MIS 410	Information Systems Analysis and Design	3
MIS 415	Web-Based Application Development for E-Business	3
MIS 419	Networking	3
MIS 423	Decision Support & Expert Systems	3
MIS 499	Systems Development Project	3
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
XXX XXX	Business Core Elective (See Note F)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
XXX XXX	Free Elective	3

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 121**

## B.S. in Business - Management

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
MIS 375	Management Information Systems & E-Commerce	3
MGT 365	Organizational Behavior and Theory	3
MGT 370	Total Quality Management	3
MGT 368	Human Resource Management	3
MKG 366	Principles of Marketing	3
SOC 325	Society, Business & Internationalism	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
MGT 410	Leadership and Diversity in Management	3
MGT 415	International Management	3
MGT 420	Organizational Change and Development	3
MGT XXX	Management Elective (See Note L)	6
XXX XXX	Business Core Elective (See Note H)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
XXX XXX	Free Elective	3

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 121**

## B.S. in Business - Marketing

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
XXX XXX	Science Elective (See Note A)	6
XXX XXX	Science Lab Elective (See Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MIS 284	Advanced Micro Computing	3
MTH 131	Pre-calculus for Non-Science Majors	3
MTH 132	Calculus for Non-Science Majors	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Principles of Managerial Accounting	3
BUS 281	Legal Environment for Business	3
DSC 270	Business Statistics	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities (See Note C)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communications	3
DSC 376	Statistics and Quantitative Methods	3
ENT 387	Introduction to Entrepreneurship	3
FNC 360	Corporate Finance	3
MIS 375	Management Information Systems & E-Commerce	3
MGT 365	Organizational Behavior and Theory	3
MKG 366	Principles of Marketing	3
MKG 367	Consumer Behavior	3
MKG 411	Salesmanship	3
SOC 325	Society, Business & Internationalism	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MGT 476	Operations Management	3
MGT 478	Strategic Management	3
MKG 412	Marketing Management	3
MKG 413	Principles of Retailing	3
MKG 416	International Marketing	3
MKG 497	Marketing Research	3
MKG XXX	Marketing Elective (See Note M)	3
XXX XXX	Business Core Elective (See Note I)	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
XXX XXX	Free Elective	3

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 121**



## B.S. in Tourism and Hospitality Management

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Freshman Seminar	0
BUS 175	Introduction to Business	3
CSC 150	Computer Literacy	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HRM 100	Professional Development I	3
HRM 115	Introduction to Hospitality	3
HRM 120	Sanitation Principles	3
MTH 103	Contemporary Mathematics	3
XXX XXX	Science Elective (See Note A)	3
XXX XXX	Science Lab Elective (See Note B)	1
XXX XXX	Global/Cultural & Language Electives (See Note C)	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Science Elective	3
HRM 112	Principles of Nutrition	3
ECN 211	Principles of Economics I	3
HED 100	Personal and Community Health	2
HRM 200	Computers in Hospitality	3
HRM 230	Hospitality Accounting I	3
HRM 330	Hospitality Accounting II	3
PED 100	Fundamentals of Fitness for Life	1
SCM 285	Principles of Speech	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	6
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HRM 210	Front Office Management	3
BUS 330	Business Communication	3
XXX XXX	Global/Cultural & Language Electives (See Note C)	3
HRM 310	Professional Development	2
MGT 365	Organization Behavior & Theory	3
MKG 366	Principles of Marketing	3
HRM 391L	Work Experience	3
HRM XXX	Tourism and Hospitality Management Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3

**TOTAL HOURS REQUIRED 29**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MGT 415	International Management	3
HRM 440	Hospitality Sales and Marketing	3
HRM 462	Human Resource Management	3
HRM 471	Hospitality Law	3
HRM 490	Senior Project	3
XXX XXX	Free Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3
HRM XXX	Tourism and Hospitality Management Elective	3

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 120**

## TOURISM AND HOSPITALITY MANAGEMENT ELECTIVES

Student must choose seven (7) courses from the following:

COURSE NO.	COURSE TITLE	CREDIT HOURS
HRM 150	Tourism Principles	3
HRM 211	Housekeeping	3
HRM 359	Commercial Food Production/Laboratory	3
HRM 280	Dining Room & Beverage Management Operations	3
HRM 300	Purchasing	3
HRM 331	Food, Beverage and Labor Cost Control	3
HRM 381	Facilities Layout & Design	3
HRM 400	Restaurant Management	3
HRM 401	Club and Resort Management	3
HRM 402	Management by Menu	3
HRM 403	Catering Management	3
HRM 481	Property Management	3
HRM 494	Hospitality Franchising	3

## LIST OF NOTES FOR BUSINESS DEGREE PROGRAMS

### NOTE A

A student needs to take TWO (2) of the following courses:

COURSE NO.	COURSE TITLE
BIO 100	Biological Sciences
CHM 100	Man/Environment
PHY 100	Physical Science

### NOTE B

A student needs to take ONE (1) of the following laboratory courses. The laboratory course must be in the same area as one of the science lecture courses taken:

COURSE NO.	COURSE TITLE
BIO 100L	Biological Science Lab
CHM 100L	Man/Environment Lab
PHY 100L	Physical Science Lab

### NOTE C

*Global/Cultural & Language Electives (9 hours)*

A student will choose THREE (3) courses from the list below. At least ONE of these must be a non-language course. If a foreign language is chosen, the student must take two courses in the same language, e.g., SPN 111 AND SPN 112.

COURSE NO.	COURSE TITLE
ENG 207	Introduction to World Literature
ENG 383	African-American Literature
FIA 201	Basic Art Appreciation
GEO 141	World Regional Geography
GEO 331	Economic Geography
GEO 336	Political Geography
GEO 337	Geography of Africa
HIS 336	African-American History
HIS 360	Latin America: Argentina, Brazil, and Chile
HIS 361	Latin America: Readings in Latin American History
HIS 363	Introduction to Modern Near-East
HIS 365	Caribbean and Latin American History
HIS 370	African History and Culture
HIS 371	African History and Culture
HIS 374	East Asian Civilization
HIS 375	Contemporary Economic System of China
HIS 376	Contemporary Economic System of Japan
HIS 446	Latin America: The Colonial Period
HIS 448	Slavery in the Atlantic Basin
HIS 476	Modern China and Modern Japan
HUM 210	Humanities
HUM 211	Humanities
MUS 301	Music Appreciation
MUS 234	African-American Music
POS 315	African American Politics
POS 323	Comparative Government
POS 360	International Relations
POS 442	International Law
POS 461	International Organization
POS 462	The Near (Middle) East in International Affairs
POS 463	Politics of African Nations
POS 467	Introduction to Non-Western Politics
POS 468	A Survey of Contemporary Governments of Asia
PSY 340	Psychology of the African American
REL 200	Major World Religions
SOC 101	Introduction to Social Science
SOC 237	Racial and Ethnic Minorities
SOC 242	Introduction to Anthropology
FRN 111 and 112	Elementary French I and II
GRM 111 and 112	Elementary German I and II
JPN 111 and 112	Elementary Japanese I and II
SPN 111 and 112	Elementary Spanish I and II
SWA 111 and 112	Elementary Swahili I and II

**NOTE D**

A student in Accountancy major needs to take ONE of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
BUS 300	Internship
BUS 382	Commercial Law
BUS 400	Independent Study
FNC 395	Introduction to Personal Financial Planning
MIS 288	Principles of E-Business
MIS 390	Business Database Management
MGT 368	Human Resources Management
MKG 411	Salesmanship

**NOTE E**

A student in Finance concentration needs to take ONE (1) of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
ACC 361	Financial Statement Analysis
BUS 300	Internship
BUS 400	Independent Study
MIS 288	Principles of E-Business
MIS 390	Business Database Management
MGT 420	Organizational Change and Development
MKG 411	Salesmanship

**NOTE F**

A student in Management Information Systems concentration needs to take ONE (1) of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
ACC 300	Accounting Systems
ACC 301	Intermediate Accounting I
BUS 300	Internship
BUS 400	Independent Study
FNC 362	Investments
FNC 395	Introduction to Personal Financial Planning
MGT 350	Ethics in Management
MGT 368	Human Resources Management
MKG 411	Salesmanship
MKG 415	Niche Marketing

**NOTE G**

A student in Entrepreneurship concentration needs to take ONE (1) of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
BUS 300	Internship
BUS 400	Independent Study
FNC 362	Investments
MIS 288	Principles of E-Business
MGT 368	Human Resource Management
MKG 411	Salesmanship

**NOTE H**

A student in Management concentration needs to take ONE (1) of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
BUS 300	Internship
BUS 400	Independent Study
FNC 362	Investments
MIS 288	Principles of E-Business
MKG 412	Marketing Management

**NOTE I**

A student in Marketing concentration needs to take ONE (1) of the following as Business Core Elective course.

COURSE NO.	COURSE TITLE
BUS 300	Internship
BUS 400	Independent Study
FNC 362	Investments
MIS 288	Principles of E-Business
MGT 420	Organizational Change and Development

**NOTE J**

A student needs to take ONE (1) of the following as Management Information Systems Elective course.

COURSE NO.	COURSE TITLE
MIS 372	Business Applications in Visual C++
MIS 374	Business Applications in Visual Basic
MIS 378	Business Applications in Java

**NOTE K**

A student needs to take ONE (1) of the following as Entrepreneurship Elective course.

COURSE NO.	COURSE TITLE
ENT 364	Managing the Family Business
ENT 467	Contemporary Topic in Entrepreneurship
ENT 486	Entrepreneurship Field Studies

**NOTE L**

A student needs to take TWO (2) of the following as Management Elective courses.

COURSE NO.	COURSE TITLE
MGT 350	The Ethics of Management
MGT 425	Advanced Seminar in Management and Total Quality
MGT 430	Labor Relations and Collective Bargaining
MGT 435	Compensation

**NOTE M**

A student needs to take ONE (1) of the following as Marketing Elective course.

COURSE NO.	COURSE TITLE
MKG 414	Advertising and Promotion Management
MKG 415	Niche Marketing
MKG 418	Internet Marketing

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## SCHOOL OF EDUCATION

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**Dr. Jean Braxton, Dean**  
**Dr. Donna W. Dabney, Associate Dean**  
**(757) 823-8701**

*“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.

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### CONCEPTUAL FRAMEWORK

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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 PreK-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.

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### ACCREDITATION

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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 or school personnel to meet the teacher certification licensure requirements for the Commonwealth of Virginia as well as requirements for successful study at the graduate school level.

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### ORGANIZATION OF SCHOOL

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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 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 Professional Development

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.

## THE CENTER FOR PROFESSIONAL DEVELOPMENT

**Dr. Margaret D. Knight, Director**  
**(757) 823-8715**

The Center for Professional Development has the responsibility of providing all formal field experiences, observation/participation, directed teaching, and internships for persons 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.

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### 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. Students admitted to the pre-professional program are required to apply for admission to the professional education program after completion of the sophomore courses (student must have 60 credit hours, have passed Praxis I/SAT/ACT,, and obtained a 2.5 GPA).

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### CRITERIA FOR ADMISSION TO TEACHER EDUCATION PROFESSIONAL LEVEL

Applicant must have done the following:

1. Completed all prescribed (per curricula) freshman and sophomore courses and earned a grade point average of 2.5 or better in all lower level (freshman and sophomore) courses.
2. Earned a grade of "C" or better in all English and math courses, exhibited physical and mental health requisite to the responsibilities and duties of the teaching profession.
3. Evidenced character and dispositions appropriate for the duties and responsibilities for the teaching profession and exhibited a professional interest in teaching.
4. Earned a grade of "C" or better in EED 201, SED 201, PED 280 or SPE 210 and submitted proof of completion of the level I field experience in the Tk20 system.
5. Passed the PRAXIS I/SAT/ACT Examination and submitted original copy of score report.
6. Received departmental recommendations to be admitted to teacher education.
7. Submitted a portfolio containing items specified in departmental handbook.
8. Verified no felony or misdemeanor charge or pending for drugs or against children and indicate any other law offenses.

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### 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).
2. Special forms are provided by the School of Education on the Center for Professional Development website at <http://nsu.edu/school/development/>
3. Applications will be evaluated as "Approved" or "Rejected." Applicants "Rejected" may reapply the next semester.
4. The student must receive "Approved" admission to teacher education before registering for upper level professional courses.
5. Verify no felony or misdemeanor charge or pending for drugs or against children and indicate any other law offenses.

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### RETENTION IN TEACHER EDUCATION

Once admitted to teacher education, the following conditions apply:

1. The teacher candidate 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 at least 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.



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## ADMISSION TO DIRECTED TEACHING

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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/SAT/ACT).
3. Passing scores on Praxis II Content Area Assessment.
4. Passing scores on the Virginia Reading Assessment (VRA), if applicable, and also a passing score on the Virginia Communication and Literacy Assessment.
5. Proof of 10 hours of observation and at least 40 hours of observation/participation field experiences must be submitted with the application to student teach.
6. All field experience reports submitted in the Tk20™ assessment system.
7. Evidence of above average academic accomplishment in major subject field.
8. Evidence of above average academic accomplishment in professional education, including both general and special courses.
9. An overall average scholastic record of 2.5 or better for all undergraduate work completed.
10. Departmental endorsement (major subject field area advisor) and (Department Head). (See Student Teaching Application at Center for Professional Development webpage.)
11. Status as a graduating senior in December or May of the school semester in which directed teaching is to begin (Department Head/Advisor).
12. Evidence of above average achievement in written and oral communications, to include meeting all communications requirements for earning a baccalaureate degree from the University.
13. Satisfactory disposition and character references by Advisor or Department Head.
14. Completion of required methods of teaching courses within the last two semesters prior to making application for admission to directed teaching (ADVISORY REPORT).
15. Evidence of training in child abuse/neglect recognition reporting.
16. A negative current TB test result and a Police criminal background check, and a Search of the Central Registry from Social Services (if applicable).
17. Verify no felony or misdemeanor for drugs and or against children and indicate any other law offenses.

18. For transfer students, completion of some coursework at this university, including at least one methodology course, before approval for student teaching (DEPARTMENT HEAD).

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## UNIVERSITY-WIDE COUNCIL ON TEACHER EDUCATION (CTE)

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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 at the University that sponsor teacher preparation programs.

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## H. H. BOZEMAN TEACHER EDUCATION RESOURCE CENTER

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The H. H. Bozeman Integrated Media/Resource Center provides supplementary materials and instructional media for the School of Education. The center has resources and equipment appropriate for use from preschool through adult education levels, with emphasis on the training and professional development of the teacher.

## DEPARTMENT OF ELEMENTARY EDUCATION

**Dr. 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.



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### Elementary Certification Endorsement (PreK-6)

1. Students must take the General Education Core of 41-44 semester hours.
2. Students must take the following courses in elementary education and professional education for endorsement (36 semester hours):

COURSE NO.	COURSE TITLE
EED 201	Teaching Profession
EED 274	The Study of Young Children
EED 360	Primary Grades (PreK)
EED 470	Studies in the Elementary School
EED 450	Elementary School
EED 461	Elementary School Grades (4-6)
EED 465	and Technology
EED 490	Diagnostic Reading
EED 499	Teaching)

3. Students must pass the PRAXIS examinations.

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

## Elementary Certification Endorsement (PreK-6) with a B.A. in Psychology

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
MTH 105	Elementary Algebra	3
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CHM 100	Chemistry or PHY 100	3
CHM 100L	Chemistry or PHY 100L	1
CSC 150	Computer Concepts & Applications	3
HIS 103	United States History 1865 to Present	3
PSY 210	Introduction to Psychology	3
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal & Community Health	2

**TOTAL HOURS REQUIRED 32**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EED 201	American Schools & Teaching Profession	3
PSY 211	Basic Principles of Psychology	3
EED 274	Study of Young Children	3
SCM 285	Principles of Speech	3
SCI 381	Science for Teachers	3
SCI 381L	Science for Teachers Lab	1
ENG 207	Literature of Western World	3
PSY 270	Statistics in Psychology or PSY 370	3
SOC 101	Introduction to Social Science	3
HUM 210	Humanities	3
ENG 203	Advanced Communication Skills	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

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

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EED 360	Curriculum & Instruction for Primary Grades (Pre K-3)	3
PSY XXX	Electives	9
MTH 141	Mathematics for Elementary Teachers I	3
MTH 142	Mathematics for Elementary Teachers II	3
PSY 360	Experiential Psychology	4
EED 450	Teaching Literacy in the Elementary Schools	3
EED 461	Elementary School (4-6)	3
EED 465	Methods and Materials for Teaching Science, Mathematics and Technology	3

**TOTAL HOURS REQUIRED 31**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 340	Psychology of African Americans	3
INT 350	Trends and Issues of Diverse Populations	3
PSY 492	Psychology Seminar	3
EED 470	Methods of Teaching Social Studies in the Elementary School	
EED 490	Diagnostic Reading	3
EED 499	Directed Teaching	12

**TOTAL HOURS REQUIRED 27**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Core	41
Psychology	28
Secondary Concentration	24
Support Concentration II - Student Teaching	12
Supporting Courses	16

**TOTAL DEGREE HOURS REQUIRED 121**

## Elementary Certification Endorsement (PreK-6) with a B.S. in Interdisciplinary Studies

### MATHEMATICS CURRICULUM

(FOR PERSONS WHO DO NOT HAVE A B.S. OR B.A. DEGREE)

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
MTH 151	College Algebra	3
BIO 100	Biological Science or BIO 110 or PHY 100 or CHM 100	6
PHY 100L	Lab or BIO 100L or CHM 100L	2
HIS 102	United States History to 1865	3
SOC 101	Introduction to Social Science	3
CSC 150	Computer Literacy or CLS 150 or IMT 170	3
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness for Life	1
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 141	Teaching Mathematics in the Elementary Schools	3
MTH 142	Teaching Mathematics in the Elementary Schools	3
ENG 203	Advanced Communication Skills	3
ENG 207	Literature of the Western World	3
SCM 285	Principles of Speech	3
HUM 210	Humanities	3
EED 201	The American Schools and the Teaching Profession	3
FIA 301 or MUS 301 or POS 315		3
POS 315 or PSY 340 or HIS 335 or HIS 371		3
EED 274	The Study of Young Children	3
INT 308	Introduction to Interdisciplinary Studies	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

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

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 360	Research Interdisciplinary Studies	3
INT 375	Language and Society	3
MTH 153	Trigonometry	3
MTH 184	Calculus	4
CSC 169	Foundations of Computers	3
INT 322	Approaches to Critical Analysis	3
EED 465	Methods of Teaching Science, Mathematics, and Technology	3
EED 360	Curriculum and Instruction for Primary Grades (PreK-3 <sup>rd</sup> )	3
EED 450	Teaching Literacy in the Elementary School	3
EED 470	Methods of Teaching Social Studies in the Elementary School	3

**TOTAL HOURS REQUIRED 31**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SCI 381	Science for Teachers	3
SCI 381L	Science for Teachers Lab	1
EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
EED 490	Diagnostic Reading and Perspective Reading	3
CSC 170	Computer Programming	3
INT 350	Trends and Issues with Diverse Populations	3
EED 499	Directed Teaching	12

**TOTAL HOURS REQUIRED 28**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	44
Interdisciplinary Core	15
Secondary Concentration Elementary Education	24
Supportive Concentration I Liberal Arts Core (LAC)	16
Supportive Concentration II – Student Teaching	12
Supportive Courses	13
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>124</b>

## Elementary Certification Endorsement (PreK-6) with a B.S. in Interdisciplinary Studies (cont'd)

### ENGLISH CURRICULUM

(FOR PERSONS WHO DO NOT HAVE A B.S. OR B.A. DEGREE)

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
MTH 105	Intermediate Algebra	3
BIO 100	Biological Science or BIO 110 or PHY 100 or CHM 100	6
PHY 100L	Lab or BIO 100L or CHM 100L	2
HIS 102	United States History to 1865	3
SOC 101	Introduction to Social Science	3
CSC 150	Computer Literacy or IMT 170	3
PED 100	Fundamentals Fitness for Life	1
HED 100	Personal & Community Health	2
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 141	Teaching Mathematics in the Elementary School	3
ENG 203	Advanced Communication Skills	3
ENG 207	Literature of the Western World	3
SCM 285	Principles of Speech	3
HUM 210	Humanities	3
EED 201	The American Schools and the Teaching Profession	3
EED 274	The Study of Young Children	3
MTH 142	Teaching Mathematics in the Elementary Schools	3
FIA 301	Art Appreciation or MUS 301	3
HIS 336 or HIS 371		3
INT 308	Introduction to Interdisciplinary Studies	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

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

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 360	Research Interdisciplinary Studies	3
INT 375	Language and Society	3
ENG 306	Literary Criticism	3
ENG 315	Survey of English Literature	3
ENG 341	Survey of American Literature	3
INT 322	Approaches to Critical Analysis	3
EED 360	Curriculum and Instruction for Primary Grades (PreK-3 <sup>rd</sup> )	3
EED 450	Teaching Literacy in the Elementary School	3
EED 465	Methods of Teaching Science, Mathematics, and Technology	3
EED 470	Methods of Teaching Social Studies in the Elementary School	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SCI 381	Science for Teachers	3
SCI 381L	Science for Teachers Lab	1
EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
EED 490	Diagnostic Reading and Perspective Reading	3
ENG 452	Literature for Children and Adolescence	3
INT 350	Trends and Issues with Diverse Populations	3
EED 499	Directed Teaching	12
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Core	44
Interdisciplinary Studies Core	15
Secondary Concentration Elementary Education	24
Supportive Concentration I Liberal Arts Core (LAC)	15
Supportive Concentration II – Student Teaching	12
Supportive Courses	13
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>123</b>

## Elementary Certification Endorsement (PreK-6) with a B.S. in Interdisciplinary Studies (cont'd)

### HISTORY CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
MTH 151	College Algebra	3
BIO 100	Biological Science or BIO 110 or PHY 100 or CHM 100	6
PHY 100L	Lab or BIO 100L or CHM 100L	2
HIS 102	United States History to 1865	3
SOC 101	Introduction to Social Science	3
CSC 150	Computer Literacy or CLS 150 or IMT 170	3
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness for Life	1
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 141	Teaching Mathematics in the Elementary Schools	3
MTH 142	Teaching Mathematics in the Elementary Schools	3
ENG 203	Advanced Communication Skills	3
ENG 207	Literature of the Western World	3
SCM 285	Principles of Speech	3
HUM 210	Humanities	3
EED 201	The American Schools and the Teaching Profession	3
FIA 301	Art Appreciation or MUS 301	3
POS 315 or PSY 340 or HIS 335 or HIS 336 or HIS 371		3
EED 274	The Study of Young Children	3
INT 308	Introduction to Interdisciplinary Studies	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

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

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 360	Research Interdisciplinary Studies	3
INT 375	Language and Society	3
HIS 328	History of Virginia	3
ECN 211	Principles of Microeconomics	3
GEO 130	Principles of Geography	3
INT 322	Approaches to Critical Analysis	3
EED 360	Curriculum and Instruction for Primary Grade (Pre K-3 <sup>rd</sup> )	3
EED 470	Methods of Teaching Social Studies in the Elementary School	3
EED 450	Teaching Reading in the Elementary School	3
EED 465	Methods of Teaching Science, Mathematics, and Technology	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SCI 381	Science for Teachers	3
SCI 381L	Science for Teachers Lab	1
EED 461	Curriculum and Instruction for Elementary School (Grades 4-6)	3
EED 490	Diagnostic Reading	3
HIS 439	The United States from 1932 to Present	3
INT 350	Trends and Issues with Diverse Population	3
EED 499	Student Teaching	12
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	44
Interdisciplinary Studies Core	15
Secondary Concentration Elementary Education	24
Supportive Concentration I Liberal Arts Core (LAC)	15
Supportive Concentration II – Student Teaching	12
Supportive Courses	13
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>123</b>



## B.S. in Early Childhood Development -- Child Care (Non-Teaching Option)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 & Community Health	2
HIS 100	History of World Societies I	3
HIS 102	United States History to 1865	3
MTH 103	Contemporary Mathematics	3
MTH 105	Elementary Algebra	3
PED 100	Fundamental Fitness for Life	1
PHY 100	Physical Science or CHM 100	3
PHY 100L	Physical Science Lab or CHM 100L	1
CSC 150	Computer Literacy	3
ECE 110	Introduction to the Profession	2
UNI 101	Introduction to University Life	0

**TOTAL HOURS REQUIRED** 34

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECE 201	American Schools and the Teaching Profession	3
HFD 232	Creative Activities for Children	3
EED 274	The Study of Children	3
ENG 203	Advanced Communication Skills	3
FIA 201	Art Appreciation or MUS 301	3
PSY 210	Introduction to Psychology	3
PSY 228	Developmental Psychology	3
HUM 210	Humanities	3
SCM 285	Principles of Speech	3
SOC 101	Introduction to Social Science	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 30

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECE 360	Curriculum and Instruction for Primary Grades (Pre K-3 <sup>rd</sup> )	3
ECE 362	Math for Young Children	3
ECE 324	Children's Literature for Early Childhood Education	3
HFD 370	Analyzing the Behavior of Children	3
DRM 226	Children's Theatre	3
SWK 327	Interviewing Techniques	3
ENT 387	Introduction to Entrepreneurship	3
XXX XXX	Electives	13

**TOTAL HOURS REQUIRED** 34

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EED 450	Teaching Literacy in Elementary Schools	3
INT 350	Trends and Issues of Diverse Populations	3
HFD 420	Parent Education	3
HFD 460	Organization and Administration of Child Care Programs	3
ECE 495	Practicum (Child Care Settings)	12

**TOTAL HOURS REQUIRED** 24

**TOTAL DEGREE HOURS REQUIRED** 122

## Early Childhood/ Primary Certification Endorsement with a B.A. in Psychology

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Intro to University Life	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 & Community Health	2
PSY 210	Introduction Psychology	3
HIS 103	U.S. History or His 103	3
MTH 103	Contemporary Mathematics	3
MTH 105	Intermediate Algebra	3
PED 100	Fundamental Fitness for Life	1
PHY 100	Physical Science or CHM 100	3
PHY 100L	Physical Science Lab or CHM 100L	1
CLS 150	Computer Literacy	3

**TOTAL HOURS REQUIRED 32**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EED 201	American Schools and Teaching...	3
PSY 211	Basic Principles of Psychology	3
ENG 203	Advanced Communication Skills	3
ENG 207	Literature in the Western World	3
EED 274	The Study of Young Children	3 **
PSY 270	Statistics of Psychology	3
HUM 210	Humanities	3
SCM 285	Principles of Speech	3
SOC 101	Introduction to Social Science	3
SCI 381	Science for Elementary Teachers	3
SCI 381L	Science for Elementary Teachers Lab	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

*\*\*Included in the Psychology Major*

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 360	Experimental Psychology	3
PSY 360L	Experimental Psychology	1
PSY 313	Behavioral Management	3
PSY 322	Psychology of Exceptional Children	3
PSY 312	Behavioral Analysis	3
INT 350	Trends and Issues of Diverse Populations	3
MTH 141	Math for Elementary Teachers	3
EED 360	Curriculum and Instruction for Primary Grades	3
ECE 362	Math for Young Children	3
ECE 324	Children's Literature for Early Childhood Education	3

**TOTAL HOURS REQUIRED 28**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECS 300	Introduction to Early Childhood Special Education	3
PSY 340	Psychology of African Americans	3
PSY 492	Psychology Seminar	3
HFD 420	Parent Education	3
ECE 470	Methods of Teaching Social Studies for Young Children	3
EED 450	Teaching Literacy in Elementary Schools	3
ECE 497	Student Teaching	12

**TOTAL HOURS REQUIRED 30**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Core Requirements	41
Psychology	31
Secondary Concentration-Early Childhood Education	24
Support Concentration II-Student Teaching	12
Supporting Courses	13

**TOTAL DEGREE HOURS REQUIRED 121**

*Note: Students must pass Praxis I, for entrance into the teacher education program. Students must pass Praxis II, the Virginia Communication and Literacy Assessment and the Reading Literacy examination to exit the program.*

## **DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, AND EXERCISE SCIENCE**

**Dr. Delano Tucker, Department Head**  
**(757) 823-8703**

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

- Physical Education – Teacher Certification KP-12
- Health Fitness Instructor
- Kinesiotherapy

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 Kinesiotherapist 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.

## B.S. in Exercise Science/Health and Physical Education

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
HIS 100 or HIS 101, 102, 103		3
MTH 141	Mathematics for Teachers	3
PED 280	Introduction to Physical Education	3
CSC 150	Computer Concepts and Applications	3
PED 158	Fundamentals of Physical Education	1
UNI 101	Introduction to University Life	0
ENG 102	Communication Skills II	3
BIO 100	Biological Science or BIO 100/100L	4
HED 170*	Personal & Community Health	3
SOC 101	Introduction to Social Sciences	3
PED 151/152	Rhythm and Folk Dance	1
PED 159	Fundamentals of Physical Education	1

**TOTAL HOURS REQUIRED** 31

\* Substitutes for General Education Core Requirement

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SCM 285	Principles of Speech	3
SED 201	American Schools and the Teaching Profession	3
HUM 210	Humanities I or MUS 301/324, FIA 201/207	3
PED 253	Gymnastics	1
PED 287	Human Anatomy	3
PED 287L	Human Anatomy Lab	1
PED 251	Modern Dance I	1
PED 261	Team Sports	1
HUM 211	Humanities II or ENG 207/383	3
PED 288	Human Physiology	3
PED 288L	Human Physiology Lab	1
PED 134	Advanced Beginning Swimming	1
HED 442	General Safety Education	3
PSY 228	Developmental Psychology	3
PED 262	Team Sports	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 31

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

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 450	Motor Learning	3
PED 357	Organization and Administration Of Physical Education Programs	2
PED 356	Kinesiology	3
HED 368A*	Curriculum and Methods in Health Education	3
PED 271	Individual Sports	1
PED 350*	Methods of Teaching Physical Education in Elementary Schools	3
PED 361	Athletic Coaching	1
PED 369	Measurement and Evaluation	3
PED 477	Physiology of Muscle Exercise	3
PED 272	Individual Sports	1
PED 365	Adapted Physical Education	3
PED 362	Officiating	1
PED 335	Techniques for Teaching Skills in Sports	1
SED 405	Reading in Content Areas	3

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HRP 290	African-American Health or Cultural Elective (HIS 33X, PSY340, SOC 237)	3
PED 358*	Methods and Materials of Teaching Physical Education in Secondary Schools	3
PED 480	Principles of Physical Education	3
SED 420	Educational Technology	3
SED 486	Educational Psychology and Behavior Management	3
SED 499*	Directed Student Teaching & Seminar Directed Teaching in Secondary Schools	12

**TOTAL HOURS REQUIRED** 27

**TOTAL DEGREE HOURS REQUIRED** 120

\* MUST PASS PRAXIS I BEFORE ENROLLMENT WILL BE PERMITTED

Continue to next page →

## B.S. in Exercise Science/Health and Physical Education (cont'd)

Students are strongly advised to take: PED 179 First Aid or American Red Cross Equivalent 2 Credits.

### HEALTH ENDORSEMENT

COURSE NO.	COURSE TITLE	CREDIT HOURS
FSN 110	The Science of Human Nutrition	3
PED 179	First Aid	2
PED 200	Beginning Fitness through Weight Training	2
HED 170	Personal & Community Health	3
HED 368A	Curriculum and Methods in Health Education	3
HED 442	General Safety Education	3

### DRIVER EDUCATION ENDORSEMENT

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 441	Driver Education: Foundations of Traffic Safety	3
PED 444	Principles and Methods of Classroom and In-car Instruction	3
Department Requirement – PED 179 or Red Cross Equivalent		2

\*\*\* Enrollment requires completion of Requirements for admission to teacher education

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education	40
Major Requirements	80
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## B.S. in Exercise Science/Health and Physical Education – Health Fitness Instructor

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 110	Biological Science or BIO 100/100L	4
CSC 150	Computer Concepts and Applications or CLM 165, BAD 184, FIA 180, IMT 170	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 170	Personal & Community Health	3
HIS 100	HIS 101, HIS 102, HIS 103	3
MTH 105	Intermediate Algebra	3
PED 133	Beginning Swimming	1
PED 200	Weight Training/Conditioning	2
PED 280	Introduction to Physical Education	3
EXS 170	Introduction to Exercise Science	3
SOC 101	Introduction to Social Science	3

**TOTAL HOURS REQUIRED 34**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 215	Chemistry	3
CHM 215L	Chemistry Lab	1
FSN 110	Science of Human Nutrition	3
FIA 201/207		3
HUM 211	Humanities II or ENG 207/383	3
PED 179	First Aid	2
PED 251	Modern Dance	1
PED 287	Anatomy & Physiology I	3
PED 287L	Anatomy & Physiology I Lab	1
PED 288	Anatomy & Physiology II	3
PED 288L	Anatomy & Physiology II Lab	1
PSY 215	Human Growth and Development	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 27**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EXS 237	Care & Prevention of Athletic Injuries	3
EXS 363	Clinical Aspects of Aging	2
EXS 380	Stress Management	3
HRP 290	African American Health or Cultural Elective	3
PED 356	Kinesiology	3
PED 357	Organization & Administration of Physical Education	3
PED 358	Methods & Materials of Secondary Physical Education	3
PED 365	Adapted Physical Education	3
EXS 369	Evaluation in Physical Education	3
EXS 477	Exercise Physiology	3
EXS 477L	Exercise Physiology Lab	1
SCM 285	Principle of Speech	3

**TOTAL HOURS REQUIRED 33**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 451	Sport Psychology	3
PED 300	Advanced Weight Training	2
PED 450	Motor Learning	3
XXX XXX	Electives	3
PED 495	Internship (Local)	3
PED 496	Internship	12

**TOTAL HOURS REQUIRED 26**

**TOTAL DEGREE HOURS REQUIRED 120**



## B.S. in Exercise Science/Health and Physical Education – Health Fitness Instructor (cont'd)

### ELECTIVES

#### INDIVIDUAL SPORT/TEAM SPORTS

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 158/159	Fundamentals of Physical Education	1
PED 204	Tennis I/ Racquetball	1
PED 206	Tennis II	1
PED 209	Bowling	1
PED 210	Golf	1
PED 212	Racquetball	1
PED 261/262	Team Sports	1
PED 271/272	Individual/Dual Sports	1

#### HEALTH CONTENT

COURSE NO.	COURSE TITLE	CREDIT HOURS
HED 368A	Curriculum and Methods in Health Education	3
HED 442	Safety	3
FSN 312	Nutrition for the Life Cycle	3

#### AQUATICS

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 134	Advanced Beginning Swimming	1
PED 235	Intermediate Swimming	1
PED 325	Lifesaving	1

#### RHYTHMS

COURSE NO.	COURSE TITLE	CREDIT HOURS
PED 107	Aerobics	1
PED 108	Water Aerobics	1
PED 251	Modern Dance	1
PED 254	Jazz Dance	1

## B.S. in Exercise Science/Health and Physical Education -- Kinesiotherapy

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CHM 215	Chemistry	3
CHM 215L	Chemistry Lab	1
HIS 100	History of World Societies I or HIS 101, HIS 102, HIS 103	3
EXS 170	Introduction to Exercise Science	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 170	Personal & Community Health	3
MTH 153	College Algebra & Trigonometry	3
SOC 101	Introduction to Social Science	3
PED 133 or 134	Swimming	1
EXS 265	Therapeutic Exercises and Sports I	2
EXS 266	Therapeutic Exercises and Sports II	2

#### TOTAL HOURS REQUIRED

34

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 150	Computer Concepts and Applications or CLM 165, BAD 184, FIA 180, IMT 170	3
HUM 210	Humanities I or MUS 301/234, FIA 201/207	3
HUM 211	Humanities II or ENG 207/383	3
PHY 152	General Physics	3
PHY 152L	General Physics Lab	1
PED 287	Anatomy & Physiology I	3
PED 287L	Anatomy & Physiology I Lab	1
PSY 210	Introduction to Psychology	3
EXS 237	Care and Prevention of Athletic Injuries (Internship hours 100 Orthopedics)	3
HIM 120	Medical Terminology	3
PED 288	Anatomy & Physiology II	3
PED 288L	Anatomy & Physiology II Lab	1
PSY 228	Human Growth and Development (Internship hours 100 Pediatrics)	3
ENG 299	Writing Competency Exam	0

#### TOTAL HOURS REQUIRED

33

## B.S. in Exercise Science/Health and Physical Education -- Kinesiotherapy (cont'd)

### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EXS 355	Anatomical Kinesiology	3
EXS 356	Biomechanics of Human Motion (Internship hours 100 Orthopedics)	3
PSY 280	Abnormal Psychology (Internship hours 100 Psychiatry)	3
PED 365	Adapted Physical Education	3
EXS 357	Organization & Administration in Exercise Science	3
FSN 110	Nutrition for the Life Cycle	3
SCM 285	Principles of Speech	3
EXS 447	Exercise Physiology	3
EXS 447L	Exercise Physiology Lab	1
EXS 369	Research Methods and Statistical Evaluation	3
PED 179	First Aid	2
PSY 380	Physiology Psychology	3
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EXS 430	Neurological and Pathological Foundations in Exercise Science	3
EXS 387/483	Clinical Kinesiology I	3
EXS 388/484	Clinical Kinesiology II	3
EXS 445	Therapeutic Modalities	3
PED 450	Motor Learning	3
EXS 363	Clinical Aspects of Aging (Internship hours 100 Geriatric)	2
EXS 493C	Clinical Internship (200 hours Cardiac)	6
EXS 493D	Clinical Internship (200 hours Clinical Specialization--Total 1000 hours)	6
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Core	
Major Requirements	
Electives	
Other Requirements	
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>129</b>

*Note: Students must pass Praxis I, for entrance into the teacher education program. Students must pass Praxis II and the Virginia Communication and Literacy Assessment to exit the program (EXE/HPE).*

## DEPARTMENT OF SECONDARY EDUCATION AND SCHOOL LEADERSHIP

Dr. Melendez O. Byrd, Department Head  
(757) 823-2926

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

### Teacher Licensure Endorsement in Secondary Education

- Candidates must take the General Education Core before applying to teacher education (see Office of Student Teaching the Center for Professional Development regarding admission to teacher education.)
- Students must earn an undergraduate degree in the field in which they plan to teach.
  - Art/Fine Arts
  - Biology
  - Business
  - Chemistry
  - English
  - Health and Physical Education
  - History and Social Science
  - Mathematics
  - Music/Instrumental
  - Music/Vocal
  - Physics
- Prior to admission to teacher education, students must pass the Praxis I/SAT/ACT examination, obtain a 2.5 grade point average, and successfully complete 200-level professional education courses:

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 233	Seminar in Assessment and Evaluation (Only for candidates who have not passed PRAXIS I/SAT/ACT)

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.)

COURSE NO.	COURSE TITLE	CREDIT HOURS
SED 380*	Foundations of Secondary Schools Methods	3
SED 390*	Secondary Social Studies Methods (History and Social Science Majors Only)	3
SED 384	Teaching Methods Mathematics/Science/Technology Secondary Schools	3
SED 498	Business Methods for Secondary	3
SED 405	Reading in the Content Areas	3
SED 420	Educational Technology	3
SED 486	Educational Psychology and Behavior Management	3
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.) See other requirements under admission to teacher education and directed teaching listed above.

## B.S. in Business Education

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BUS 175	Introduction to Business & Entrepreneurship	3
CSC 150	Computer Concepts and Applications	3
XXX XXX	Natural Science Elective (Note A)	6
XXX XXXL	Natural Science Lab Elective (Note B)	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 131	Precalculus for Non-Science Majors (See Note C)	3
MTH 132	Calculus for Non-Science Majors (See Note C)	3
PED 100	Fitness for Life or PED 101/102 or Modified PED	1
PSY 210	Introduction to Psychology	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ACC 201	Principles of Financial Accounting	3
ACC 202	Intro to Managerial Accounting	3
ECN 211	Principles of Microeconomics I	3
ENG 210	Practical English Grammar	3
FNC 281	Legal Environment of Business	3
MIS 284	Advanced Microcomputing	3
LOG 210	Logic: Critical Thinking	3
SCM 285	Principles of Speech	3
SED 210	Keyboarding III	3
XXX XXX	Humanities (See Note D)	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BUS 330	Business Communication	3
CSC 160	Visual Basic Programming or CSC 169 Intro to Computer Science	3
MKG 366	Principles of Marketing	3
POS 350	Organization Theory and Behavior	3
SCM 310	Speech for the Classroom Teacher	3
SED 201	Schools and the Teaching Profession	3
SED 324	Business Systems and Procedures	3
XXX	Education Elective	3
SED 380	Foundations of Secondary Schools Methods	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SED 405	Reading in the Content Area	3
SED 420	Educational Technology	3
SED 486	Educational Psychology and Behavior Management	3
SED 498	Business Methods for Secondary Schools	3
SED 499	Directed Teaching	12
XXX XXX	Global/Cultural & Language Electives (See Note D)	6

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 121**

## LIST OF NOTES FOR SECONDARY EDUCATION AND SCHOOL LEADERSHIP

### NOTE A

A student needs to take TWO of the following courses:

COURSE NO.	COURSE TITLE
BIO 100	Biological Sciences
CHM 100	Man/Environment
PHY 100	Physical Science

### NOTE B

A student needs to take ONE (1) of the following laboratory courses. The laboratory course must be in the same area as one of the science lecture courses taken:

COURSE NO.	COURSE TITLE
BIO 100L	Biological Science Lab
CHM 100L	Man/Environment Lab
PHY 100L	Physical Science Lab

### NOTE C

A student with 600 on the quantitative section of SAT I or a score of 3 or higher on the advanced placement test in mathematics need not take MTH 131. Instead, the student will take MTH 132 and then proceed to take either MTH 300 (Linear Algebra) or a course in natural science or a course from the Global/ Cultural and Language Electives listed in Note D.

### NOTE D

*Global/Cultural and Foreign Language Electives (9 hours)*

A student will choose THREE (3) courses from the list below. At least ONE (1) of these must be a non-language course. If a foreign language is chosen, the student must take two courses in the same language, e.g., SPN 111 AND SPN 112.

COURSE NO.	COURSE TITLE
ENG 207	Introduction to World Literature
ENG 383	African-American Literature
FIA 170	African and African-American Art
FIA 301	Basic Art Appreciation
GEO 141	World Regional Geography
GEO 331	Economic Geography
GEO 336	Political Geography
GEO 337	Geography of Africa
HIS 336	African-American History since 1865
HIS 360	Latin America: Argentina, Brazil, and Chile
HIS 361	Latin America: Readings in Latin American History
HIS 363	Introduction to Modern Near-East
HIS 365	Latin America: Mexico, Central America, and the Caribbean
HIS 370	African History and Culture

COURSE NO.	COURSE TITLE
HIS 371	African History and Culture
HIS 374	East Asian Civilization
HIS 375	Contemporary Economic System of China
HIS 376	Contemporary Economic System of Japan
HIS 446	Latin America Colonial
HIS 448	Slavery in the Atlantic Basin
HIS 476	Modern China and Modern Japan
HIS 490E	Major Themes in Contemporary Africa
HUM 210	Humanities
HUM 211	Humanities
MUS 234	African-American Music
MUS 301	Music Appreciation
POS 315	Blacks in American Political Process
POS 323	Comparative Government
POS 360	International Politics
POS 442	International Law
POS 461	International Organization
POS 462	The Near (Middle) East in International Affairs
POS 463	Politics of African Nations
POS 467	Introduction to Non- Western Politics
POS 468	A Survey of Contemporary Governments of Asia
PSY 340	Psychology of African Americans
REL 200	Major World Religions
SOC 101	Introduction to Social Science
SOC 237	Racial and Cultural Minorities
SOC 242	Introduction to Anthropology
FRN 111 and 112	Elementary French I and II
GRM 111 and 112	Elementary German I and II
JPN 111 and 112	Elementary Japanese I and II
RUS 111 and 112	Elementary Russian I and II
SPN 111 and 112	Elementary Spanish I and II
SWA 111 and 112	Elementary Swahili I and II

### NOTE E

If a student has not passed the PRAXIS I/SAT/ACT Exam, the student must enroll in SED 233, Seminar in Assessment and Evaluation. Otherwise enroll in SED 488, School and Community Relations.



## List of Notes for Secondary Education and School Leadership (cont'd)

### NOTE F

Students must pass the PRAXIS I/SAT/ACT Exam prior to enrolling in the following courses:

COURSE NO.	COURSE TITLE
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 and Community Relations
SED 498	Business Methods for Secondary Schools
SED 499	Directed Teaching

A student must pass the PRAXIS I Exam to be admitted to teacher education. See other requirements under admission to teacher education and directed teaching listed above.

## DEPARTMENT OF SPECIAL EDUCATION

**Dr. June L. Harris, 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 persons with disabilities 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 (2) 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.

### Teacher Licensure Endorsement in Special Education

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

English  
History and Social Science  
Interdisciplinary Studies  
Psychology

- Students must pass the PRAXIS examinations.
- Students must complete preparation to teach learners with learning disabilities and mental retardation (LD/MR) or emotional disturbance (LD/ED).
- See other requirements under admission to teacher education and directed teaching listed above.
- Students must take the following courses in Special Education and professional education (24 semester hours):

#### LEARNING DISABILITIES

COURSE NO.	COURSE TITLE	CREDIT HOURS
SPE 210	American Schools & The Teaching Profession	3
SPE 312	Educational Psychology and Behavioral Management	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition and other Curricular Adjustments	3
SPE 490	Assessment of Exceptional Students	3
<b>TOTAL HOURS REQUIRED</b>		<b>15</b>

**AND**

#### OPTION (A): MENTAL RETARDATION

COURSE NO.	COURSE TITLE	CREDIT HOURS
SPE 332	Understanding and Teaching Learners with Mental Retardation	3
SPE 499C	Directed Teaching-Mental Retardation	6

**TOTAL HOURS REQUIRED 9**

**OR**

#### OPTION (B): EMOTIONAL DISTURBANCE

COURSE NO.	COURSE TITLE	CREDIT HOURS
SPE 334	Understanding and Teaching Learners With Emotional Disturbance	3
SPE 499A	Directed Teaching – Emotionally Disturbed	6

**TOTAL HOURS REQUIRED 9**

## B.A. in Psychology - Learning Disabilities/Mental Retardation

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	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 & Community Health	2
HIS 102 or HIS 103	United States History to 1865 or United State History 1865 to Present	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 or MUS 301	Art Appreciation or Music Appreciation	3

**TOTAL HOURS REQUIRED** 28

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 150	Computer Concepts and Applications	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 Profession	3
PSY 270	Statistics in Psychology	3
PED 365	Adapted Physical Education	1
XXX XXX	Elective	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 31

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 370	African History and Culture	3
PSY 322	Psychology of Exceptional Children	3
PSY 360	Experimental Psychology	4
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 other Curricular Adjustments	3
CSD 212	Speech and Language Development	3
XXX XXX	Elective	3

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 390	Fundamentals of Learning	3
CSC 200	Advanced Computer Concepts	3
PSY 492	Psychology Seminar	3
SPE 312	Educational Psychology and Behavioral Management	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 HOURS REQUIRED** 30

#### SUMMARY OF GRADUATE REQUIREMENTS\*

SUBJECT AREA	CREDIT HOURS
General Education Requirements	43
Major Requirements	77

**TOTAL DEGREE HOURS REQUIRED** 120

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

## B.S. in Interdisciplinary Studies - Learning Disabilities/Mental Retardation

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	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 & Community Health	2
HIS 102	U.S. History to 1865 or	
HIS 103	U.S. History 1865 to Present	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
PHY 100	Physical Science	3
SOC 101	Introduction to Social Sciences	3
FIA 201 or MUS 301	Art Appreciation or Music Appreciation	3

**TOTAL HOURS REQUIRED** 28

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 150	Computer Concepts & Applications	3
INT 308	Introduction to Interdisciplinary Studies	3
PSY 210	Introduction to Psychology	3
PSY 211	Basic Principles of Psychology	3
PSY 228	Developmental Psychology	3
PSY 280	Abnormal Psychology	3
SCM 285	Principles of Speech	3
ENG 207	Introduction to World Literature	3
SPE 210	American Schools & The Teaching Profession	3
PED 365	Adapted Physical Education	3
XXX XXX	Elective	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 31

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 370	African History & Culture	3
INT 360	Research in Interdisciplinary Studies	3
INT 375	Language and Society	3
PSY 322	Psychology of Exceptional Children	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 381	Topics in Psychology	3
SPE 321	Characteristics, Medical & Legal Aspect in Special Education	3
SPE 332	Understanding & Teaching Learners with MR	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition & Other Curricular Adjustments	3
CSD 212	Speech & Language Development	3
XXX XXX	Elective	1

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 390	Fundamentals of Learning	3
INT 322	Approaches to Critical Analysis	3
INT 411	Ideas & Their Influences	3
SPE 312	Educational Psychology & Behavioral Management	3
SPE 336	Understanding and Teaching Students with LD	3
SPE 490	Assessment of Exceptional Students	3
SPE 499B	Directed Teaching-Learning Disabilities	6
SPE 499C	Directed Teaching-Mental Retardation	6

**TOTAL HOURS REQUIRED** 30

#### SUMMARY OF GRADUATE REQUIREMENTS\*

SUBJECT AREA	CREDIT HOURS
General Education Requirements	43
Major Requirements	77

**TOTAL DEGREE HOURS REQUIRED** 120

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

## B.A. in Psychology - Learning Disabilities/Emotional Disturbance

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	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 & Community Health	2
HIS 102 or HIS 103	United States History to 1865 or U.S. History 1865 to Present	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
PHY 100	Physical Science	3
SOC 101	Introduction to Social Sciences	3
FIA 201 or MUS 301	Art Appreciation or Music Appreciation	3

**TOTAL HOURS REQUIRED** 28

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 150	Computer Concepts and Applications	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 Teaching Profession	3
PSY 270	Psychological Statistics	3
PED 365	Adapted Physical Education	3
XXX XXX	Elective	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 33

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 370	African History and Culture	3
PSY 322	Psychology of Exceptional Children	3
PSY 360	Experimental Psychology	4
PSY 381	Topics in Psychology	3
SPE 321	Characteristics, Medical and Legal Aspects	3
SPE 334	Understanding Teaching Learning With Emotional Disturbance	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition and other Curricular Adjustments	3
CSD 212	Speech and Language Development	3
XXX XXX	Elective	3

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 390	Fundamentals of Learning	3
CSC 200	Advanced Computer Concepts	3
PSY 492	Psychology Seminar	3
SPE 312	Educational Psychology and Behavioral Management	3
SPE 336	Understanding and Teaching Students with Learning Disabilities	3
SPE 490	Assessment of Exceptional Students	3
SPE 499A	Directed Teaching-Emotional Disturbance	6
SPE 499B	Directed Teaching-Learning Disabilities	6

**TOTAL HOURS REQUIRED** 30

#### SUMMARY OF GRADUATE REQUIREMENTS\*

SUBJECT AREA	CREDIT HOURS
General Education Requirements	43
Major Requirements	79

**TOTAL DEGREE HOURS REQUIRED** 122

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

## B.S. in Interdisciplinary Studies - Learning Disabilities/Emotional Disturbance

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	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 & Community Health	2
HIS 102 or HIS 103	U.S. History to 1865 or U.S. History 1865 to Present	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1
PHY 100	Physical Science	3
SOC 101	Introduction to Social Sciences	3
FIA 201 or MUS 301	Art Appreciation or Music Appreciation	3

**TOTAL HOURS REQUIRED** 28

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 150	Computer Concepts & Applications	3
INT 308	Introduction to Interdisciplinary Studies	3
PSY 210	Introduction to Psychology	3
PSY 211	Basic Principles of Psychology	3
PSY 228	Developmental Psychology	3
PSY 280	Abnormal Psychology	3
SCM 285	Principles of Speech	3
SPE 210	America Schools & The Teaching Profession	3
ENG 207	Introduction to World Literature	3
PED 365	Adapted Physical Education	3
XXX XXX	Elective	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 31

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 370	African History & Culture	3
INT 360	Studies	3
INT 375	Language and Society	3
PSY 381	Topics in Society	3
PSY 322	Psychology of Exceptional Children	3
SPE 321	Characteristics, Medical & Legal Aspects in Special Education	3
SPE 336	Understanding & Teaching Learners with LD	3
SPE 344	Teaching Reading to Exceptional Learners	3
SPE 440	Collaboration, Inclusion, Transition & Other Curricular Adjustments	3
CSD 212	Speech & Language Development	3
XXX XXX	Elective	1

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 390	Fundamentals of Learning	3
INT 322	Approaches to Critical Analysis	3
INT 411	Ideas & Their Influences	3
SPE 312	Educational Psychology & Behavioral Management	3
SPE 336	Understanding & Teaching Students with LD	3
SPE 490	Assessment of Exceptional Students	3
SPE 499A	Directed Teaching-Emotional Disturbances	6
SPE 499B	Directed Teaching-Learning Disabilities	6

**TOTAL HOURS REQUIRED** 30

#### SUMMARY OF GRADUATE REQUIREMENTS\*

SUBJECT AREA	CREDIT HOURS
General Education Requirements	43
Major Requirements	77

**TOTAL DEGREE HOURS REQUIRED** 120

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



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## COLLEGE OF LIBERAL ARTS

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**Dr. William A. Byrne, Acting Dean**  
**Dr. Robert K. Perkins, Acting Associate Dean**  
**(757) 823-8118**

The College 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 College of Liberal Arts as well.

Students in the College 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 College 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 address, 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 workforce.
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.

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### TECHNOLOGICAL PROFICIENCY

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

## DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES

**Dr. Annie S. Perkins, Department Head**  
(757) 823-8891

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. The Department aims 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, power, and utility of language in varied media. The Department offers its majors opportunities to concentrate in English/Liberal arts and Spanish literature to prepare them for graduate study, teaching or other professions. Students may specialize in theatre performance and technology, African-American literature, creative writing, speech communication, and French literature through the selection of courses approved by the department head.

The Foreign Languages program in the Department seeks to develop students' fundamental skills in French, Spanish, and other languages, including Arabic, Chinese, and Japanese, as staff resources permit. It seeks also to generate or broaden student interest in world cultures through language study. 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.

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### ENGLISH REQUIREMENTS

Requirements for the major: Thirty-six or more hours are required in discipline-related courses in all of the concentrations 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 Commonwealth 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 and high school.

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### 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 SPN 111/112. The Department reserves the right to increase or reduce requirements depending upon the potential of the individual student.

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### ASSESSMENT REQUIREMENTS

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.

English majors must meet the University requirement of passing the Examination of Writing Competency before graduation. This examination should be taken after students have passed ENG-101 and ENG-102 and before students have accumulated 90 credit hours of coursework.

#### **Additional Recommendation**

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

#### *Note:*

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

## B.A. in English

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab or CHM or PHY 100L	1
CHM 100	Chemistry: Man and Environment or PHY 100	3
CSC 150	Computer Concepts and Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
ENG 114	Techniques of Vocabulary Building	2
FRN 111	Elementary French I or SPN 111	3
FRN 112	Elementary French II or SPN 112	3
UNI 101	Introduction to University Life	0
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I or HIS 101, HIS 102 or HIS 103	3
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 30**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SOC 101	Introduction to Social Science	3
CSC 200	Advanced Computer Skills	3
ENG 207	Introduction to World Literature	3
ENG 210	Practical English Grammar	3
ENG 286	Advanced Composition	3
FRN 211	Intermediate French I or SPN 211	3
FRN 212	Intermediate French II or SPN 212	3
HUM 210 or HUM 211	Humanities I or Humanities II	3
MTH 103	Contemporary Mathematics	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 306	Introduction to Literacy Criticism	3
ENG 315	Survey of English Literature I	3
ENG 316	Survey of English Literature II	3
ENG 341	Survey of American Literature I	3
ENG 342	Survey of American Literature II	3
ENG 350	Seminar in Literacy Analysis and Interpretation	3
ENG 383	African-American Literature	3
ENG 410	The History of the English Language	3
ENG 413	Shakespeare	3
ENG 419	Contemporary American English Grammar	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Unrestricted Electives	15
ENG 412	Chaucer, or ENG 430	3
ENG 450	Research Seminar and Senior Thesis	3
ENG 454	Young Adult Literature	3
ENG 456	Women's Studies or ENG 459	3
ENG 460	Assessment & Evaluation of Writing or ENG 387 or ENG 449	3

**TOTAL HOURS REQUIRED 30**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	65
Electives	15

**TOTAL DEGREE HOURS REQUIRED 120**

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## Teacher Licensure Endorsement in English and Foreign Languages

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 taking SED 499.
7. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours):

COURSE NO.	COURSE TITLE
ENG 387	Teaching English in the secondary School
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.*

## B.A. in English - Spanish Literature

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab or CHM or PHY 100L	1
CHM 100	Chemistry: Man and Environment or PHY 100	3
CSC 150	Computer Concepts and Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
UNI 101	Introduction of University Life	0
HIS 100	History of World Societies or HIS 101, HIS 102, HIS 103	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness of Life	1
SPN 111	Elementary Spanish I or SPN 211	3
SPN 112	Elementary Spanish II or SPN 212	3

**TOTAL HOURS REQUIRED** 29

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 SPN 216	3
SPN 212	Intermediate Spanish II or SPN 215 or SPN 216	3
SPN 220	Spanish Civilization	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 29

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 306	Introduction to Literary Criticism	3
ENG 315	Survey of English Literature I	3
ENG 316	Survey of English Literature II	3
ENG 341	American Literature I	3
ENG 342	American Literature II	3
ENG 350	Seminar in Literary Analysis and Interpretation	3
ENG 383	African-American Literature	3
SPN 321	Survey of Spanish Literature I	3
SPN 322	Survey of Spanish Literature II	3
SPN 340	Drama of the Golden Age	3
SPN 450	Phonetics or SPN 485	2

**TOTAL HOURS REQUIRED** 32

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Electives	3
ENG 410	History of the English Language or ENG 419	3
HUM 210 HUM 211	Humanities I or Humanities II	3
SPN 320	Latin-American Civilization	3
SPN 332	Literature of the 19 <sup>th</sup> Century	3
SPN 333	Literature of the 20 <sup>th</sup> Century	3
SPN 350	Cervantes	3
SPN 454	Advanced Grammar & Composition	3
SPN 490	Senior Seminar	3

**TOTAL HOURS REQUIRED** 30

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	77
Electives	3

**TOTAL DEGREE HOURS REQUIRED** 120

*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, HIS 102 or HIS 103, MTH (Elective), SED 201, SED 380, SED 405, SED 420, SED 486, SED 488, SED 499*

## 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:

COURSE NO.	COURSE TITLE
ENG 210	Practical English Grammar or
ENG 286	Advanced Composition
ENG 341 or ENG 342	Survey of American Literature I or II
ENG 306:	Introduction to Literary Criticism

Additional nine (9) credit hours of courses:

COURSE NO.	
ENG 3XX or ENG 4XX	
ENG 3XX or ENG 4XX	
ENG 3XX or ENG 4XX	
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>18</b>

## Minor in French

Nine (9) credit hours of the following courses:

COURSE NO.	COURSE TITLE
FRN 215	Intermediate Conversation
FRN 454	Advanced Grammar Composition
FRN 220	French Civilization I or
FRN 320	French Civilization II

Additional nine (9) credit hours of courses:

COURSE NO.	
FRN 3XX or FRN 4XX	
FRN 3XX or FRN 4XX	
FRN 3XX or FRN 4XX	
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>18</b>

## Minor in Spanish

Nine (9) credit hours of the following courses:

COURSE NO.	COURSE TITLE
SPN 215	Intermediate Conversation
SPN 454	Advanced Grammar Composition
SPN 220	Spanish Civilization or
SPN 221	Latin American Civilization

Additional nine (9) credit hours of courses:

COURSE NO.	
FRN 3XX or FRN 4XX	
FRN 3XX or FRN 4XX	
FRN 3XX or FRN 4XX	
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>18</b>



## DEPARTMENT OF FINE ARTS

**Mr. Nelson Gary Jenks, 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, while continuing the infusion of relevant technologies in hardware and software. This has placed greater emphasis on a wider spectrum of courses and programs, more varied technology, and a neoteric pedagogy. The role of the creative enterprise in society is explored in special projects.



## B.A. 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" and other co-curricular activities scheduled by the Department is required of all graduates. Continuous verifiable engagement with the local art community is required by the Department.

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 280	Computer Applications in the Arts	3
HED 100	Personal & Community Health	2
MTH 103	Contemporary Mathematics	3
UNI 101	Introduction to University Life	3
PED 100	Fundamentals of Fitness for Life	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 XXX	Elective (100 or 200 level free Elective or FIA or FDM)	3
XXX XXX	Elective (100 or 200 level free Elective or FIA or FDM)	3
HIS 100	History of World Societies I	3
SOC 101	Introduction to Social Science	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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)	3
XXX XXX	Elective (200 or 300 level free Elective or FIA or FDM)	3
XXX XXX	Elective (200 or 300 level free Elective or FIA or FDM)	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

Continue to next page →

## B.A. in Fine Arts and Graphic Design (cont'd)

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective (limited to one Of the selected cultural electives)	3
FIA XXX	FIA Elective (300 or 400 level FIA or FDM)	3
XXX XXX	Elective (300 or 400 level free Elective including FIA or FDM)	3
FIA XXX	FIA Elective (400 level FIA or FDM)	3
FIA XXX	FIA Elective (400 level FIA or FDM)	3
FIA 470	Modern Art History	3
FIA 491	Advanced Studio Problems	3
XXX XXX	Elective (300 or 400 level free Elective including FIA or FDM)	3
FIA 495	Portfolio Preparation & Senior Exhibition	2
HUM 210	Humanities	3
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	62
Electives	18

**TOTAL DEGREE HOURS REQUIRED      120**

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

### RECOMMENDED ELECTIVES

#### CULTURAL ELECTIVES

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

#### 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.

## B.A. in Fine Arts and Graphic Design - Fine Arts Education

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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
UNI 101	Introduction to University Life	0
PED 100	Fundamentals of Fitness for Life	1
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 280	Computer Applications in 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 World Societies II	3
MTH 103	Contemporary Mathematics	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective *	3
SCM 285	Principles of Speech	3
FIA 234	Painting	3
FIA 270	History of Art Survey I	3
FIA 271	History of Art Survey II	3
FIA 314	Fine Arts & Methods	3
SED 201	American Schools & Teaching Profession	3
SED 233	Critical Thinking & Assessment Skills	3
SED 380	Foundations of Methods in Secondary Education	3
SOC 101	Introduction to Social Sciences	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
FIA 320	Intermediate Drawing	3
FIA 365	Elementary Photography	3
HUM 210	Humanities	3
SED 420	Educational Technology I	3
SED 486	Educational Sociology	3
SED 488	School/Community Relations	3
SED 499	Directed Teaching	12
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Professional Education Requirements	27
Major Requirements	54

**TOTAL DEGREE HOURS REQUIRED 121**

## Teacher Licensure Endorsement in Fine Arts

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 250, FIA 251, FIA 370, FIA 470, HIS 335, HIS 336, HIS 337, HIS 370, HIS 371, MUS 234, POS 315, PSY 340, SED 405, SOC 237

## Minor in Fine Arts

*(for students majoring in other departments)*

COURSE NO.	COURSE TITLE	CREDIT HOURS
FIA 115	Basic Design II	3
FIA 120	Basic Drawing I	3
FIA 260	Introduction to Advertising	3
FIA 3XX	Dept. Elective (FDM or FIA)	3
FIA 3XX	Dept. Elective (FDM or FIA)	3
FIA 3XX or 4XX	Dept. Elective (300 or 400 level)	3
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>18</b>

*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 art classes.*

## DEPARTMENT OF GENERAL STUDIES

**Dr. William A. Byrne, Acting Dean**  
**Dr. Robert K. Perkins, Acting Associate Dean**  
**College of Liberal Arts**  
**(757) 823-8118**

The Office of the First Year Experience provides three courses designed to address the needs of first year students (introducing them to university life), undeclared students and students on academic probation. For more information, please phone (757) 823-8507 or visit [www.nsu.edu](http://www.nsu.edu).

The Honors College coordinates the honors seminars, which are for Juniors and Seniors with a GPA of 3.5 or above. (Students with a GPA between 3.0 and 3.49 may enter an honors seminar by permission of the instructor.) For more information, please phone the director at (757) 823-8208 or email the director at [honors@nsu.edu](mailto:honors@nsu.edu).

## DEPARTMENT OF HISTORY

**Dr. 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. Upon completion of the required history and geography courses, students should be able to identify and discuss the major civilizations that have shaped human behavior over time and space. They should be able to compare and assess the principal values and ideologies of major world civilizations.
2. Upon completion of the Department's required courses in addition to the general core's English courses, students should be able to write in clear prose. They should be able to summarize and to analyze primary source documents as well as secondary source monographs. They should also be able to identify, to define, and to defend a point of view.
3. Upon completion of the Department's required courses, students should be able to appreciate cultural diversity by means of comparing and contrasting different cultures and traditions from the same time period. This emphasis on appreciating diversity is designed "to equip students with the capability to become productive citizens who continuously contribute to a global and rapidly changing society," as per the University's mission statement.

Accordingly, the Department's primary learning outcomes for its majors to acquire are as follows:

1. Ability to trace and analyze change over time.
2. Ability to compare and contrast cultures and traditions from the same time period.
3. Ability to write and argue clearly with a thesis statement in the first paragraph.
4. Ability to appreciate the contributions of African Americans to American history.
5. Ability to appreciate the contributions of the African diaspora to world history.

The departmental degree program is designed to prepare students for careers in law, teaching, public relations, journalism, foreign services, business, and other professions.



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## ASSESSMENT \*

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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, subsequently, not 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 consists 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](mailto:chford@nsu.edu) or [lgrant@nsu.edu](mailto:lgrant@nsu.edu).

## B.S. in 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

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
FL 111	Foreign Language	3
FL 112	Foreign Language	3
HED 100	Personal & Community Health	2
HIS 102	United States History to 1865	3
HIS 103	United States 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 HOURS REQUIRED 34**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HUM 210 or FIA 201 or MUS 301		3
HUM 211 or FIA 201 or MUS 301		3
XXX XXX	Electives	6
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
LOG 210	Logic: Critical Thinking	3
PHY 100	Physical Science	3
POS 100	American National Government	3
HIS 205	Introduction to History	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	Non-Western History Electives	6
ECN 211	Principles of Microeconomics	3
XXX XXX	Elective	3
CSC 200	Advanced Computer Concepts	3
GEO 130	Principles of Geography	3
ENG 203	Advanced Communication Skills or ENG 286 or ENG 303	3
ENG 383	African American Literature or FIA 170 or MUS 234 or HIS 335 or HIS 336	3
HIS 439	United States from 1932 to Present	3
SCM 285	Principles of Speech	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Electives	8
HIS XXX	History Electives	9
ENG 207	Literature of the Western World or ENG 315 or ENG 316	3
HIS 497	Introduction to Historical Research	3
POS 430	Modern Theory or POS 431**	3

**TOTAL HOURS REQUIRED 26**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	63
Electives	17

**TOTAL DEGREE HOURS REQUIRED 120**

(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.)

## B.S. in History – Teacher Licensure Endorsement in History and Social Science

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
FL 111	Foreign Language	3
FL 112	Foreign Language	3
HED 100	Personal & Community Health	2
HIS 102	United States History to 1865	3
HIS 103	United States History since 1865	3
SOC 101	Introduction to the Social Sciences	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 34**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HUM 210	Humanities or FIA 201 or MUS 301	3
HUM 211	Humanities or FIA 201 or MUS 301	3
GEO 130	Principles of Geography	3
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
LOG 210	Logic: Critical Thinking	3
PHY 100	Physical Science	3
POS 100	American Government	3
POS 231	American State & Local Government	3
POS 430	Modern Theory or POS 431	3
SED 201	American Schools & the Teaching Profession	3
HIS 205	Introduction to History	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 36**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS XXX	History Elective	3
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
ENG 203	Advanced Communication Skills or ENG 286 or ENG 207 or ENG 303	3
ENG 383	African American Literature or FIA 170 or MUS 234 or HIS 335 or HIS 336	3
HIS 346	Twentieth Century Europe	3
HIS 328	History and Government of Virginia	3
HIS 439	United States from 1932 to Present	3
SED 380	Foundations of Methods in Secondary Schools **	3
SED 390	Secondary Social Studies Methods	3
SED 420	Educational Technology	3
SED 486	Educational Psychology & Behavior Management	3

**TOTAL HOURS REQUIRED 36**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	Non-Western History Electives	6
GEO XXX	Geography Advanced Course	3
HIS 497	Introduction to Historical Research	3
POS 360	International Politics	3
SCM 285	Principles of Speech	3
SED 488	School-Community Relations	3
SED 499	Directed Teaching	12

**TOTAL HOURS REQUIRED 33**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirement	40
History-Social Science	69
Professional Education Core (including 12 hours of Directed Teaching)	30

**TOTAL DEGREE HOURS REQUIRED 139**

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## ENDORSEMENT REQUIREMENTS

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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 Test.*

Prior to enrolling for SED 499, students must pass the PRAXIS II Test for Social Studies and must give the Department a hard copy of both their overall scores and content-specific subscores from this examination. Failure to pass the content areas of the Praxis II Test and to give the Department a hard copy of those Praxis II scores and subscores for verification will prevent the student from graduating.

*\*\*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).

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### Teacher Licensure Endorsement in History and Social Science - Early Childhood

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):

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 233	Seminar in Assessment and Evaluation
ECE 274	The Study of Young Children
ECE 460	Curriculum and Instruction in Preschool and Kindergarten
ECE 461	Curriculum and Instruction in Early Primary
ECE 484	Teaching Reading in Early Childhood Education
ECE 499	Directed Teaching

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### Teacher Licensure Endorsement in History and Social Science - Special Education

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.

## B.S. in History - Military Science (ARMY)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	3
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HIS 102	United States History to 1865	3
HIS 103	United States History 1865 to Present	3
MSL 111	Fundamentals of Leadership/ Management	2
MSL 112	Fundamentals of Leadership/ Management	2
MSL 111D or 112D	Basic Drill & Ceremony or MSL	1
MTH 103	Contemporary Mathematics	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SOC 101	Introduction to Social Science	3
ENG 203	Advanced Communication Skills or ENG 207 or ENG 286 or ENG 303	3
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
HUM 210	Humanities or FIA 201 or MUS 301	3
HUM 211	Humanities or FIA 201 or MUS 301	3
LOG 210	Logic: Critical Thinking	3
MSL 211	Applied Leadership/ Management	2
MSL 211D or 212D	Drill and Ceremonies or MSL	1
MSL 212	Applied Leadership/ Management	2
PHY 100	Physical Science	3
POS 100	American National Government	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	Non-Western History Electives	6
ENG 383	African-American Literature or FIA 170 or MUS 234 or HIS 335 or HIS 336	3
CSC 200	Advanced Computer Concepts	3
FL 111	Foreign Language	3
FL 112	Foreign Language	3
HIS 380	American Military History	3
MSL 311	Advanced Leadership/ Management	3
MSL 311D	Drill and Ceremonies	1
MSL 312	Advanced Leadership/ Management	3
MSL 312D	Drill and Ceremonies	1
MSL 313	Advanced Camp*	0
SCM 285	Principles of Speech	3
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	History Electives (300-400 level)	6
GEO 130	Principles of Geography	3
HIS 439	United States from 1932 to Present	3
HIS 497	Introduction to Historical Research	3
MSL 411	Theory/Dynamics of Military Team	3
MSL 411D	Drill and Ceremonies	1
MSL 412	Theory/Dynamics of Military Team	3
MSL 412D	Drill and Ceremonies	1
POS 360	International Politics	3
<b>TOTAL HOURS REQUIRED</b>		<b>26</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	54
Military Science*	26
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

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 leadership development assessment course, but these credits will not be a part of scheduling.*

## B.S. in History - Military Science (NAVY)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	3
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HIS 102	United States History to 1865	3
HIS 103	United States History since 1865	3
HIS 205	Introduction to History	3
MTH 103	Contemporary Mathematics	3
NSC 111	Naval Laboratory	1
NSC 112	Naval Laboratory II	1
SOC 101	Introduction to Social Science	3

**TOTAL HOURS REQUIRED 30**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
HIS 205	Introduction to History	3
HUM 210	Humanities or FIA 201 or MS 301	3
HUM 211	Humanities or FIA 201 or MUS 301	3
LOG 210	Logic: Critical Thinking	3
NSC 201	Naval Ship Systems I (Engineering)	3
NSC 202	Naval Ship Systems II (Weapons)	3
NSC 211	Naval Laboratory III	1
NSC 212	Naval Laboratory IV	1
ENG 203	Advanced Communication Skills or ENG 207 or ENG 286 or ENG 303	3
PHY 100	Physical Science	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	Non-Western History Electives	6
ENG 383	African-American Literature or FIA 170 or MUS 234 or HIS 335 or HIS 336	3
CSC 200	Advanced Computer Concepts	3
FL 111	Foreign Language	3
FL 112	Foreign Language	3
HIS 380	American Military History	3
NSC 301	Navigation and Naval Operations I	3
NSC 302	Navigation and Naval Operations II	3
NSC 311	Naval Laboratory V	1
NSC 312	Naval Laboratory VI	1
SCM 285	Principles of Speech	3

**TOTAL HOURS REQUIRED 32**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 3XX or HIS 4XX	History Electives (300-400 level)	6
GEO 130	Principles of Geography	3
HIS 439	United States from 1932 to Present	3
HIS 497	Introduction to Historical Research	3
NSC 401	Leadership and Management I	3
NSC 402	Leadership and Management II	3
NSC 411	Naval Laboratory VII	1
NSC 412	Naval Laboratory VIII	1
POS 360	International Politics	3

**TOTAL HOURS REQUIRED 26**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirement	40
Major Requirements	54
Military Science	26

**TOTAL DEGREE HOURS REQUIRED 120**

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:

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 205	Introduction to History	3
HIS 3XX – HIS 4XX	History Electives	12
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>15</b>

## 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.

### PREREQUISITES

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 335	African American History I	3
HIS 336	African American History II	3

### REQUIRED COURSES

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 490A	Introduction to African and African Diasporan Studies	3
HIS 370	African History and Culture I	3

## ELECTIVES

*(Select one from each grouping)*

### GROUP 1

COURSE NO.	COURSE TITLE
HIS 371	African History and Culture II
HIS 490E	Major Themes in Contemporary Africa

### GROUP 2

COURSE NO.	COURSE TITLE
HIS 365	Caribbean and Latin American History
HIS 446	Colonial Latin American
HIS 448	Slavery in the Atlantic Basin

### GROUP 3

COURSE NO.	COURSE TITLE
ENG 383	African American Literature
ENG 384	African American Literature: Poetry
ENG 385	African American Literature: Fiction
ENG 432	African and African American Novel
ENG 433	African and African American Biography and Autobiography
ENG 440	Seminar in African and African American Literature
ENG 458	Southern Black Female Aesthetic

### GROUP 4

COURSE NO.	COURSE TITLE
DRM 219	African American Drama
FIA 370	African American Art
MUS 234	African American Music
MUS 335	Jazz Literature and Criticism
MUS 336	Jazz History

### GROUP 5

COURSE NO.	COURSE TITLE
GEO 337	Geography of Africa
REL 330	History and Theology of the Black Church
JRN 299	African American and Mass Media
POS 315	African American Politics
POS 463	Politics of African Nations
PSY 340	Psychology of the African American
SOC 237	Racial and Cultural Minorities
INT 412	Contemporary Globalization

**TOTAL HOURS REQUIRED 15**

## DEPARTMENT OF INTERDISCIPLINARY STUDIES

**Dr. Khadijah O. Miller, 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 enables students to develop 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.

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Core Requirements	40
Interdisciplinary Major Requirements Discipline Core & Technology Supplement	18
Areas of Concentration(including last 3 INT Core Courses)	45
Electives	17
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

### CORE COURSES

*(Courses to be completed with grade of "C" or better)*

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 308	Introduction to Interdisciplinary Studies	3
INT 322	Approaches to Critical Analysis	3
INT 360	Research in Interdisciplinary Studies	3
INT 375	Language and Society	3
INT 411	Ideas and Influences	3

### INCLUDED WITH CONCENTRATION I

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 412	Contemporary Globalization	3
INT 470	Senior Seminar	3
INT 477	Senior Thesis	3

### TECHNOLOGY SUPPLEMENT

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 200	Advanced Computer Concepts	3
Concentration I (includes last 3 INT Core Courses)		15
Concentration II		15
Concentration III		15

*NOTE: It is strongly recommended that all INT Core courses be taken in numerical order.*

### OPTION: (APPROVAL OF DEPARTMENT HEAD AND SCHOOL DEAN)

Students are encouraged to explore new relationships among 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 are required.

## B.S. in Interdisciplinary Studies

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CSC 150	Computer Concepts & 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	HIS 101, HIS 102, or HIS 103	3
MTH 103	College Algebra or higher	3
PED 100	Fundamentals of Fitness for Life	1
SOC 101	Introduction of Social Science	3
INT 308	Introduction to Interdisciplinary Studies	3

**TOTAL HOURS REQUIRED** 31

\*or CLM 165, CSC 169, CIT 150, FIA 180 or IMT 170

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
	Concentration III	15
SCM 285	Principles of Speech	3
HUM 210	Humanities I	3
HUM 211	Humanities II	3
INT 322	Approaches to Critical Analysis	3
INT 360	Research in Interdisciplinary Studies	3
INT 375	Language and Society	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 200	Advanced Computer Concepts	3
XXX XXX	Cultural Elective	3
XXX XXX	Concentration II	15
XXX XXX	Free Electives	6
INT 411	Ideas and Influences	3
INT 412	Contemporary Globalization(part of Concentration I)	3

**TOTAL HOURS REQUIRED** 33

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 470	Advanced Interdisciplinary Studies Seminar	3
INT 477	Senior Thesis	3
XXX XXX	Concentration I	6
XXX XXX	Free Electives	11

**TOTAL HOURS REQUIRED** 23

**TOTAL DEGREE HOURS REQUIRED** 120

## Minor in Interdisciplinary Studies

(Eighteen (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.)

COURSE NO.	COURSE TITLE	CREDIT HOURS
INT 308	Introduction to Interdisciplinary Studies	3
INT 322	Approaches to Critical Analysis	3
INT 360	Foundations of Research in INT	3
INT 375	Language and Society	3
INT 411	Ideas and their Influences	3
INT 412	Contemporary Globalization	3
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>18</b>

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### E-LEARNING

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The Department of Interdisciplinary Studies offers on-line courses for all the discipline core requirements.

#### Student Requirements

1. 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.
2. 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?"
3. Upon enrollment, students receive a Norfolk State e-mail account. Students must access their Norfolk State e-mail accounts by doing the following:
  - a) Go to the NSU web-site ([www.nsu.edu](http://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 students 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.

#### **B.S. in Interdisciplinary Studies**

Elementary Education Endorsement PreK-6 (English or History) Curriculum

*(Please see section on School of Education.)*

#### **B.S. in Interdisciplinary Studies**

Special Education Curriculum

*(Please see section on School of Education.)*

#### **B.S. in Interdisciplinary Studies**

Reclamation Program at Virginia Beach Higher Education Center

*(Please see NSU Website.)*

#### **B.S. in Interdisciplinary Studies**

Norfolk Naval Base

*(Please see NSU Website.)*

## DEPARTMENT OF MASS COMMUNICATIONS AND JOURNALISM

**Dr. Wanda Goins Brockington, 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.

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### CURRICULUM REGULATIONS

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Mass Communications and Journalism students must earn “C” or better in all departmental courses and in ENG 101, ENG 102, ENG 203 and SCM 285.

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### TRANSFER CREDIT POLICY

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The Department will accept no more than 12 hours credit in the undergraduate major taken at another institution and no more than 6 credits in the graduate major. It will accept credits for all courses outside the major approved by the Office of Admissions and the Registrar's Office.



## B.S. in Mass Communications - General Broadcast

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CSC 150	Computer Concepts and Application	3
ENG 101	Communication Skills I or ENG 101H	3
ENG 102	Communication Skills II or ENG 102H	3
HED 100	Personal & Community Health	2
HIS 102	United States to 1865 or HIS 100 or HIS 101 or HIS 103	3
MCM 211	Society & Mass Communications	3
MCM 250	TV Production	3
MTH 103	Contemporary Mathematics	3
PED 100	Fundamentals of Fitness for Life or PED 13X or PED 20X or PED 21X	1
SOC 101	Introduction to Social Sciences or SOC 110	3
POS 100	American National Government	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
CHM 100	Chemistry or PHY 100	3
BIO 100L	Biological Science Lab or CHM 100L or PHY 100L	1
CSC 200	Advanced Computer Concepts	3
ENG 203	Advanced Communication Skills or ENG 286 or ENG 303	3
ENG 207	Introduction to World Literature or ENG 207H	3
MCM 261	Introduction to Media Writing	3
FIA 201	Basic Art Appreciation or MUS 301	3
HUM 210	Humanities or HUM 211	3
PSY 210	Introduction to Psychology	3
SCM 285	Principles of Speech or SCM 285H	3
XXX XXX	Elective outside the Major	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>34</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECN 211	Principle of Microeconomics or ECN 212	3
ENG 114	Techniques of Vocabulary Building	2
HIS 335	African American History or HIS 336 or HIS 370 or HIS 371 or ENG 383 or FIA 170 or JRN 299 or MUS 234 or POS 315 or PSY 340	3
LOG 210	Logic: Critical Thinking	3
JRN 290	Digital Photography or MCM 280 or MCM 330 or MCM 391	3
MCM 310	History of Mass Communications or MCM 363 or MCM 476	3
MCM 350	TV Directing or MCM 315 or MCM 390	3
XXX XXX	Elective within the Major	3
XXX XXX	Electives outside the Major	6
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective within the Major	3
XXX XXX	Electives outside the Major	6
GEO 130	Principles of Geography	3
MCM 351	Introduction to Broadcast and Film Criticism or MCM 450 or MCM 485	3
MCM 440	Law & Mass Communications	3
MCM 445	Ethics in Media or MCM 464 or MCM 470	3
MCM 460	Contemporary Issues & Special Problems in Mass Communications or MCM 362 or MCM 489	3
MCM 491	Internet/Web Page Design	3
<b>TOTAL HOURS REQUIRED</b>		<b>27</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education	40
Courses in the Major	39
Required Liberal Arts & Sciences	26
Electives outside the Major	15
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>



## B.A. in Journalism

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
ENG 101	Communication Skills I or ENG 101H	3
ENG 102	Communication Skills II or ENG 102H	3
MCM 211	Society & Mass Communications	3
PED 100	Fundamentals of Fitness for Life or PED 13X or PED 20X or PED 21X	1
SOC 101	Introduction to Social Sciences or SOC 110	3
CSC 150	Computer Concepts & Applications	3
POS 100	American National Government	3
HED 100	Personal & Community Health	2
HIS 102	United State History to 1865 or HIS 100 or HIS 101 or HIS 103	3
JRN 220	Basic Writing	3
MTH 103	Contemporary Mathematics	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
CHM 100	Chemistry or PHY 100	3
BIO 100L	Biological Science Lab or CHM 100L or PHY 100L	1
JRN 210	Advertising Principles or JRN 221 or JRN 240	3
ENG 203	Advanced Communication Skills or ENG 286 or ENG 303	3
JRN 290	Digital Photography or MCM 250 or FIA 365	3
CSC 200	Advanced Computer Concepts	3
PSY 210	Introduction to Psychology	3
FIA 201	Basic Art Appreciation or MUS 301	3
ENG 207	Literature of the Western World	3
SCM 285	Principles of Speech or SCM 285H	3
HUM 210	Humanities or HUM 211	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>34</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECN 211	Principles of Microeconomics or ECN 212	3
ENG 114	Techniques of Vocabulary Building	2
HIS 335	African American History to 1865 or HIS 336 or HIS 370 or HIS 371 or ENG 383 or FIA 170 or MUS 234 or POS 315 or PSY 340 or JRN 299	3
JRN 330	Copy Editing	3
JRN 341	PR Practice or JRN 313 or JRN 323	3
LOG 210	Logic: Critical Thinking	3
XXX XXX	Elective within the Major	3
XXX XXX	Electives outside the Major	9
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MCM 440	Law & Mass Communications or MCM 445	3
JRN 332	Graphics of Communication or JRN 342	3
MCM 310	History of Mass Communication or MCM 460	3
MCM 450	Mass Communication Theory & Research	3
MCM 491	Internet/Web Page Design	3
XXX XXX	Electives within the Major	6
XXX XXX	Electives outside the Major	6
<b>TOTAL HOURS REQUIRED</b>		<b>24</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Courses in the Major	39
Required Liberal Arts & Sciences	26
Electives outside the Major	15
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## Minor in Mass Communications

The following 15 hours are required for a minor in Mass Communications (General Broadcast):

### CORE COURSES

COURSE NO.	COURSE TITLE
MCM 211	Society and Mass Communications
MCM 250	TV Production
MCM 261	Introduction to Media Writing
MCM 362	Broadcasting News Writing & Reporting
MCM 3XX	

**TOTAL HOURS REQUIRED** 9

### ELECTIVE COURSES

COURSE NO.	COURSE TITLE
MCM 330	Elec. Field Production & Editing
MCM 350	TV Directing
MCM 391	Radio & TV Announcing
MCM 464	Advanced TV Production
MCM 470	Broadcast/Cable Programming
MCM 476	Broadcast/Cable Sales
MCM 489	Media Management
MCM 491	Internet/Web Page Design

**TOTAL HOURS REQUIRED** 6

**TOTAL DEGREE HOURS REQUIRED** 15

## Minor in Journalism

The following 15 hours are required for a minor in Journalism with a B.A.:

### CORE COURSES

COURSE NO.	COURSE TITLE
JRN 220	Basic Writing
JRN 210	Advertising Principles
JRN 221	News Writing
JRN 240	Public Relations Principles
JRN 2XX	
JRN 313	Advertising/Public Campaigns
JRN 330	Copy Editing
JRN 341	Public Relations Practice
JRN 3XX	

**TOTAL HOURS REQUIRED** 9

### ELECTIVE COURSES

COURSE NO.	COURSE TITLE
JRN 332	Graphics of Communication
JRN 342	Promotional Writing
MCM 491	Internet/Web Page Design
MCM 4XX	

**TOTAL HOURS REQUIRED** 6

**TOTAL DEGREE HOURS REQUIRED** 15

## DEPARTMENT OF MILITARY SCIENCE (ARMY ROTC)

**Lt. Col. Nicholas Anthony, 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 or her freshman and sophomore years of college. Instruction in each phase includes basic military subjects, instruction in leadership and management, and volunteered off-campus field training exercises. The Advanced phase includes on-campus study, off-campus field training exercises, and a 35-day Leadership Development Assessment Course (LDAC) designed to evaluate a cadet's leadership ability and mastery of military skills. Students entering advanced phase must be seeking to contract with ROTC and must have the permission of the Professor of Military Science. LDAC 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. 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 30<sup>th</sup> birthday upon graduation/commissioning (27<sup>th</sup> birthday for scholarship students).

NSU COURSE	AROTC SUBSTITUTIONS COURSE
HED 100	MSL 101 or MSL 102
HIS 100, 101, 102, 103	HIS 380
PED 100	MSL 201 or MSL 202

### 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, and room and board. Additionally, scholarship recipients receive \$300-\$500 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 \$300-\$500 per month for each month of the school year, not to exceed 10 months per year. While attending LDAC, 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 or she will receive approximately \$3,600 in pay and allowances. This includes subsistence pay and summer camp pay.

## DEPARTMENT OF MUSIC

**Dr. Amelia Ross-Hammond, 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 Education - Instrumental/ Keyboard/ Vocal

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
MUS 110	Ensembles *	1
MUS 111	Ensembles *	1
MUS 121	Applied Minor	1
MUS 122	Applied Minor	1
MUS 123	Performance Class	1
MUS 124	Performance Class	1
MUS 125	Applied Major	2
MUS 126	Applied Major	2
MUS 131	Music Literature**	2
MUS 132	Music Literature**	2
MUS 141	Sight, Singing & Ear Training	2
MUS 142	Sight, Singing & Ear Training	2
MUS 145	Harmony and Keyboard	2
MUS 146	Harmony and Keyboard	2
MUS 161	String Class (Instrumental or Music Elective Keyboard & Vocal)	1
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 32**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CLM 165	Computer Literacy for Musicians	3
HED 100	Personal & Community Health	2
MUS 151	Elementary Conducting	2
MUS 210	Ensembles *	1
MUS 211	Ensembles *	1
MUS 221	Applied Minor	1
MUS 222	Applied Minor	1
MUS 223	Performance Class	1
MUS 225	Applied Major	2
MUS 226	Applied Major	2
MUS 241	Sight, Singing & Ear Training	2
MUS 242	Sight, Singing & Ear Training	2
MUS 245	Harmony & Keyboard	2
MUS 246	Harmony & Keyboard	2

COURSE NO.	COURSE TITLE	CREDIT HOURS
MUS 260	Band Instrument Survey(Vocal/ Keyboard)	1
MUS 261	Percussion Class (Instrumental)	1
MUS 271	Vocal Diction (Vocal and Keyboard)	1
MUS 272	Vocal Diction (Vocal)	1
MUS 273	Voice Class (Instrumental & Keyboard)	1
MUS 361	Woodwind Class (Instrumental)	1
SED 201	American School & Teaching Professions	3
SED 486	Education Psychology and Behavior Management	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MUS 346	Composition or MUS 247	3
BIO 100	Biological Science or PHY 100	3
BIO 100L	Biological Science Lab or PHY 100L	1
HIS 100	History of World Societies I or HIS 101, HIS 102, HIS 103	3
MUS 234	African American Music	3
MUS 310	Ensembles *	1
MUS 311	Ensembles *	1
MUS 325	Applied Major	2
MUS 326	Applied Major	2
MUS 331	Music History **	2
MUS 332	Music History **	2
MUS 351	Advanced Conducting	2
MUS 362	Brasswind Class (Instrumental or music elective, Vocal & Keyboard)	1
MUS 383	Methods in Public School Music	2
MUS 384	Methods in Public School Music	2
SED 405	Reading in the Content Area	3

**TOTAL HOURS REQUIRED 33**

\*\* 4 Semesters of Music Literature/History = 6 hours of Humanities

Continue to next page →

## Bachelor of Music Education - Instrumental/ Keyboard/ Vocal (cont'd)

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MUS 410	Ensemble *	1
MUS 425	Applied Major	2
MUS 426	Applied Major	2
MUS 448	Arranging	2
SED 499	Directed Teaching	12
PHY 154	Physics of Music	3
SCM 285	Principles of Speech	3
SED 420	Educational Technology	3
SOC 110	Introduction to Sociology	3
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	60
Teacher Education Courses	27
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>129</b>

### \* 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.
3. Three semesters of music literature/history satisfy the humanities core requirement.

*\*Four 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.

### \*\*PROFESSIONAL EDUCATION CORE COURSES

Students must pass the PRAXIS I and II tests prior to applying for admission to MUS-383 and MUS-384 – Methods in Public School Music.

SED-233

May be taken before taking the PRAXIS Exam.

SED-499

Directed Teaching (Secondary Level/Elementary level)



## Bachelor of Music - Media

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 103	Contemporary Mathematics	3
MUS 110	Ensembles *	1
MUS 111	Ensembles *	1
MUS 112	Performance Workshops	1
MUS 113	Performance Workshops	1
MUS 121	Applied Minor	1
MUS 122	Applied Minor	1
MUS 125	Applied Major	2
MUS 126	Applied Major	2
MUS 131	Music Literature**	2
MUS 132	Music Literature**	2
MUS 141	Sight, Singing & Ear Training	2
MUS 142	Sight, Singing & Ear Training	2
MUS 145	Harmony & Keyboarding	2
MUS 146	Harmony & Keyboarding	2
MUS 151	Elementary Conducting	2

TOTAL HOURS REQUIRED

35

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CLM 165	Computer Literacy	3
MCM 211	Society and Mass Communications	3
MUS 143	Progressive Harmony	3
MUS 210	Ensembles*	1
MUS 211	Ensembles*	1
MUS 212	Performance Workshop	1
MUS 213	Performance Workshop	1
MUS 221	Applied Minor	1
MUS 222	Applied Minor	1
MUS 225	Applied Major	2
MUS 226	Applied Major	2
PED 100	Fundamentals of Fitness for Life	1
ENG 299	Writing Competency Exam	0

TOTAL HOURS REQUIRED

24

## Bachelor of Music - Media (cont'd)

### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 100	History of World Societies I	3
MCM 250	TV Production or MUS 365 or 265	3
MCM 350	TV Directing or MUS 366	3
MUS 234	African American Music	3
MUS 310	Ensembles*	1
MUS 311	Ensembles*	1
MUS 312	Performance Workshop	1
MUS 313	Performance Workshop	1
MUS 325	Applied Major	2
MUS 326	Applied Major	2
MUS 331	Music History	2
MUS 332	Music History	2
MUS 335	Jazz Literature and Criticism	3
MUS 346	Composition or MUS 247 Twentieth Century	3
PHY 154	Physic of Music	3
SCM 285	Principles of Speech	3
<b>TOTAL HOURS REQUIRED</b>		<b>36</b>

*\*\*4 semesters of Music Literature/History satisfy the Humanities core requirements*

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MCM 261	Introduction to Media Writing	3
MUS 265	Pract. App. or MUS 365 Rec. Elect Mus.	3
MCM 440	Law and Mass Communications or MUS 440	3
MCM 351	Introduction to Broadcast & Film Criticism	3
MCM 489	Media Management	3
JRN 493	Journalism Internship	3
MUS 410	Ensembles*	1
MUS 412	Performance Workshop	1
MUS 425	Applied Major	2
MUS 426	Applied Major	2
MUS 448	Arranging	2
MCM 496	Internship	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>125</b>

## **Bachelor of Music – Media (cont'd)**

Four semesters 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.

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### **\*ENSEMBLES**

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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 or 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.

Although 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.

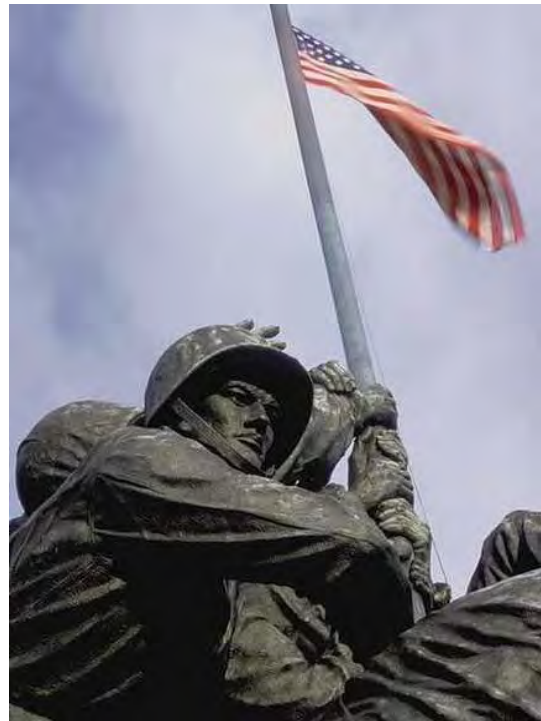
## DEPARTMENT OF POLITICAL SCIENCE

**Dr. Harold Hubbard, 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: 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 fundamental training for students planning careers in law, public management, political 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 prepare students with the appropriate academic background (i.e., knowledge base and communication skills), which can aid them in performing well in graduate/professional school, in their careers and in the global community.



## B.S. in Political Science

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science or CHM 100 or PHY 100 or SCI 1XX	3
BIO 100L	Biological Science Lab 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 100	American National Government	3
POS 180	Introduction to Political Science	3
UNI 101	Introduction to University Life	0
HED 100	Personal & Community Health	2
SCM 285	Principles of Speech	3
XXX XXX	Elective	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 105	Biological Science or CHM 1XX, PHY 1XX, or SCI 1XX,	3
ENG 203	Advanced Communication Skills	3
ENG 114	Techniques of Vocabulary Building	2
HIS 100	History of World Societies I or 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
XXX XXX	Elective	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 200	Advanced Computer Concepts	3
ECN 211	Principles of Microeconomics or ECN 212	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
XXX XXX	Cultural Elective	3
XXX XXX	Elective	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
POS 337	American Constitutional Law	3
POS 350	Organizational Theory and Behavior	3
POS 360	International Relations Politics	3
POS 431	Modern Political Theory	3
POS 451	Public Personnel Administration	3
POS 3XX	POS 4XX OR URP 2XX	3
XXX XXX	Electives	9

**TOTAL HOURS REQUIRED 27**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	62
Free Electives	18

**TOTAL DEGREE HOURS REQUIRED 120**

## CAREER AREAS OF INTEREST

The following courses represent career areas of interest to increase students' preparedness for specific career goals. Students are encouraged to work closely with their advisor prior to taking courses in their career area of interest. Twelve (12) credit hours are needed to fulfill the requirements for each career area of interest in Political Science.

### LAW

COURSE NO.	COURSE TITLE
POS 332 *	Intro to Jurisprudence
POS 337 *	American Constitutional Law
POS 338 *	American Constitutional Law (POS 3XX)
POS 443 *	Administrative Law (POS 4XX)
POS 494	Pre-Law Internship (POS 4XX)
CJS 200	Introduction to Criminal Justice (Free Elective)
CJS 313	American Court System (Free Elective)

### PUBLIC ADMINISTRATION

COURSE NO.	COURSE TITLE
POS 250 *	Introduction to Public Administration
POS 350 *	Organization Theory and Behavior
POS 451 *	Public Personnel Administration
POS 493 *	Public Administration Internship (POS 4XX)
POS 230	American Public Policy
POS 443	Administrative Law (POS 4XX)
ACC 201	Principles of Financial Accounting

### URBAN PLANNING

COURSE NO.	COURSE TITLE
URP 192 *	Introduction to Urban Planning
URP 292 *	Urban Planning Law
URP 285 *	Urban Land Use Planning (URP 2XX)
URP 380 *	Housing and Community Development (URP 3XX)
URP 355	Economic Development Planning (URP 3XX)
POS 310	Metropolitan and Regional Development (POS 3XX)

### U.S. POLITICS & THEORY

COURSE NO.	COURSE TITLE
POS 100 *	American National Government
POS 325 *	American Foreign Policy (POS 3XX)
POS 315 *	African American Politics (POS 3XX)
POS 431 *	Modern Political Theory
POS 430	Political Theory
POS 320	The American Party System

### INTERNATIONAL AFFAIRS

COURSE NO.	COURSE TITLE
POS 323 *	Comparative Government
POS 360 *	International Relations
POS 442 *	International Law (POS 4XX)
POS 463 *	Politics of African Nations (POS 4XX)
POS 462	Near Middle East in International Affairs (POS 4XX)
POS 467	Introduction to Non-Western Politics (POS 4XX)
GEO 130	Geography (Recommended) (Free Elective)

***\*12 credit hours required in order to fulfill the Career Areas of Interest in Political Science.***

- Other courses listed below are Electives for Political Science Majors who choose not to have a Minor in another department.
- Students may minor in Political Science by completing 18 credit hours in Political Science.

## Minor in Political Science

### REQUIRED COURSES

COURSE NO.	COURSE TITLE	CREDIT HOURS
POS 100	American National Government	3
POS 250	Public Administration	3
URP 192	Introduction to Urban Planning	3
POS 332	Introduction to Jurisprudence	3
POS 430	Political Theory	3
POS XXX	Political Science Elective 3XX, POS 4XX, URP 292 or URP 380	3
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>18</b>

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

### NOTE:

In order to complete the Minor in Political Science, 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 (18 credits total).

- ENG 210 (Practical Grammar) and Eng 303 (Professional and Technical Writing) are recommended electives.
- Students interested in careers which require a specific proficiency (such as mastery of a foreign language) are encouraged to take electives consistent with those career options.
- POS 451 - Public Personnel Administration is a prerequisite for POS 493.
- POS 493 - Public Administration Internship – This course provides field experience in a public or non-profit agency. Please contact the Public Administration Internship Coordinator for additional requirements.
- POS 494 - Pre-law Internship – Please contact the Pre-law Internship Coordinator for the requirements. 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.

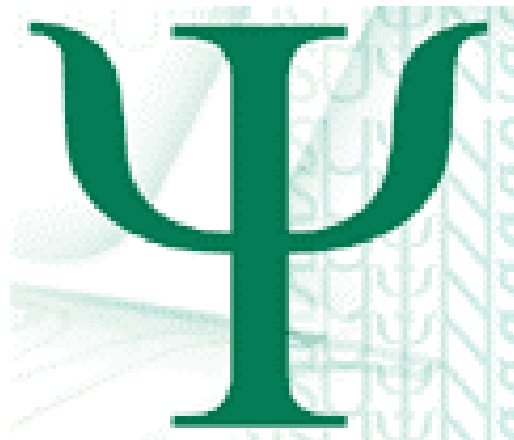


## DEPARTMENT OF PSYCHOLOGY

**Dr. 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 paraprofessionals, teachers and behavioral science researchers. All programs are designed to prepare students for rigorous graduate training in psychology. The Department also offers a Master of Arts in Community/Clinical Psychology and is part of the Virginia Consortium Program in Clinical Psychology that offers the doctor of psychology degree. 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 prepare students thoroughly to render services initially as entry-level professionals, 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.



## B.A. in Psychology

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SOC 101	Introduction to Social Science	3
CSC 150	Computer Concepts & Applications	3
ENG 101	Communication Skills I	3
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness for Life	1
PSY 210	Introduction to Psychology	3
UNI 101	Introduction to University Life	0
ENG 102	Communication Skills II	3
MTH 103	Contemporary Mathematics	3
PSY 211	Basic Principles of Psychology	3
LOG 210	Logic: Critical Thinking	3

**TOTAL HOURS REQUIRED** 27

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 280	Abnormal Psychology	3
PSY XXX	Electives	6
BIO 100	Biological Science or CHM 100 or PHY 100 or SCI 100	6
BIO 100L	Biological Science Lab or CHM 100L	1
ECN 211	Principles of Microeconomics	3
ENG 207	Literature of the Western World	3
PSY 270	Statistics in Psychology	3
SCM 285	Principles of Speech	3
CSC 200	Advanced Computer Concepts	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 31

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HUM 210	Humanities or MUS 301	3
PSY XXX	Electives	9
XXX XXX	Free Electives	6
PSY 360	Experiential Psychology w/ Lab	4
XXX XXX	Cross Disciplinary Electives	6
XXX XXX	Social Science Elective	3

**TOTAL HOURS REQUIRED** 31

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY XXX	Electives	6
XXX XXX	Cross Disciplinary Electives	6
HIS 335 or HIS 336 or HIS 370 or HIS 371	African American History or African American History or African History or African History	3
PSY 492	Psychology Seminar	3
XXX XXX	Free Electives	13

**TOTAL HOURS REQUIRED** 31

#### SUMMARY OF GRADUATION REQUIREMENTS

COURSE NO.	CREDIT HOURS
General Education Requirements	40
Major Requirements	28
PSY Electives	21
Cross Disciplinary Electives	12
Free Electives	19
Exit Writing Competency Exam	0

**TOTAL DEGREE HOURS REQUIRED** 120

## Minor in Psychology

COURSE NO.	COURSE TITLE	CREDIT HOURS
PSY 210	Introduction to Psychology	3
PSY 211	Basic Principles of Psychology	3
PSY 280	Abnormal Psychology	3
PSY 3XX/4XX	300 – 400 level Psychology Courses	6
PSY 4XX	400 Level Psychology Course	3

**TOTAL DEGREE HOURS REQUIRED** 18

Students must earn a minimum grade of C in all major courses.

## DEPARTMENT OF SOCIOLOGY

**Dr. Curtis T. Langley, Department Head**  
**(757) 823-8852**

The Sociology Department focuses on providing understanding of social issues such as crime, poverty, injustice, urban and family problems based on scientific principles of society. The Department is committed to student excellence, preparing students to address these issues in society by working closely with them to encourage and develop their skills. Through research and scholarly activities, faculty contribute to the further understanding of human behavior and involve students in these activities. Simultaneously, the Department seeks to serve as an interface between the theoretically-oriented university and the pragmatically-oriented community and to be involved in community service. As a channel of scientific knowledge, the Sociology Department is prepared to introduce innovative programs to meet the needs of a dynamic, diverse society. The Department offers a Bachelor of Arts degree in Sociology and Masters of Arts degrees in Criminal Justice, Urban Affairs and Applied Sociology (a joint degree program with Old Dominion University).



## B.S. in Sociology

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science or BIO 105 or BIO 110 or CHM 100 or PHY 100	3
BIO 100L	Biological Science Lab or CHM 100L or PHY 100L	1
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness for Life	1
HIS 100	History of World Societies I or HIS 101, HIS 102 or HIS 103	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
UNI 101	Introduction to University Life	0
MTH 103	Contemporary Mathematics or MTH 105	3
SOC 101	Introduction to Social Sciences	3
SOC 110	Introduction to Sociology	3
CSC 150	Computer Concepts & Applications	3
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science or BIO 105 or BIO 110 or CHM 100 or PHY 100	3
HUM 210	Humanities I or HUM 211 or ENG 207 or MUS 301 or FIA 301 or Foreign Language	6
LOG 210	Logic: Critical Thinking	3
PSY 210	Introduction to Psychology or POS 100 or ECN 211	3
SCM 285	Principles of Speech	3
SOC 137	Social Problems or CJS 200	3
SOC 225	Social Science Research Skills	3
CSC 200	Advanced Computer Concepts	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 383	African American Literature or HIS 335 or HIS 336 or HIS 370 or HIS 377 or PSY 240 or POS 315 or SOC 237	3
SOC 338 or SOC 331		3
SOC 344	Methods of Social Research	3
SOC 355	Elementary Social Statistics	3
SOC 3XX	Sociology or CJS Elective	9
XXX XXX	Free Electives	9
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SOC 446	Sociological Theory	3
SOC 393 or XXX XXX	Internship or Approved Electives	6
XXX XXX	Approved Elective	3
SOC 462	Complex Organizations	3
SOC 499	Applied Sociology	3
XXX XXX	Free Electives	14
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	45
Other Requirements	12
Free Electives	23
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## CAREER AREAS IN SOCIOLOGY

Students may follow the general curriculum (above) or specialize in courses relevant to career areas to increase their preparedness for specific career goals using the following guidelines and working closely with an advisor.

### CRIME AND CRIMINAL JUSTICE

- POS 100 - American National Government or PSY 100 - Introduction to Psychology
- CJC 200 - Introduction to Criminal Justice (instead of SOC 137- Social Problems)
- CJS Electives: Choose 3: CJS 220 - Juvenile Delinquency, 225 - Law Enforcement, 230 - Introduction to Corrections, 310 - Criminology, 313 - American Court System, 315 - Sociology and Drug Usage, 492 - Special Topics in Criminal Justice
- Approved/ Free Electives: Choose 3: POS 332 - Jurisprudence, SOC 458 - Social Inequality, SOC 237 - Racial Ethnic Minorities, CJS XXX

### FAMILY AND SOCIAL RELATIONS

- PSY 210 - Introduction to Psychology (instead of POS 100 - American National Government)
- SOC 137 - Social Problems (instead of CJS 200 - Introduction to Criminal Justice)
- SOC XXX - Choose 3: SOC 338 - The Family or SOC 331 Social Psychology, SOC 205 - Human Sexuality, CJS 220
- Juvenile Delinquency, CJS 315 - Sociology and Drug Usage, SOC 458 - Social Inequality
- Approved Elective: Choose 1: PSY 220 - Child Psychology, 225 - Adolescent Psychology, Soc 228 - Developmental Psychology, SWK Techniques of Counseling
- Free Electives: Choose 2: Any Approved Elective above, SWK 357 - Interviewing Techniques, SOC 458 - Social Inequality, SOC 237 - Racial, Ethnic Minorities

### SOCIAL INEQUALITY AND SOCIAL JUSTICE

- POS 100 -- American National Government or ECN 210 -- Economics (instead of PSY 210 - Introduction to Psychology)
- SOC 137 -- Social Problems (instead of CJS 200 - Introduction to Criminal Justice)
- SOC XXX --SOC 237- Racial Ethnic Minorities, SOC 458 - Social Inequality; Choose 1 from: SOC 228 - Demography or SOC 234 - Urban Sociology or SOC 325 - Society, Business and Internationalism

- Approved Elective/ Free Elective, Choose 3 -- CJS 310 - Criminology or CJS 230 - Introduction to Corrections or CJS 200- Introduction to Criminal Justice, POS (Housing), POS 315 - Blacks in the American Political Process, GEO 100 - Geography, INT 400 - Globalism

### POPULATION STUDIES AND INTERNATIONAL DEVELOPMENT

- POS 100 - American National Government or
- ECN 211 (instead of PSY 210 - Introduction to Psychology)
- SOC 137 - Social Problems (instead of CJS 200 - Introduction to Criminal Justice)
- SOC 228 - Demography (instead of Soc 234 - Urban Sociology)
- SOC XXX: SOC 301 - Demographic Methods or SOC 302 - Migration, or Soc 303 - Fertility, SOC 304 - Mortality, SOC 401-Demographic Methods II, SOC 402 -Family Demography, SOC 403 - Population Growth Food and the Environment, SOC 404 - Population and Economic Development, SOC 234 - Urban Sociology, SOC 325 - Society, Business and Internationalism
- Approved/Free Electives, Choose 3: SOC 458 Social Inequality, INT 400 - Globalism, SOC 237 Racial, Cultural Minorities, GEO 100 - Geography, POS or HIS International Focus

## Minor in Sociology

COURSE NO.	COURSE TITLE	CREDIT HOURS
<b>INTRODUCTION</b>		
SOC 110	Introduction to Sociology	3
<b>SOCIAL PROBLEMS (Select One Course)</b>		
SOC 137	Social Problems	3
SOC 228	Demographic Principles	
SOC 234	Urban Sociology	
CJS 200	Introduction to Criminal Justice Research	
SOC 344	Methods of Social Research	
<b>ORGANIZATION (Select One Course)</b>		
SOC 446	Sociological Theory	3
SOC 458	Social Inequality	
SOC 462	Complex Organizations	
<b>GENERAL (Select One Course)</b>		
SOC 3XX		3
SOC 4XX		
CJS 3XX		
CJS 4XX		
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>15</b>

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# COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

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**Dr. Sandra J. DeLoatch, Dean**  
**Dr. Larry Mattix, Associate Dean**  
**(757) 823-8180**

The College of Science, Engineering 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 students. 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 College of Science, Engineering 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.

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## ACCREDITATION/APPROVALS

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The following programs, sponsored by the College of Science, Engineering 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**  
 The Computing Accreditation Commission of ABET, Inc. 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700
2. **Chemistry-American Chemical Society (ACS)**  
 1155 Sixteenth Street, N.W., Washington, DC 20036, (202) 872-4589
3. **Medical Technology**  
 National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Ave., Suite 670, Chicago, IL 60631, (773) 714-8880
4. **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, 4<sup>th</sup> Floor, Richmond, VA 23230, (804) 662-9909.
5. **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, 4<sup>th</sup> Floor, Richmond, VA 23230, (804) 662-9909.
6. **Technology**  
 National Association of Industrial Technology (NAIT), 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104, (734) 677-0720 Industrial Technology (NAIT), 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104, (734) 677-0720



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## ORGANIZATION OF THE SCHOOL

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The courses offered by the College of Science, Engineering 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

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## DEGREES OFFERED

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The College of Science, Engineering and Technology offers programs terminating at the associate, baccalaureate and master degree levels. Students admitted to the College of Science, Engineering 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.

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## ADMISSION REQUIREMENTS

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Admission to Norfolk State University does not imply automatic admission to the following programs:

1. DNIMAS
2. Engineering
3. Medical Technology
4. Nursing

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## ADMISSION TO MEDICAL TECHNOLOGY PROFESSIONAL PHASE

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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.

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## ADMISSION TO NURSING

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1. Admission to University prior to semester of the desired entry into the nursing sequence.
2. Submission of a separate application for admission to the Nursing Department.
3. 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 GPA of 2.0 in each course.
4. Students must have a cumulative GPA of 2.5 or better in high school or course work.
5. For admission to the LPN to Associate Degree Program, student must be licensed in the Commonwealth of Virginia as a LPN.
6. For admission to the Upper Level Baccalaureate Program (RN-Completion), student must be licensed in the Commonwealth of Virginia as a RN.
7. For admission to the 2<sup>nd</sup> Degree Program, student must have completed an undergraduate or higher degree and defined pre-requisites.
8. For admission to the LPN to BSN Program, student must be licensed in the Commonwealth of Virginia as a LPN and must have completed defined prerequisites.



## DEPARTMENT OF ALLIED HEALTH

**Dr. Mildred K. Fuller, Department Head**  
**(757) 823-2366**

The Department of Allied Health offers majors, concentrations or certificates in the disciplines of 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 Services Management, and Medical Technology. A Certificate of Completion is awarded in Health Services Management.

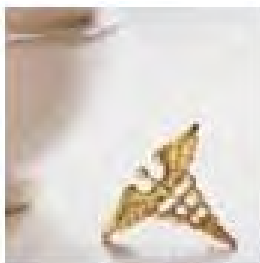
The Communication Sciences and Disorders Program, formerly with the Department of English and Foreign Languages, was aligned with the Department of Allied Health in Summer 2006. Students must consult with the CSD program coordinator before enrolling in the program and scheduling. Students will still receive a B.A. degree in English.

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### OBJECTIVES OF DEPARTMENT

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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.



**HEALTH SERVICES MANAGEMENT**



**MEDICAL TECHNOLOGY**



**FOOD SCIENCE AND NUTRITION**

## B.S. in Health Services Management

**Dr. 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.

### CURRICULUM

#### FIRST YEAR

**TOTAL HOURS REQUIRED**

**31**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
ACC 201	Introduction to Financial Accounting	3
ACC 202	Introduction to Managerial Accounting	3
CSC 150	Computer Literacy*	3
UNI 101	Introduction to University Life	0
BIO 100	Biological Science, CHM 100 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 Health Professions	3
MTH 151	College Algebra or MTH 131, MTH 132, MTH 153	3
PED 100	Fundamental of Fitness for Life (any active P.E.)	1

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ECN 211	Principles of Microeconomics	3
ECN 212	Principles of Macroeconomics	3
MTH 250	Elementary Statistics or PSY 270, SOC 355, POS 345, or DSC 270	3
ENG 203	Advanced Communication Skills	3
HIS 101	History of World Societies or HIS 102, HIS 103, or SOC 101	3
HSM 300	Health Service Management	3
HSM 300L	Health Service Management Lab	1
HSM 310	Health Personal	3
PSY 210	Introduction to Psychology	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**THIRD YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	HSM Restrictive Electives or ENT 3XX, DSC 3XX, HIM 3XX, MGT 3XX, MKG 3XX or FNC 3XX, ACC 3XX, MIS 3XX or BUS 3XX	3
XXX XXX	Humanities Electives**	3
MGT 365	Organizational Theory & Behavior	3
FNC 360	Corporate Finance and Applications	3
HIM 310	Current Trends in Health Delivery	3
HSM 311	Legal Aspects and Ethics of Health Care Delivery	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
HSM 454	Long Term Care Administration	3
XXX XXX	Labor Relations or Labor Laws and Legislation MGT 410, MGT 420, MGT 430, MGT 435, MGT 440, MGT 4XX, POS 4XX	3

**TOTAL HOURS REQUIRED 30**

\* CLM 165, CLS 150, CSC 169, CIT 150, FIA 180, or IMT 170 or CLS 165

\*\* ENG 38X, FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371, HRP 290, SOC 237, PSY 340, POS 315, MUS 301, Foreign Language, FIA 201

\*\*\* MGT 4XX, MKT 3XX, SWK 32X, HIM 3XX, HIM 4XX, MKT 4XX

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**B.S. in Health Services Management (cont'd)****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO XXXL or CHM XXXL or PHY XXXL	Lab Elective: Biology or Chemistry or Physical Science	1
XXX XXX	Free Elective	3
BIO 1XX or CHM XXX or PHY XXX	or any higher level Biology Chemistry or Physical Science Elective	3
HIM 120	Medical Terminology	3
HSM 331	Health Financial Management	4
HSM 451	Comprehensive Health Planning	3
HSM 494	Health Services Management Internship	6
XXX XXX	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 and Research or HIM 420	3
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

**SUMMARY OF GRADUATION REQUIREMENTS**

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Electives	75
Electives	3
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## B.S. in Medical Technology

**Dr. Mildred K. Fuller, Program Coordinator**  
(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, this 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 understood the technical standards of the Medical Technology Program, and I believe that I can and am prepared to meet these requirements.

## B.S. in Medical Technology (cont'd)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 110	General Biology	4
BIO 165	Human Anatomy and Physiology	3
BIO 165L	Human Anatomy and Physiology Lab	1
CHM 221	General Chemistry I	3
CHM 221L	General Chemistry I Lab	1
CHM 222	General Chemistry II	3
CHM 222L	General Chemistry II Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HRP 190	Introduction to Health Professions	3
MTH 151	College Algebra	3
MTH 153	College Algebra and Trigonometry	3
PED 100	Fundamentals of Fitness for Life PED XXX	1

**TOTAL HOURS REQUIRED 32**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 310	General Microbiology Iad	4
CHM 312	Organic Chemistry	3
CHM 312L	Organic Chemistry Lab	1
CSC 150	Computer Literacy	3
HIS 100	History of Civilization or HIS 101 or any General Education Social Sciences	3
HIS 335*	African American History	3
HUM 210	Humanities or any General Education Humanities	3
HUM 211	Humanities or any Concepts"	3
MTH 250	Elementary Statistics Concepts	3
SOC 101	Introduction to Social Science or any General Educations Social Sciences	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MDT 315	Clinical Hematology	4
MDT 325	Clinical Chemistry	4
MTH 373	Clinical Microbiology I	5
MTD 410	Immunology /Serology	4
MDT 425	Clinical Chemistry II	4
MDT 450	Clinical Hematology II	4
MDT 455	Immunohematology	4
MDT 473	Clinical Microbiology II	4

**TOTAL HOURS REQUIRED 33**

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
MDT 306	Phlebotomy	2
MDT 308	Urinalysis	2

**TOTAL HOURS REQUIRED 4**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MDT 395	Hematology/Coagulation Practicum	4
MDT 396	Immunohematology Seminar	4
MDT 475	Medical Technology Seminar	1
MDT 480	Clinical Laboratory Administration	2
MDT 495	Clinical Microbiology Practicum	4
MDT 496	Clinical Chemistry Practicum	4

**TOTAL HOURS REQUIRED 19**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education	41
Major Requirements	79

**TOTAL DEGREE HOURS REQUIRED 120**

*\*ENG 38X, FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 371, HIS 377, HRP 290, SOC 237, PSY 340, POS 315*

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## **Certificate Program in Health Services Management**

The Certificate in Health Services Management is designed for health care professionals who are seeking to improve their management, administrative, and leadership skills. The target audience for the Certificate Program: (1) persons already employed in the health care field with an associate or bachelor's degree; (2) persons currently in a managing position in the health care field or on a career path in the direction of health care management; and (3) persons interested in gaining knowledge of careers in the health care field.

Students wishing to pursue the Certificate in Health Services Management must do the following:

1. Apply for admission to the University;
2. Have a letter of recommendation from the prospective student's supervisor;
3. Have a current position in the health care field; or
4. Write a detailed statement of interest in health care management if not employed in the health care field; and
5. Take all semester credits applicable to the Certificate Program at Norfolk State University.

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### **COURSE WORK**

Courses are taught on-line and/or in the classroom.

- HSM 300 – Health Services Management (3 Credit Hours)
- HSM 310 – Health Personnel Management (3 Credit Hours)
- HSM 311 – Legal Aspects and Ethics of Health Care Delivery (3 Credit Hours)
- HSM 331 – Health Financial Management (4 Credit Hours)

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### **CONCENTRATION IN HEALTH SERVICES MANAGEMENT**

The concentration in Health Services Management is for students who have Interdisciplinary Studies as their major. Those students seeking a concentration in Health Services Management can take the Health Services Management core courses as directed by the department of Interdisciplinary Studies.



## B.A. in English - Communication Sciences and Disorders

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 not possible for those with only a bachelor's degree. An advanced degree (master's or doctorate) in speech-language pathology is required for employment in the U.S. for persons holding a state licensure and certification (CCC-SLP) by the American Speech-Language-Hearing Association.

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 105	Human Biology w/Lab	4
CSC 150	Computer Concepts and Use	3
ENG 101	Communication Skills I	3
UNI 101	Introduction to University Life	0
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I or HIS 101, 102, 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
HRP 190	Introduction to Health Professionals	3
MTH 105	Elementary Algebra	3
PED 100	Fundamentals of Fitness for Life	1
SOC 101	Introduction to Social Science	3

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 200	Advanced Computer Concepts	3
CSD 213	Computers and other Instrumentation in Communications Science and Disorders	1
CSD 218	Anatomy & Physiology/Speech Mechanism	3
HUM 210	Humanities I	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 II	3
MTH 250	Elementary Statistics Concepts	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSD 311	Methods & Materials in Communication Disorders	3
CSD 312	Phonological/ Articulatory & Language Disorders	3
CSD 211	Phonetics	3
CSD 212	Speech and Language Development	3
ENG 207	Introduction to World Literature	3
HUM 211	Humanities II	3
MTH 250	Elementary Statistics Concepts	3

**TOTAL HOURS REQUIRED 31**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 309	Human Behavior II	3

**TOTAL HOURS REQUIRED 30**

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## B.A. in English - Communication Sciences and Disorders (cont'd)

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSD 413	Research Methods in Com. Sciences and Disorders	3
CSD 414	Voice and Fluency Disorders	3
CSD 415	Clinical Practicum in Communication Disorders	
ENG 342	Survey of American Literature II African American Literature	3
ENG 383		3
CSD 416	Habilitation/Rehabilitation of Hearing Disorders	
CSD 417	Clinical Practicum in Communication Disorders II	
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 HOURS REQUIRED** **28**

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements (ENFL)	23
Concentration Requirements (CSD)	42
Cognate Electives	15

**TOTAL DEGREE HOURS REQUIRED** **120**

### AUDIOLOGY ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSD 314	Audiology and Hearing Sciences II	3
CSD 420	Differential Audiology	3

### HEALTH REHABILITATION SCIENCES CORE ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
HRS 120	Introduction to Health Rehabilitation and Related Services	1
HRS 220	Medical Aspects of Disability and Chronic Illness	3
HRS 230	Health Rehabilitation Technologies	2
HRS 320	Legal and Ethical Aspects of Health Rehabilitation	3
HRS 420	Psychosocial Aspects of Health Rehabilitation	3
HRS 430	Vocational Aspects of Health Rehabilitation	3
HRS 440	Case Management in Health Rehabilitation	3

## DEPARTMENT OF BIOLOGY

**Dr. Howard Duncan, Acting Department Head**  
**(757) 823-8512**

The Biology Department provides a diversity of career options through three 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 three 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 3, Pre-professional, which provides a background for students having an interest in medicine, dentistry, veterinary medicine, optometry, pharmacy, osteopathy, and podiatry.

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## BIOTECHNOLOGY CERTIFICATE

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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 who work 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 three 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.

## B.S. in Biology

### BIOLOGY 1 CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 110	General Biology I	4
BIO 111	General Biology II	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
MTH 151	College Algebra	3
MTH 153	College Algebra and Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 260	General Zoology	4
BIO 261	General Botany	4
BIO 271	Ecology or BIO 350	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
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 263	Vertebrate Embryology	4
BIO 270	Comparative Anatomy of Vertebrates	4
BIO 310	General Microbiology	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
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	African-American Elective from the Core*	6
XXX XXX	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
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

\* Select two (2) from ENG 383, FIA 170, HIS 335, or MUS 234

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	54
Restrictive Electives	24
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

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## Teacher Licensure Endorsement in Biology

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### BIOLOGY 2 CURRICULUM

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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).

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 233	Seminar in Assessment and Evaluation
SED 380	Foundations of Methods in Secondary Schools
SED 384	Teaching of Mathematics and Sciences in Secondary Schools
SED 486	Educational Psychology and Behavior Management
SED 499	Directed Teaching and Seminar

## B.S. in Biology - Pre-Professional

### BIOLOGY 3 CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 110	General Biology I	4
BIO 111	General Biology II	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I	3
HIS 101	History of World Societies II	3
MTH 151	College Algebra	3
MTH 153	College Algebra & Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 29**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 260	General Zoology	4
BIO 261	General Botany	4
BIO 271	Ecology or BIO 350	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
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
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Electives (nonrestrictive)	3
BIO 263	Vertebrate Embryology	4
BIO 270	Comparative Anatomy of Vertebrates	4
BIO 310	General Microbiology	4

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 HOURS REQUIRED 33**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS 335	African-American Elective from the Core* or FIA 170 or ENG 383 or MUS 234	3
BIO 351	Principles of Genetics	4
BIO 364	Seminar and Colloquium in Biology	1
BIO 459	General Physiology	4
CHM 431	Biochemistry I	3
CHM 431L	Biochemistry I Lab	1
CSC 150 or CSC 200	Computer Literacy or Advanced Computer Concepts	3
FIA 301	Art Appreciation or HUM 210 or MUS 301 or ENG 207	3
MTH 184	Calculus I	4

**TOTAL HOURS REQUIRED 26**

\* Select from ENG 383, FIA 170, HIS 335, or MUS 234

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	75
Non-restrictive Elective	3

**TOTAL DEGREE HOURS REQUIRED 120**



## Certificate Program in Biotechnology

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

COURSE NO.	COURSE TITLE
BIO 474	Molecular Biology: Three credit hours. Prerequisites- BIO 351 Principles of Genetics, BIO 310, CHM 222, CHM 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
BIO 469	Biochemistry I Lecture: Three credit hours; Prerequisites CHM 322 and
BIO 469L	Biochemistry I Laboratory: One credit hour; Prerequisites CHM 322L

#### OR

COURSE NO.	COURSE TITLE
CHM 431	Biochemistry I: Three credit hours. Prerequisites – CHM 322 and CHM 362
CHM 431L	Biochemistry I Laboratory; One credit hours. Prerequisites – CHM 322L or CHM 323L
CHM 432	Biochemistry II: Three credit hours. Prerequisites – CHM 322 and CHM 362
CHM 432L	Biochemistry II Laboratory: One credit hour. Prerequisites – CHM 322L or CHM 323L
CHM 481	Special Topics in Chemistry: Three credit hours. Prerequisites – Approval of Chemistry Department

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## Minor in Biology

Completion of a minor requires that a student earn a C (2.0) or better in each of the required courses. Substitutions are not possible for core courses.

### CORE COURSES

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 110	General Biology I	3
BIO 110L	General Biology Lab	1
BIO 111	General Biology II	3
BIO 111L	General Biology II Lab	1
BIO 260	General Zoology	3
BIO 260L	General Zoology Lab	1
BIO 261	General Botany	3
BIO 261L	General Botany Lab	1

### ADDITIONAL COURSE REQUIREMENTS

(CHOOSE TWO)

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 253	Human Physiology	3
BIO 272	Human Anatomy	3
BIO 272L	Human Anatomy Lab	1
BIO 278	Cell Biology	3
BIO 278L	Cell Biology Lab	1
BIO 310	General Microbiology	3
BIO 310L	General Microbiology Lab	3
BIO 351	Genetics	3
BIO 351L	Genetics Lab	1
BIO 4XX	BIO 459, 461, 469, 474, 495 or 499	3
BIO 4XXL	BIO 459L, 461L, 469L, 474L, 495L or 499L	1

**TOTAL DEGREE HOURS REQUIRED      19-21**

## 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), 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.

**B.S. in Chemistry****CURRICULUM****FIRST YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 221L	General Chemistry I Lab	1
CHM 222L	General Chemistry II Lab	1
CHM 223A	General Chemistry I	4
CHM 224A	General Chemistry II	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
PED 100	Fundamentals of Fitness for Life	1
PHY 152	General Physics I	3
PHY 152L	General Physics I Lab	1
UNI 101	Introduction to University Life	0

**TOTAL HOURS REQUIRED 30****SECOND YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 321	Organic Chemistry I	3
CHM 321L	Organic Chemistry I Lab	3
CHM 322	Organic Chemistry II	2
CHM 322L	Organic Chemistry II Lab	2
CHM 331	Analytical Chemistry I	3
CHM 331L	Analytical Chemistry I Lab	2
CHM 351	Seminar or CHM 352	1
CSC 170	Computer Programming	3
CSC 170L	Computer Programming Lab	1
MTH 251	Calculus II	4
MTH 252	Calculus III	4
PHY 153	General Physics	3
PHY 153L	General Physics Lab	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 32****THIRD YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 110	General Biology	3
BIO 110L	General Biology Lab	1
CHM 332	Analytical Chemistry II	3
CHM 332L	Analytical Chemistry II Lab	2
CHM 345	Math Methods and Logic	3
CHM 361	Physical Chemistry I	3
CHM 362	Physical Chemistry II	3
CHM 363L	Physical Chemistry Lab	2
XXX XXX	Elective	3
HIS XXX	History from the Core	3
SCM 285	Principles of Speech	3

**TOTAL HOURS REQUIRED 29****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Electives	3
CHM XXX	Chemistry (Restrictive Electives)*	6
XXX XXX	Cultural Elective from the Core	3
XXX XXX	Humanities from the Core	6
CHM 451	Seminar or CHM 452	1
CHM 473	Advanced Inorganic Chemistry	3
CHM 431	Biochemistry	3
SOC 101	Introduction to Social Science	3
CHM 497	Introduction to Research or CHM 498	1

**TOTAL HOURS REQUIRED 29**

\* Select 6 hours from 400 level Chemistry Electives. Maximum of 3 total hours of research

**SUMMARY OF GRADUATION REQUIREMENTS**

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	74
Electives	6

**TOTAL DEGREE HOURS REQUIRED 120**

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## Teacher Licensure Endorsement in Chemistry

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).

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 233	Seminar in Assessment and Evaluation
SED 380	Foundations of Methods in Secondary Schools
SED 384	Teaching of Mathematics and Sciences in Secondary Schools
SED 486	Educational Psychology and Behavior Management
SED 499	Directed Teaching and Seminar

## B.S. in Chemistry Pre-Medicine

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 221	General Chemistry I	4
CHM 222	General Chemistry II	4
CHM 221L	General Chemistry I Lab	1
CHM 222L	General Chemistry II Lab	1
PHY 152	General Physics I	3
PHY 152L	General Physics I Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
PED 100	Fundamentals of Fitness for Life	1
UNI 101	Introduction to University Life	0

**TOTAL HOURS REQUIRED 30**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
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
CHM 331	Analytical Chemistry I	3
CHM 331L	Analytical Chemistry I Lab	2
CSC 170	Computer Programming	3
CSC 170L	Computer Programming Lab	1
MTH 251	Calculus II	4
MTH 252	Calculus III	4
PHY 153	General Physics	3
PHY 153L	General Physics Lab	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
HIS XXX	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 HOURS REQUIRED 29**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO XXX	Biology Electives	7
XXX XXX	Cultural Elective from the Core	3
XXX XXX	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	Introduction to Social Science	3

**TOTAL HOURS REQUIRED 33**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	80
Electives	3

**TOTAL DEGREE HOURS REQUIRED 123**

## Five-Year Dual Degree: B.S. in Chemistry and M.S. in Materials Science

### CHEMISTRY CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 223	General Chemistry I	4
CHM 224	General Chemistry II	4
CHM 221L	General Chemistry I Lab	1
CHM 222L	General Chemistry II Lab	1
CSC 170	Computer Programming	3
CSC 170L	Computer Programming Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 153	College Algebra & Trigonometry	3
MTH 184	Calculus I	4
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED** 30

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SCM 285	Principles of Speech	3
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
CHM 331	Analytical Chemistry I	3
CHM 331L	Analytical Chemistry I Lab	2
MTH 251	Calculus II	4
MTH 252	Calculus III	4
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 29

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	History from the Core	3
XXX XXX	Chemistry Elective	2
XXX XXX	Humanities from the Core**	3
CHM 332	Analytical Chemistry II	3
CHM 332L	Analytical Chemistry II Lab	2
CHM 361	Physical Chemistry I	3
CHM 362	Physical Chemistry II	3
CHM 363L	Physical Chemistry Lab	2
CHM 345	Math Methods and Logic	3
MTH 372	Differential Equations	3
SOC 101	Introduction to Social Science	3

**TOTAL HOURS REQUIRED** 29

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective from the Core***	3
XXX XXX	Unrestrictive Elective	3
XXX XXX	Humanities from Core**	3
XXX XXX	Restrictive Chemistry Elective****	3
CHM 451	Seminar or CHM 452	1
CHM 473	Advanced Inorganic Chemistry	3
CHM 545	Math Methods	3
MATS 530	Materials Science	3
BIO 110	General Biology	4
PHY 356	Heat and Thermodynamics	3
PHY 580	Quantum Mechanics for Materials Science	3

**TOTAL HOURS REQUIRED** 32

\* Select one from: HIS 100, 101, 102, or 103

\*\* Select one from: HUM 210, 211, ENG 383, FIA 170, MUS 234

\*\*\* Select one from: HIS 335, 336, 370, 371, 377, ENG 383, PSY 340, SOC 237, POS 315, FIA 170, MUS 234

\*\*\*\* Select one from: CHM 431, 432, 431L, 432L, 473L, 475, 476, 481, 461L, 462L, 478, CHM 397, 398, 497, 498

Continue to next page →



## Five-Year Dual Degree: B.S. in Chemistry and M.S. in Materials Science (cont'd)

### MATERIALS SCIENCE CURRICULUM

#### SUMMER

COURSE NO.	COURSE TITLE	CREDIT HOURS
MATS 697	Research I	3
<b>TOTAL HOURS REQUIRED</b>		<b>3</b>

#### FIFTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MSE 533	Polymers and Polymer-Based Composites	3
XXX XXX	Technical Elective	3
XXX XXX	Technical Elective	3
MSE 535	Electronic and Optical Materials	3
MSE 575	Instrumentation for Materials Characterization	3
MATS 799	Thesis Research	3
XXX XXX	Technical Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

### TECHNICAL ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 573	Advanced Inorganic Chemistry	3
CHM 633	Molecular Dynamics	3
CHM 663	Atomic and Molecular Spectroscopy	3
PHY 653	Solid State Physics	3
PHY 675	Electricity and Magnetism	3
MATS 610	Special Topics	3
MATS 710	Special Topics	3

#### SUMMARY OF DUAL DEGREE REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	38
Major Requirements	86
Electives	29
<b>TOTAL DUAL DEGREE HOURS REQUIRED</b>	<b>153</b>

## DEPARTMENT OF COMPUTER SCIENCE

**Dr. George C. Harrison, 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)
- Applied Computing
- Computer Engineering
- Information Systems

Computer Science general and Computer Engineering option are also available for students enrolled in the DNIMAS Program.

The program addresses a number of career opportunities within the curriculum. The Applied Computing option is suitable for students who are interested in information technology applications especially networking and web design and management. 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.

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## Minor in Computer Science

A Computer Science Minor consists of the following 18 credit hours of required courses:

COURSE NO.	COURSE TITLE
CSC 170	Computer Programming I
CSC 260	Computer Programming II
CSC 268	Computer Organization
CSC 372	Data Structures
CSC 464	Operating Systems
CSC XXX	Elective at the 300 or 400 level

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### GENERAL DEPARTMENT REQUIREMENTS

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Computer Science majors must complete at least 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 a specialty in applied computing must receive a "C" grades or better in CIT and IMT courses, majors with a specialty in computer engineering must receive a "C" grade or better in all engineering courses, and majors with a 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, the content of which is pre requisite, or assumed knowledge, for a higher level course that a student has already completed.

## B.S. in Computer Science

The B.S. degree program in Computer Science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; Telephone: (410) 347-7700.

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CHM 221/221L or PHY 152/152L or BIO 110/110L	Chemistry I and Lab or Physics I and Lab or General Biology I and Lab	4
CHM 222	222L or PHY 153, 153L or BIO 111, 111L Chemistry II and Lab or Physics II and Lab or General Biology II and Lab	4
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
CSC 101	Introduction to the Computer Science Professions	1
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
CSC 260	Computer Programming II	3
CSC 260L	Computer Programming II Lab	1

**TOTAL HOURS REQUIRED 30**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Laboratory Science Elective (BIO 110, PHY 152, or CHM 221 and the corresponding Laboratory)	4
MTH 251	Calculus II	4
MTH 371	Discrete Mathematical Structures	4
ENG 303	Technical Writing	3
SCM 285	Principles of Speech	3
XXX XXX	Social Science Elective	3
CSC 268	Computer Organization	3
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness Life	1
CSC 292	Unix and C Programming	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 30**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 351	Probability and Statistics I	3
XXX XXX	Humanities or Foreign Languages	6
XXX XXX	Cultural Elective	3
CSC 295	Java Applications Programming	3
CSC 361	Survey of Programming Languages	3
CSC 372	Data Structures	3
CSC 380	Software Engineering	3
XXX XXX	Computer Science Electives (300 or above)	6

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Computer Science Electives (300 Level or above)	6
XXX XXX	Computer Science or Mathematics Elective (300 level or above)	3
MTH XXX	Mathematics Elective(300 level or above)	3
XXX XXX	Social Science Elective	3
CSC 430	Data Communication	3
CSC 464	Operating Systems	3
CSC 468	Computer Architecture	3
CSC 498	Computer Science Seminar I	1
CSC 499	Computer Science Seminar II	2
XXX XXX	Free Elective	3

**TOTAL HOURS REQUIRED 30**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	75
General Elective	3

**TOTAL DEGREE HOURS REQUIRED 120**

## B.S. in Computer Science – Applied Computing

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CSC 101	Introduction to the Computer Science Profession	1
CSC 111	Information Technology Principles	3
CSC 170/170L	Computer Programming I and Lab	4
CSC 260/260L	Computer Programming II and Lab	4
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
XXX XXX	Social Science Elective	3
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal and Community Health	2
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Laboratory Sciences: One sequence of Biology (BIO 110/110L and BIO 111/111L), Chemistry (CHM 221/221L and CHM 222/222L), or Physics (PHY 152/152L and PHY 153/153L)	8
CSC 195	Introduction to Internet Programming	3
CSC 211	Information Technology Operating Systems	3
CSC 268	Computer Organization	3
CSC 311	Fundamentals of Networking	3
CSC 360	User Interface Design	3
XXX XXX	Concentration Elective (see below)	3
MTH 371	Discrete Mathematical Structures	4
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 380	Software Engineering	3
CSC 420	Database Principles and Design	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 435	Computer Security I	3
XXX XXX	Two Concentration Electives (see below)	6
MTH 250	Elementary Statistics Concepts	3
IMT 244	Industrial Specifications and Technical Documentation	3
SCM 285	Principles of Speech	3
XXX XXX	Humanities Elective	3
XXX XXX	Free Elective	2

**TOTAL HOURS REQUIRED 29**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 498	Senior Seminar I	1
CSC 499	Senior Seminar II	2
XXX XXX	CSC Elective (300 level or above)	3
XXX XXX	Two Concentration Electives (see below)	6
IMT 303	Internship in Technology	3
IMT 413	Project Management	3
XXX XXX	Humanities Elective	3
XXX XXX	Cultural Elective	3
XXX XXX	Social Science Elective	3
XXX XXX	Free Elective	3

**TOTAL HOURS REQUIRED 30**

### CONCENTRATION ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
FIA 260	Introduction to Graphics Design	3
MIS 410	Systems Analysis and Design	3
CSC 292	UNIX and C Programming	3
CSC 312	Topics in Information Technology	3
CSC 313	Network Administration	3
CSC 314	Advanced Internet Programming	3
CSC 411	Web Server Administration	3
CSC 422	Database Implementation	3
CSC 432	Wireless Data Networking	3
CSC 445	Computer Network Defense	3
CIT 336L	Computer Network Technology Lab	1
CIT 436/436L	Computer Network Technology II and Lab	4

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	73
Free Electives	5
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## B.S. in Computer Science – Computer Engineering

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 110/110L or CHM 221/221L		4
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
CSC 101	Introduction to the Computer Science Profession	1
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
CSC 260	Computer Programming II	3
CSC 260L	Computer Programming II Lab	1
XXX XXX	Social Science Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 201/201L	Elect Network Theory I and Lab	4
PHY 160/160L and PHY 161/161L	University Physics I & II	10
MTH 251	Calculus II	4
MTH 252	Calculus III	4
SCM 285	Principles of Speech	3
CSC 268	Computer Organization	3
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal & Community Health	2
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 301/301L	Engineering Electronics I and Lab	4
MTH 351	Probability and Statistics	3
MTH 371	Discrete Mathematical Structures	4
MTH 372	Differential Equations	3
ENG 303	Technical Writing	3
XXX XXX	Humanities or Foreign Language	6
CSC 292	Unix and C Programming	3
CSC 361	Survey of Programming Language	3
CSC 372	Data Structures	3
CSC 380	Software Engineering	3
<b>TOTAL HOURS REQUIRED</b>		<b>35</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 231	Digital Logic Design	3
EEN XXX	EEN Elective 300 level or above	3
XXX XXX	Cultural Elective	3
XXX XXX	Social Science Elective	3
CSC 295	Java Application Programming	3
CSC 430	Data Communications	3
CSC 464	Operating Systems	3
CSC 468	Computer Architecture	3
CSC 498	Computer Science Seminar I	1
CSC 499	Computer Science Seminar II	2
CSC XXX	Computer Science Elective 300 level or above	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	83
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>125</b>

## B.S. in Computer Science – Information Systems

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CHM 221/221L or PHY 152/152L or BIO 110/110L	Chemistry I and Lab or Physics I and Lab or General Biology I and Lab	4
CHM 222/222L or PHY 153/153L or BIO 111/111L	Chemistry II and Lab or Physics II and Lab or General Biology II and Lab	4
MTH 153	College Algebra and Trigonometry	3
MTH 184	Calculus I	4
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
CSC 101	Introduction to Computer Science Profession	1
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
CSC 260	Computer Programming II	3
CSC 260L	Computer Programming II Lab	1
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Laboratory Science Elective (BIO 110, PHY 152, or CHM 221 and the corresponding Laboratory)	4
MTH 251	Calculus II	4
MTH 371	Discrete Mathematical Structures	4
ENG 303	Technical Writing	3
SCM 285	Principles of Speech	3
PSY 210	Introduction to Psychology	3
CSC 268	Computer Organization	3
CSC 292	Unix and C Programming	3
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal & Community Health	2
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 351	Probability and Statistics I	3
XXX XXX	Humanities or Foreign Language	6
XXX XXX	Business Electives (see list below)	6
CSC 295	Java Applications Programming	3
CSC 361	Survey of Programming Languages	3
CSC 372	Data Structures	3
CSC 380	Software Engineering	3
MTH 352 or MTH 384	Probability and Statistics II or Math Modeling for the Sciences	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
XXX XXX	Social Science Electives	6
MIS 410	Systems Analysis	3
CSC 420	Database Principles and Design	3
CSC 422	Database Implementation	3
CSC 430	Data Communications	3
CSC 464	Operating Systems	3
CSC 468	Computer Architecture	3
CSC 498	Computer Science Seminar I	1
CSC 499	Computer Science Seminar II	2

**TOTAL HOURS REQUIRED 30**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	75
Free Electives	3

**TOTAL DEGREE HOURS REQUIRED 120**

Continue to next page →



**B.S. in Computer Science – Information Systems (cont'd)**

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**BUSINESS ELECTIVES**

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COURSE NO.	COURSE TITLE
ACC 201	Principles of Accounting I
ACC 202	Principles of Accounting II
MGT 365	Organizational Behavior and Theory
MKG 366	Principles of Marketing
DSC 370	Total Quality Management

## DEPARTMENT OF ENGINEERING

**Dr. Kyo D. Song, Department Head**  
**(757) 823-2692**

The Department of Engineering at Norfolk State University offers B.S. and M.S. degrees in Electronics Engineering and Optical Engineering. The Department's Engineering Advisory Board is composed of national leaders from government, universities, and industry. The Advisory Board provides vision and insight for all departmental initiatives conducted by the faculty.

The Department of Engineering offers its students curricula that focus on key concepts and developments in the Electronics and Optical engineering fields.

The B.S. and M.S. degree programs allow students exciting opportunities to conduct research at major research facilities, both nationally and internationally. Areas of research include gaming, image processing, microelectronics, modeling and simulation, nanotechnology, optoelectronics, and quantum optics.

The mission of the Department of Engineering is to empower students with the knowledge, skills, and abilities needed for successful professional careers in engineering; to encourage innovation, creativity and an entrepreneurial spirit; to instill a sense of community responsibility; and to develop leaders for a technology-driven global society.

In order to provide the best possible undergraduate education, the Department embraces the standards established by ABET, the sole accrediting agency for engineering programs in the United States. The B.S. programs in Electronics Engineering and Optical Engineering will be evaluated in the fall of 2007 for full ABET accreditation and final ABET determination will be available in July 2008.

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### GENERAL DEPARTMENT REQUIREMENTS

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All students must complete the University's general education requirements to qualify for the Bachelor of Science degree. Additionally, the department requires that all majors:

- meet prerequisites or their equivalents before enrolling in engineering courses;
- earn a grade of "C" or better in all mathematics, science and engineering courses; and,
- complete a senior design project.



## B.S. in Electronics Engineering

### EDUCATIONAL OBJECTIVES

The program's educational objectives are that the Norfolk State University Electronics Engineering faculty will provide a state-of-the-art electronics engineering education capable of producing engineers that can:

- apply knowledge in science and engineering disciplines to make sound scientific decisions and devise innovative solutions related to contemporary issues;
- clearly communicate their ideas to the technical community and to broader audiences;
- function successfully in multidisciplinary and diverse professional environments; be successful in leadership and in team oriented settings;
- be ethically responsible and cognizant of the societal implications of their actions; and,
- continue their education in graduate school programs and pursue life-long learning.

### CURRICULUM

The B.S. degree program in Electronics Engineering provides emphasis in digital and analog networks, communications and control systems. The curriculum is designed to give students a thorough knowledge of the methods of design, application, and analysis of electronic systems

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 100	Introduction to Engineering	3
EEN 102*	Engineering Use of Computers	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
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 I Laboratory	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Laboratory	1
UNI 101	Introduction to University Life	0

**TOTAL HOURS REQUIRED 33**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
XXX XXX	Social Sciences from the Core	3
EEN 201	Electrical Network Theory I	3
EEN 201L	Electrical Network Theory I Laboratory	1
EEN 202	Electrical Network Theory II	3
EEN 202L	Electrical Network Theory II Laboratory	1
EEN 211	Materials Science and Engineering	3
EEN 231	Digital Logic Design	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 210*	General Chemistry for Engineers	3
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 33**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
EEN 301	Engineering Electronics I	3
EEN 301L	Engineering Electronics I Laboratory	1
EEN 302	Engineering Electronics II	3
EEN 302L	Engineering Electronics II Lab	1
EEN 305	Signals and Systems	3
EEN 321	Electromagnetic Field Theory	3
EEN 331	Microprocessors	3
EEN 331L	Microprocessors Laboratory	1
EEN 333	Digital Integrated Circuits	3
EEN 333L	Digital Integrated Circuits Laboratory	1
EEN 351	Communications Engineering	3
MTH 300	Linear Algebra	3
MTH 351E	Probability and Statistics I	3

**TOTAL HOURS REQUIRED 34**

Continue to next page →

**B.S. in Electronics Engineering (cont'd)****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Social Sciences from the Core	3
EEN 401	Electronics Engineering Seminar	1
EEN 411	Engineering Economics	3
EEN 471	Control Systems	3
EEN 498	Senior Project I	3
EEN 499	Senior Project II	3
XXX XXX	Cultural Elective	3
XXX XXX	Engineering Elective	3
XXX XXX	Technical Elective	3
XXX XXX	Unrestrictive Elective*	3
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

\*Substitutes for General Education Core Requirements

**SUMMARY OF GRADUATION REQUIREMENTS**

SUBJECT AREA	CREDIT HOURS
General Education Requirements including Cultural and Unrestricted Electives	42
Major Requirements including Math and Science	80
Engineering and Technical Electives	6

**TOTAL DEGREE HOURS REQUIRED      128**

The Technical Elective may be chosen from 300 or above level courses in math, computer science, chemistry, physics or engineering.

## B.S. in Optical Engineering

### EDUCATIONAL OBJECTIVES

The Optical Engineering program's educational objectives are that the Norfolk State University faculty will implement best practices and state-of-the-art pedagogies to produce well rounded engineers who are competitive in the market place and prepared to continue their education beyond the undergraduate level. Norfolk State University Optical Engineering graduates will be prepared for optical science and engineering careers. They will have the knowledge and skills to achieve leadership positions in a technological and global society. Our graduates will exhibit the following characteristics:

- strong analytical and engineering design skills;
- effective team skills and a team oriented perspective;
- strong communication skills in technical and public arenas;
- a strong sense of professional and ethical responsibility; and,
- respect for and appreciation of diversity with a global perspective.

### CURRICULUM

The Optical Engineering program was established in Fall 2003 for the purpose of addressing diversity and high-tech workforce needs in Hampton Roads, the State of Virginia and the United States. The curriculum offers emphasis in optical materials, photonics, optoelectronics, and optical communications. There is a five-year B.S./M.S. degree option.

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 100	Introduction to Engineering	3
EEN 102*	Engineering Use of Computers	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal and Community Health	2
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 I Laboratory	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Laboratory	1
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
EEN 201	Electrical Network Theory I	3
EEN 201L	Electrical Network Theory I Laboratory	1
EEN 203	Electronic Principles	3
EEN 211	Materials Science and Engineering	3
OEN 200	Geometric and Instrumentation Optics	3
OEN 200L	Geometric and Instrumentation Optics Laboratory	1
OEN 201	Physical and Instrumentation Optics	3
OEN 201L	Physical and Instrumentation Optics Laboratory	1
CHM 210*	General Chemistry for Engineers	3
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>34</b>

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## B.S. in Optical Engineering (cont'd)

### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
XXX XXX	Social Sciences from the Core	3
EEN 321	Electromagnetic Field Theory	3
OEN 320	Optical Systems Analysis	3
OEN 340	Lasers and Photonics	3
OEN 340L	Lasers and Photonics Laboratory	1
OEN 360	Introduction to Optical Materials	3
OEN 380	Introduction to Quantum Optics	3
MTH 300	Linear Algebra	3
MTH 351E	Probability and Statistics I	3
XXX XXX	Cultural Elective	3

**TOTAL HOURS REQUIRED 31**

### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Social Sciences from the Core	3
EEN 411	Engineering Economics	3
OEN 460	Optical Communications I	3
OEN 460L	Optical Communications I Laboratory	1
OEN 461	Optical Communications II	3
OEN 461L	Optical Communications II Laboratory	1
OEN 490	Senior Seminar	1
OEN 498	Senior Project I	3
OEN 499	Senior Project II	3
XXX XXX	Engineering Elective	3
XXX XXX	Technical Elective	3
XXX XXX	Unrestrictive Elective	3

**TOTAL HOURS REQUIRED 30**

*\*Substitutes for General Education Core Requirements*

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements including Cultural and Unrestricted Electives	42
Major Requirements including Math and Sciences	80
Engineering and Technical Electives	6
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>128</b>

The Technical Elective may be chosen from 300 level or above courses in math, computer science, chemistry, physics or engineering.

## Five-Year Dual Degree: B.S. and M.S. in Optical Engineering

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
EEN 100	Introduction to Engineering	3
EEN 102*	Engineering Use of Computers	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
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 I Laboratory	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Laboratory	1
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
EEN 201	Electrical Network Theory I	3
EEN 201L	Electrical Network Theory I Laboratory	1
EEN 203	Electronic Principles	3
EEN 211	Materials Science and Engineering	3
OEN 200	Geometric and Instrumentation Optics	3
OEN 200L	Geometric and Instrumentation Optics Laboratory	1
OEN 201	Physical and Instrumentation Optics	3
OEN 201L	Physical and Instrumentation Optics Laboratory	1
*CHM 210	General Chemistry for Engineers	3
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
SCM 285	Principles of Speech	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>34</b>

#### SUMMER

COURSE NO.	COURSE TITLE	CREDIT HOURS
OEN 297	Summer Research	3

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities from the Core	3
XXX XXX	Social Sciences from the Core	3
**EEN 321	Electromagnetic Field Theory	3
**OEN 320	Optical Systems Analysis	3
**OEN 340	Lasers and Photonics	3
**OEN 340L	Lasers and Photonics Laboratory	1
**OEN 360	Introduction to Optical Materials	3
**OEN 380	Introduction to Quantum Optics	3
MTH 300	Linear Algebra	3
MTH 351E	Probability and Statistics I	3
XXX XXX	Cultural Elective	3

**TOTAL HOURS REQUIRED 31**

#### SUMMER

COURSE NO.	COURSE TITLE	CREDIT HOURS
OEN 397	Summer Research	3

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Social Sciences from the Core	3
EEN 411	Engineering Economics	3
**OEN 460	Optical Communications I	3
**OEN 460L	Optical Communications I Laboratory	1
**OEN 461	Optical Communications II	3
**OEN 461L	Optical Communications II Laboratory	1
OEN 490	Senior Seminar	1
OEN 498	Senior Project I	3
OEN 499	Senior Project II	3
XXX XXX	Engineering Elective	3
XXX XXX	Technical Elective	3
XXX XXX	Unrestrictive Elective	3

**TOTAL HOURS REQUIRED 30**

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## Five-Year Dual Degree: B.S. and M.S. in Optical Engineering (cont'd)

### FIFTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MSE 535	Electronic and Photonic Materials Engineering	3
MSE 575	Basic Instrumentation for Materials Science	3
OEN 630	Opto-Electronic Devices	3
OEN 690	Applied Optics Research Seminar	3
OEN 699	Master's Thesis	6
PHY 653	Solid State Physics	3
XXX XXX	Graduate Electives	6
<b>TOTAL HOURS REQUIRED</b>		<b>27</b>

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements including Cultural and Unrestricted Electives	42
Major Requirements including Math and Sciences	80
Undergraduate Engineering and Technical Electives	6
Summer Research	6
Graduate Courses and Electives	27
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>161</b>

*\*Substitutes for General Education Core Requirements*  
*\*\* Must earn a grade of B or better*

To maintain standing in the five-year B.S./M.S. Optical Engineering Program, students must maintain a GPA of 3.0, or above, in all semesters, and must receive a grade of B, or above, in the core courses (marked with a double asterisk (\*\*) above).

The Technical Elective may be chosen from 300 level or above courses in math, computer science, chemistry, physics or engineering.

## DEPARTMENT OF MATHEMATICS

**Dr. Mushtaq Khan, 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 such 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.

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### FACILITIES

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The Department maintains a Mathematics Resource Center (BMH C-227) for students enrolled in entry level mathematics courses.

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### GENERAL DEPARTMENT REQUIREMENTS

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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 complete the prerequisites or their equivalents prior to enrolling in more advanced mathematics courses.
2. Mathematics majors 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 pass a comprehensive examination covering the content of the core mathematics courses.

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### PROGRAMS OF STUDY

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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.

## B.S. in Applied Mathematics

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100	Biological Science	3
BIO 100L	Biological Science Lab	1
CSC 169	Introduction to Computer Science	3
CSC 170	Computer Programming	3
CSC 170L	Computer Programming Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
MTH 184	Calculus I	4
MTH 251	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 152	General Physics I	3
PHY 152L	General Physics I Lab	1
UNI 101	Introduction to University Life	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Computer Programming Electives (200 Level)	6
XXX XXX	Science Elective (200 Level or above)	3
ENG 203/303	Advanced Communication Skills	3
MTH 252	Calculus III	4
MTH 300	Linear Algebra	3
MTH 372	Differential Equations	3
MTH 373	Advanced Vector Calculus	3
PHY 153	General Physics II	3
PHY 153L	General Physics II Lab	1
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Applied Electives	6
XXX XXX	General Electives	2
HIS 1XX	History Elective	3
HUM 210	Humanities	3
HUM 211	Humanities	3
MTH 331	Algebraic Structures	3
MTH 351	Probability and Statistics I	3
MTH 352	Probability and Statistics II	3
SOC 101	Introduction to Social Science	3
<b>TOTAL HOURS REQUIRED</b>		<b>29</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Applied Electives	9
XXX XXX	Cultural Elective	3
XXX XXX	General Elective	5
MTH 401	Numerical Analysis I	3
MTH 473	Introduction to Real Analysis	3
MTH 496	Mathematics Seminar	2
MTH 497	Mathematics Seminar	2
SCM 285	Principles of Speech	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	56
Math Restricted Electives	15
General Electives	7
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

#### ELECTIVES

*NOTE: Students will take 15 hours of applied electives as indicated.*

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)

## Teacher Certification Program in Mathematics

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 100/100L	Biological Science & Lab	4
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
UNI 101	Introduction to University Life	0
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
XXX XXX	General Electives	2
MTH 184	Calculus I	4
MTH 251	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 152	General Physics	3
PHY 152L	General Physics Lab	1

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 203	Advanced Communication Skills	3
HIS 1XX	History Elective	3
HUM 210	Humanities I	3
HUM 211	Humanities II	3
MTH 242	History of Mathematics	3
MTH 252	Calculus III	4
MTH 300	Linear Algebra	3
MTH 372	Differential Equations	3
SED 201	American Schools and Teaching Profession	3
SOC 101	Introduction to Sociology	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
MTH 311	Modern Geometry	3
MTH 351	Probability and Statistics	3
MTH 331	Algebraic Structures	3
MTH 310	Discrete Mathematics	3
MTH 3XX	Mathematics Elective	3
SED 380	Foundation of Methods in Secondary Schools	3
SED 384	Teaching in Mathematics in Secondary Schools	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
SED 405	Reading in the Content Areas	3
CSC 2XX	Computer Science Elective	3
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 4XX	Mathematics Elective	3
MTH 496 & 497	Mathematics Seminar	4
SCM 285	Principles of Speech	3
SED 420	Educational Technology	3
SED 486	Educ. Psychology and Behavior Management	3
SED 499	Directed Teaching	12
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	42
Major Requirements	40
Professional Education Requirements	18
Student Teaching/Field Experiences	12
Math Restricted & General Electives	8
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

#### RECOMMENDED MATHEMATICS ELECTIVES

COURSE NO.	COURSE TITLE
MTH 323	Number Theory
MTH 352	Probability & Statistics II
MTH 373	Advanced Vector Calculus
MTH 384	Mathematics Modeling
MTH 401	Numerical Analysis
MTH 431	Abstract Algebra
MTH 473	Real Analysis

*NOTE: Students must pass the PRAXIS I Exam prior to taking 300 & 400 level SED courses. Students who have not passed PRAXIS I must enroll in SED 233, Critical Thinking and Assessment.*

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## Teacher Licensure Endorsement in Mathematics

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.
5. Take the PRAXIS test and make a passing score. (See the School of Education PRAXIS coordinator)
6. Take the following professional education courses (18 semester hours) plus student teaching (12 semester hours).

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 380	Foundations of Methods in Secondary Schools
SED 384	Teaching in Math and Science in Secondary Schools
SED 405	Reading in Content Area
SED 420	Educational Technology
SED 486	Educational Psychology and Behavior Management

## Dual Degree in Mathematics

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

1. **Complete Primary Degree Requirements** (*Minimum of 120 Semester Hours*)
2. **Complete Dual Mathematics Requirements** (*30 Semester Hours*)

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 184	Calculus I	4
MTH 251	Calculus II	4
MTH 252	Calculus III	4
MTH 300	Linear Algebra	3
MTH 351	Probability and Statistics I	3
MTH 372	Differential Equations	3
MTH 373	Advanced Vector Calculus (or MTH 310 Discrete Mathematics)	3

#### MATHEMATICS ELECTIVES

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 310 or 331 or 352 or 382 or 384		3
MTH 401 or 431 or 451 or 473 or 484		3

3. **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 DUAL DEGREE HOURS REQUIRED**

**150**

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## Minor in Mathematics

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### CURRICULUM

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#### CORE

COURSE NO.	COURSE TITLE	CREDIT HOURS
MTH 252	Calculus III	4
MTH 351	Probability and Statistics I	3
MTH 372	Differential Equations	3

**TOTAL HOURS REQUIRED** 10

#### ELECTIVES

Choose any 2 courses from MTH 3XX or MTH 4XX. Some suggestions are:

COURSE NO.	COURSE TITLE	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 401	Numerical Analysis I	3

**TOTAL HOURS REQUIRED** 6

**TOTAL DEGREE HOURS REQUIRED** 16



## DEPARTMENT OF NURSING

**Dr. 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 (61 Broadway-33<sup>rd</sup> Floor, New York City, NY, 10006; 800-669-1656) 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 three semesters. The Bachelor of Science (BSN) degree is designed as an upper-level program for individuals who have associate degrees or diplomas in nursing, a second degree BSN track 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.

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### POLICIES

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Specific policies related to grading, promotion, and retention in the program are delineated in the Student Handbook.

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### CRITERIA FOR READMISSION

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Readmission is competitive and is granted on a space available basis. A Letter of Request for Readmission should be addressed to the Admissions Coordinator. The Admissions, Promotion, and Retention Committee makes recommendations for readmission. The final decision to grant readmission to the nursing program, however, rests with the Department Chairperson.

## Associate Degree in Nursing

### ADMISSION CRITERIA

Admission to the Associate Degree Nursing sequence is competitive. Accepted applicants must meet the following minimal criteria:

1. Admission to the University on or before February 1<sup>st</sup> prior to the Fall semester of desired entry into the nursing sequence.
2. Submission of a separate application for admission to the Nursing Department on or before February 1<sup>st</sup>.
3. Completion of 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" (2.0) is required for each course.
4. A cumulative grade point average of 2.5 or better in high school or college work.

### CURRICULUM

#### FIRST YEAR - FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 165/165L	Human Anatomy & Physiology	4
ENG 101	Communication Skills I	3
NUR 150	Fundamental Concepts of Nursing*	4
NUR 150L	Fundamental Concepts of Nursing Lab	3
NUR 153	Fundamental Pharmacology Skills	4

**TOTAL HOURS REQUIRED 18**

#### FIRST YEAR - SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 166/166L	Human Anatomy & Physiology	4
NUR 160	Clinical Nursing I**	3
NUR 160L	Clinical Nursing I Lab	4
PSY 210	General Psychology	3
ENG 102	Communication Skills II	3

**TOTAL HOURS REQUIRED 17**

#### FIRST YEAR - SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 170	Care of the Individual	3
CSC 150	Computer Literacy	3

**TOTAL HOURS REQUIRED 6**

#### SECOND YEAR – FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 163/163L	Microbiology for Health Sciences	4
NUR 275/L	Clinical Nursing II/Lab	9
PSY 228 or PSY 220	Developmental Psychology or Child Development	3

**TOTAL HOURS REQUIRED 16**

#### SECOND YEAR – SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
SOC 110	Introduction to Sociology	3
NUR 272	Contemporary Trends in Nursing Practice	1
NUR 285	Clinical Nursing III	4
NUR 285L	Clinical Nursing III Lab	5
NUR 287	Seminar	2
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 15**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	30
Major Requirements	42

**TOTAL DEGREE HOURS REQUIRED 72**

## Associate Degree in Nursing – LPN to ADN

### ADMISSIONS CRITERIA

Admission to the LPN to Associate Degree Nursing sequence is competitive. Accepted applicants must meet the following minimal criteria:

1. Admission to the University on or before December 1<sup>st</sup>, prior to the summer session of desired entry into the nursing sequence.
2. Submission of a separate application for admission to the Nursing Department on or before December 1<sup>st</sup>.
3. Completion of 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" (2.0) is required in each course.
4. A cumulative grade point average of 2.5 or better in high school or college work.

### OPTION I CURRICULUM

NOTE: Three Semesters and One Summer Session - 16 Months

SUBJECT AREA	CREDIT HOURS
Advanced Placement Credits	18

#### FIRST YEAR - SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 165/165L	Human Anatomy & Physiology	4
ENG 101	Communication Skills I	3
PSY 210	Introduction to Psychology	3
SOC 110	Introduction to Sociology	3
CSC 150	Computer Concepts	3

**TOTAL HOURS REQUIRED 16**

#### FIRST YEAR - SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 166/166L	Human Anatomy & Physiology	4
NUR 199	LPN-RN Bridge	3
PSY 228L or PSY 220	Human Growth & Development or Child Psychology	3

**TOTAL HOURS REQUIRED 10**

#### SECOND YEAR – FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 163/163L	Microbiology for Health Sciences/Lab	4
NUR 275/L	Clinical Nursing II/Lab	9
ENG 102	Communications Skills	3

**TOTAL HOURS REQUIRED 16**

#### SECOND YEAR – SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 272	Contemporary Trends in Nursing Practice	1
NUR 285	Clinical Nursing III	4
NUR 285L	Clinical Nursing III Lab	5
NUR 287	Seminar	2
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 12**

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	30
Major Requirements	42

**TOTAL DEGREE HOURS REQUIRED 72**

## Associate Degree in Nursing – LPN to ADN (cont'd)

### OPTION II CURRICULUM

NOTE: Four Semesters = 16 Months

SUBJECT AREA	CREDIT HOURS
Advanced Placement Credits	18

#### FIRST YEAR – SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BIO 165/165L	Human Anatomy & Physiology/Lab	4
CSC 150	Computer Literacy	3
ENG 101	Communication Skills I	3
PSY 210	Introduction to Psychology	3
SOC 110	Introduction to Sociology	3
<b>TOTAL HOURS REQUIRED</b>		<b>16</b>

#### FIRST YEAR - SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 166/166L	Human Anatomy and Physiology/Lab	4
ENG 102	Communications Skills	3
NUR 199	LPN-RN Bridge	3
<b>TOTAL HOURS REQUIRED</b>		<b>10</b>

#### SECOND YEAR - FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
BIO 163/163L	Microbiology for the Health Sciences/Lab	4
NUR 275	Clinical Nursing II	4
NUR 275L	Clinical Nursing II Lab	5
PSY 228	Human Growth & Development or	3
PSY 220	Child Psychology	
<b>TOTAL HOURS REQUIRED</b>		<b>16</b>

#### SECOND YEAR – SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 272	Contemporary Trends	1
NUR 285	Clinical Nursing III	4
NUR 285L	Clinical Nursing III Lab	5
NUR 287	Seminar	2
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

SUBJECT AREA	CREDIT HOURS
Advanced Placement Credits	18
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>72</b>

## B.S. in Nursing -- RN to BSN

### ADMISSION CRITERIA

Admission to the Upper-level Baccalaureate Program in Nursing is competitive and open to all qualified applicants. The minimal admission requirements are:

1. Admission to the University by February 1<sup>st</sup> for fall admission; August 1<sup>st</sup> for January admission.
2. Submission of a separate application for admission to the Nursing Department on or before February 1<sup>st</sup> for fall admission; August 1<sup>st</sup> for January admission.
3. A cumulative grade point average of 2.5 and "C" in the following courses: Chemistry, Anatomy and Physiology and Microbiology.
4. Completion of pre-requisite courses or credit by examination (CLEP or ACT).
5. Receipt of official transcript(s) from previously attended college(s).
6. Current license to practice as a registered nurse in the Commonwealth of Virginia.
7. Two units of Math, one of which must be algebra: A minimum grade of "C" in both courses.

### PREREQUISITE COURSES

SUBJECT AREA	CREDIT HOURS
Introduction to University Life	0
Computer Concepts	3
Communication Skills	6
Introduction to Psychology	3
Human Growth and Development or Child Psychology	3
Introductory to Sociology	3
Human Anatomy and Physiology	8
Microbiology	4
<i>Subtotal</i>	
General Education Requirements	30
Lower-level Nursing Courses	37
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>67</b>

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## Upper-Level Baccalaureate Program in Nursing (RN – BSN) (cont'd)

### CURRICULUM

#### JUNIOR YEAR – FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
HUM 210; or HUM 211	Humanities or FIA 201 or MUS 401 or REL 110 or LOG 210	3
BIO 320	Pathophysiology	3
MTH 250	Statistics or PSY 270 or SOC or 355	3
SCM 285	Principle of Speech	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### JUNIOR YEAR – SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	African-American Perspectives	3
XXX XXX	Humanities	3
ECN 211 or POS 230	Principles of Microeconomics or American Public Policy	3
HIS 100	History of World Societies I or HIS 101, 102, or HIS 103	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### SENIOR YEAR – FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 321	Multiculturalism /Bioethics	3
NUR 415	Health Assessment*	3
NUR 418	Conceptual Models for Nursing	3
XXX XXX	Free Elective (300-400 Level)	3
NUR 461	Nursing Research Dimensions	3
<b>TOTAL HOURS REQUIRED</b>		<b>15</b>

#### SENIOR YEAR – SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 435	Providing Complex Nursing Systems for Families and Groups	3
NUR 435L	Providing Complex Nursing Systems for Families and Groups Lab	2
NUR 462	Nursing Leadership and Management	3
NUR 470	Nursing Seminar in Professional Development	3
NUR 485	Contemporary Topics in Nursing & Health Care	3
<b>TOTAL HOURS REQUIRED</b>		<b>14</b>

**TOTAL HOURS REQUIRED 14**

**TOTAL DEGREE HOURS REQUIRED 120**

*\*RNs may take NUR 415 and NUR 321 prior to being admitted to the nursing program. If the RN matriculates in the program, the credits will be applied to the degree.*

## B.S. in Nursing – Second Degree

### ADMISSION CRITERIA

Admission to the Second Degree Baccalaureate Degree Program is competitive and open to qualified students. The minimal admission criteria are:

1. Completion of an undergraduate or higher degree;
2. Admission to the University by December 1 for summer session, and August 1 for January session.
3. Submission of a separate application for admission to the Nursing Department on or before December 1 for summer session, and August 1<sup>st</sup> for January session.
4. A cumulative grade point average of 2.5 and a grade of "C" in the following courses: Chemistry, Anatomy and Physiology, Microbiology and Pathophysiology.
5. Receipt of official transcript(s) from previously attended college(s).
6. Completion of prerequisite courses or credit by examination (CLEP, ACT-PEP).
7. Two units of math, one of which must be algebra. A minimum grade of "C" is required in both courses.

### PREREQUISITE COURSES

SUBJECT AREA	CREDIT HOURS
Communication Skills	9
Introduction to University Life	0
Humanities	6
African-American Perspectives	3
Fundamental Pharmacological Skills	4
Anatomy and Physiology	8
Microbiology	4
Economics or American Public Policy	3
Statistics	3
Computer Concepts	3
History	3
General Psychology	3
Human Growth and Development or Child Psychology	3
Sociology	3
Pathophysiology	3
<i>Subtotal</i>	
General Education	58
Major Credits	15
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>73</b>

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## B.S. in Nursing – Second Degree (cont'd)

### FULL-TIME DAY CURRICULUM

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 362	Essentials of Nursing	4
NUR 362L	Essentials of Nursing Lab"	2
NUR 415	Health Assessment	3
NUR 418	Conceptual Models for Nursing	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 321	Multiculturalism/Bioethics	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
<b>TOTAL HOURS REQUIRED</b>		<b>16</b>

#### SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 429	Providing Nursing Systems for Individuals and Large Groups	3
NUR 429L	Providing Nursing Systems for Individuals and Large Groups Lab*	5
NUR 461	Nursing Research Dimensions	3
NUR 462	Nursing Leadership and Management	3
NUR 485	Contemporary Issues in Nursing and Health Care	3
<b>TOTAL HOURS REQUIRED</b>		<b>17</b>

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 470	Seminar on Professional Development	3
NUR 475	Nursing Process Seminar*	3
<b>TOTAL HOURS REQUIRED</b>		<b>6</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>124</b>

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## B.S. in Nursing – Second Degree (cont'd)

### EVENINGS AND WEEKENDS CURRICULUM

#### SPRING SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 362	Nursing Essentials*	4
NUR 362L	Nursing Essentials Lab	2
NUR 415	Health Assessment	3
NUR 418	Conceptual Models for Nursing	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 419A	Providing Nursing Systems for Individuals and Small Groups*	2
NUR 419C	Providing Nursing Systems for Individuals and Small Groups Lab*	2
NUR 321	Multiculturalism/Bioethics	3
<b>TOTAL HOURS REQUIRED</b>		<b>7</b>

#### FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 419B	Providing Nursing Systems for Individuals and Small Groups*	3
NUR 419D	Providing Nursing Systems for Individuals and Small Groups Lab*	3
NUR 444	Planning Nursing Systems for Adults*	3
NUR 461	Nursing Research Dimensions	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 429A	Providing Nursing Systems for Individuals and Large Groups*	2
NUR 429C	Providing Nursing Systems for Individuals and Large Groups Lab*	3
NUR 462	Nursing Leadership Management	3
NUR 485	Contemporary Issues in Nursing and Health Care	3
<b>TOTAL HOURS REQUIRED</b>		<b>11</b>

#### SUMMER SESSION I

COURSE NO.	COURSE TITLE	CREDIT HOURS
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
<b>TOTAL HOURS REQUIRED</b>		<b>6</b>

#### SUMMER SESSION II

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 475	Nursing Process Seminar*	3
<b>TOTAL HOURS REQUIRED</b>		<b>3</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>124</b>

## B.S. in Nursing – LPN to BSN

### ADMISSION CRITERIA

Admission into the LPN-BSN track is competitive and open to qualified students. The minimal admission criteria are:

1. Completion of prerequisite courses or credit by examination (CLEP, ACT) and/or advance placement credits;
2. Admission to the University by December 1<sup>st</sup> for summer session and August 1<sup>st</sup> for January session.
3. Submission of a separate application for admission to the Nursing Department on or before December 1<sup>st</sup> for Summer Session and August 1<sup>st</sup> for January session.
4. A cumulative grade point average of 2.5, and "C" in the following courses: Chemistry, Anatomy and Physiology, Microbiology, and Pathophysiology;
5. Receipt of official transcript(s) from previously attended college(s) and practical nursing program;
6. Current license to practice as a licensed practical nurse in the Commonwealth of Virginia;
7. Two units of math, one of which must be algebra. A minimum grade of "C" is required in both courses.

### PREREQUISITE COURSES

SUBJECT AREA	CREDIT HOURS
Communication Skills	9
Humanities	6
Computer Concepts	3
African-American Perspectives	3
Introduction to University Life	0
Pathophysiology	3
Anatomy and Physiology	8
Microbiology	4
Introduction to Psychology	3
Developmental Psychology or Child Psychology	3
Introduction to Sociology	3
History	3
American Public Policy or Economics	3
Statistics	3
Advance Placement	15

### TOTAL DEGREE HOURS REQUIRED

**69**

Continue to next page →

## B.S. in Nursing – LPN to BSN (cont'd)

### FULL-TIME DAY CURRICULUM

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
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*	4
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 321	Multiculturalism/Bioethics	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
<b>TOTAL HOURS REQUIRED</b>		<b>16</b>

#### SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 429	Providing Nursing Systems for Individuals and Large Groups*	3
NUR 429L	Providing Nursing Systems for Individuals and Large Groups Lab*	5
NUR 485	Contemporary Issues in Nursing and Health Care	3
NUR 461	Nursing Research Dimensions	3
NUR 462	Nursing Leadership and Management	3
<b>TOTAL HOURS REQUIRED</b>		<b>17</b>

#### SUMMER SESSION

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 475	Nursing Process Seminar*	3
NUR 470	Nursing Seminar in Professional Development	3
<b>TOTAL HOURS REQUIRED</b>		<b>6</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>120</b>

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## B.S. in Nursing – LPN to BSN (cont'd)

### EVENING/WEEKEND CURRICULUM

#### SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 418	Conceptual Models for Nursing	3
NUR 415	Health Assessment	3
NUR 362	Nursing Essentials*	4
NUR 362L	Nursing Essentials Lab*	2
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### SUMMER SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 419A	Providing Nursing Systems for Individuals and Small Groups*	2
NUR 419C	Providing Nursing Systems for Individuals and Small Groups Lab*	2
NUR 321	Multiculturalism/Bioethics	3
<b>TOTAL HOURS REQUIRED</b>		<b>7</b>

#### FIRST SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 419B	Providing Nursing Systems for Individuals and Small Groups*	3
NUR 419D	Providing Nursing Systems for Individuals and Small Groups Lab*	3
NUR 444	Planning Nursing Systems for Adults*	3
NUR 461	Nursing Research Dimensions	3
<b>TOTAL HOURS REQUIRED</b>		<b>12</b>

#### SECOND SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 429A	Providing Nursing Systems for Individuals and Large Groups*	2
NUR 429C	Providing Nursing Systems for Individuals and Large Groups Lab*	3
NUR 485	Contemporary Issues in Nursing and Health Care	3
NUR 462	Nursing Leadership Management	3
<b>TOTAL HOURS REQUIRED</b>		<b>11</b>

#### SUMMER SESSION I

COURSE NO.	COURSE TITLE	CREDIT HOURS
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	Nursing Seminar in Professional Development	3
<b>TOTAL HOURS REQUIRED</b>		<b>6</b>

#### SUMMER SESSION II

COURSE NO.	COURSE TITLE	CREDIT HOURS
NUR 475	Nursing Process Seminar	3
<b>TOTAL HOURS REQUIRED</b>		<b>3</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>120</b>

\*Courses are to be taken only in the Second Degree and LPN to BSN programs.

## DEPARTMENT OF PHYSICS

**Dr. 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.

## B.S. in Physics

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 10X	History or Social Sciences	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
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
XXX XXX	Humanities Elective from core	3
XXX XXX	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
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 221	General Chemistry I	3
CHM 221L	General Chemistry Lab I	1
CHM 222	General Chemistry II	3
CHM 222L	General Chemistry Lab II	1
PHY 365	Mechanics I	3
PHY 366	Mechanics II	3
PHY 375	Electricity and Magnetism I	3
PHY 380	Quantum Mechanics I	3
PHY 399	Advanced Lab	2
PHY 445	Mathematical Methods for Physical Sciences II	3
SCM 285	Principles of Speech	3
SOC 101	Social Sciences	3
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective (Unrestricted)	10
XXX XXX	Humanities elective from core	3
PHY 356	Thermodynamics	3
PHY 468	Optics	3
PHY 475	Electricity and Magnetism II	3
PHY 480	Quantum Mechanics II	3
PHY 498	Senior Project I	1
PHY 499	Senior Project II	2
<b>TOTAL HOURS REQUIRED</b>		<b>28</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	67
Electives	13
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>



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## Teacher Licensure Endorsement in Physics

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).

COURSE NO.	COURSE TITLE
SED 201	American Schools and the Teaching Profession
SED 233	Seminar in Assessment and Evaluation
SED 380	Foundations of Methods in Secondary Schools
SED 420	Educational Technology
SED 486	Educational Psychology and Behavior Management
SED 488	School/Community Relations
SED 499	Directed Teaching and Seminar

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## Minor in Physics

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### CURRICULUM

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#### CORE REQUIREMENTS

COURSE NO.	COURSE TITLE	CREDIT HOURS
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
TOTAL HOURS REQUIRED		9

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#### UPPER DIVISION COURSES

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COURSE NO.	COURSE TITLE	CREDIT HOURS
PHY 350	Modern Physics	3
TOTAL HOURS REQUIRED		3

Any two of the Following courses:

COURSE NO.	COURSE TITLE	CREDIT HOURS
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 HOURS REQUIRED		6
TOTAL DEGREE HOURS REQUIRED		18

## Five-Year Dual Degree: B.S. Physics and M.S. Materials Science

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CSC 169	Introduction to Computer Science	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 10X	History Elective/Social Science	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 I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 221	General Chemistry	3
CHM 221L	General Chemistry I Lab	1
CHM 222	General Chemistry II	3
CHM 222L	General Chemistry II Lab	1
EEN 301	Engineering Electronics	3
ENG 203	Advanced Communication Skills	3
ENG 383	African American Literature	3
MTH 252	Calculus III	3
MTH 372	Differential Equations	3
PHY 241	Physics Seminar	1
PHY 320	Waves	3
PHY 350	Modern Physics	3
PHY 351	Experimental Concepts in Modern Physics	1
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective**	3
XXX XXX	Elective (unrestricted)	1
XXX XXX	Restricted Math Elective*	6
PHY 365	Mechanics I	3
PHY 375	Electricity and Magnetism I	3
PHY 356	Thermodynamics	3
PHY 366	Mechanics II	3
PHY 380	Quantum Mechanics I	3
PHY 399	Advanced Laboratory	2
SCM 285	Principles of Speech	3
SOC 101	Social Science	3

**TOTAL HOURS REQUIRED 33**

#### SUMMER

COURSE NO.	COURSE TITLE	CREDIT HOURS
PHY 397	Research (to fulfill elective Requirement)	3

**TOTAL HOURS REQUIRED 3**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 545	Math Methods	3
MATS 530	Materials Science	3
MATS 533	Polymers and Composites	3
HUM 210	Humanities or HUM 211	3
PHY 468	Optics	3
PHY 475	Electricity and Magnetism II	3
PHY 480	Quantum Mechanics II	3
PHY 497	Research (to fill elective Requirement)	3
PHY 498	Senior Project I	1
PHY 499	Senior Project II	2
PHY 580	Quantum Mechanics for Materials Science	3

**TOTAL HOURS REQUIRED 30**

\*Restricted Math Elective to be selected from the following: MTH 255, 471, 472, 481, 484, or CHM 345

\*\* Cultural Elective to be selected from the following: FIA 170, MUS 234, HIS 335, HIS 336, HIS 370, HIS 377, POS 315, PSY 340, or SOC 237

Continue to next page →

## Five-Year Dual Degree: B.S. in Physics and M.S. in Materials Science (cont'd)

### SUMMER

COURSE NO.	COURSE TITLE	CREDIT HOURS
MATS 697	Research	3
<b>TOTAL HOURS REQUIRED</b>		<b>3</b>

### FIFTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 573	Advanced Inorganic Chemistry	3
MATS 575	Instrumentation	3
CHM 663	Atomic and Molecular Spectroscopy	3
CHPH 600	Seminar	3
MATS 797	Research	3
MATS 710	Special Topics	3
MATS 799	Thesis Preparation	3
PHY 653	Solid State Physics	3
PHY 675	Electricity/Magnetism	3
<b>TOTAL HOURS REQUIRED</b>		<b>27</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>160</b>

## Minor in Astronomy

The Minor in Astronomy is an ideal complement 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.

## CURRICULUM

### CORE REQUIREMENTS

COURSE NO.	COURSE TITLE	CREDIT HOURS
PHY 152	General Physics I	3
PHY 153	General Physics II	3
AST 201	Astronomy	3
<b>TOTAL HOURS REQUIRED</b>		<b>9</b>

Any three from the following courses:

COURSE NO.	COURSE TITLE	CREDIT HOURS
AST 301	Methods of Observational Astronomy	3
AST 302	Astrobiology	3
AST 303	Introduction to Astrophysics	3
AST 401	Stellar Astrophysics	3
<b>TOTAL HOURS REQUIRED</b>		<b>9</b>
<b>TOTAL DEGREE HOURS REQUIRED</b>		<b>18</b>

## DEPARTMENT OF TECHNOLOGY

**Dr. Carray Banks, Jr., Department Head**  
(757) 823-2421

The Department offers degrees in the following program areas: B.S. degree in Building Construction Technology, Computer Technology, and Electronics Technology; A.S. degree in Architectural Drafting Technology.

The mission of the Department of Technology is to provide programs and services to prepare student graduates for a variety of responsible technological and/or technical management positions in industry, business, and government. The department commits to the responsibility of preparing students in quality industrial technology programs for careers in architectural drafting technology; building construction technology; computer technology; and electronic technology. Accordingly, the department commits, through its academic programs, to fostering within students an intrinsic feeling of self-worth that allows them to be the best persons possible, as well as the best technologists.

### A.S. in 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 Operator.

## CURRICULUM

### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BCT 162	Materials of Construction	3
CSC 150	Computer Literacy	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I	3
BCT 170	Fundamentals of Masonry	3
MTH 151	College Algebra	3
MTH 153	College Algebra/Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
TMD 150	Engineering Graphics	3
TMD 151	Introduction to CAD	3

**TOTAL HOURS REQUIRED 33**

### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective	3
BCT 260	Building Codes and Specification	3
BCT 262	Methods of Building Construction	3
BCT 263	Fundamentals of Surveying	3
BCT 264	Intermediate Surveying	3
BCT 265	Architectural Details	3
BCT 266	Architectural Drafting	3
IMT 205	Industrial Safety/Management	3
IMT 244	Indus Specifications and Tech Document	3
PHY 152	General Physics	3
PHY 152L	General Physics Lab	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31**

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	22
Major Requirements	24
Other Requirements	16

**TOTAL DEGREE HOURS REQUIRED 64**

*OPTIONAL: CED 350, 450 Cooperative Education (3 credit hours each)*

## B.S. in Building Construction Technology

The Building Construction Technology program is designed to provide men and women with current technical/management competencies required for technical and supervisory roles in residential, industrial, civil, and commercial construction industries.

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
BCT 162	Materials of Construction	3
CSC 150	Computer Literacy	3
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I	2
IMT 205	Industry Safety and Management	3
MTH 151	College Algebra	3
MTH 153	College Algebra/Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
TMD 150	Engineering Graphics	3
TMD 151	Introduction to CAD	3
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective	3
BCT 260	Building Codes and Specifications	3
BCT 262	Methods of Building Construction I	3
BCT 263	Fundamentals of Surveying	3
BCT 264	Intermediate Surveying	3
BCT 265	Architectural Details	3
BCT 266	Architectural Drafting	3
BUS 281	Legal Environment	3
PHY 152	General Physics	3
PHY 152L	General Physics Lab	1
TMD 225	Mechanics I: Statistics	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>31</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BCT 363	Methods of Building Construction II	3
BCT 364	Steel Structures	3
BCT 370	Cost Estimates	3
CHM XXX	General Chemistry	3
CHM XXXL	General Chemistry Lab	1
HIS 335	African American History or Cultural Elective	3
XXX XXX	Humanities Elective	3
IMT 244	Indus Specifications and Tech Document	3
MTH 184	Calculus	4
XXX XXX	Technical Elective	3
TMD 345	Mechanics II: Study of Materials	3
TMD 345L	Mechanics Lab: Property of Materials	1
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
BCT 376	Soil Mechanics	3
XXX XXX	Humanities Elective	3
BCT 462	Problem Analysis and Planning	3
BCT 464	Organization and Supervision Of Construction	3
BCT 466	Structural Planning and Design	3
XXX XXX	Elective	3
IMT 420	Labor and Industrial Relations	3
SCM 285	Principles of Speech	3
<b>TOTAL HOURS REQUIRED</b>		<b>24</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	45
Other Requirements	36

**TOTAL DEGREE HOURS REQUIRED 121**

## B.S. in Computer Technology

Computer Technology program prepares graduates for careers in maintaining, manufacturing, integration, and support of computer systems. Emphasis is placed on job skills required of professionals in the computer industry; including wireless systems, electronic interfacing, networking, digital communications, oral and written communication, and management principles.

### CURRICULUM

#### FIRST YEAR – FALL SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
ELT 111/111L	Circuit Analysis I and Lab	4
ENG 101	Communication Skills I	3
HED 100	Personal & Community Health	2
IMT 170	Introduction to Technology	1
MTH 153	College Algebra and Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
UNI 101	Introduction to University Life	0

**TOTAL HOURS REQUIRED** 14

#### FIRST YEAR – SPRING SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 170/170L	Introduction to Programming I and Lab	4
ELT 212/212L	Circuit Analysis II and Lab	4
ENG 102	Communication Skills II	3
MTH 184	Calculus I	4

**TOTAL HOURS REQUIRED** 15

#### SECOND YEAR – FALL SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 204/204L	Digital Logic and Lab	4
ELT 213/213L	Electronic Devices I and Lab	4
IMT 244	Industrial Specifications and Technical Documentation	3
PHY 152/152L	General Physics and Lab	4

**TOTAL HOURS REQUIRED** 15

#### SECOND YEAR – SPRING SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 304/304L	Digital System Design and Lab	4
ELT 313/313L	Electronic Devices II and Lab	4
ENG 299	Writing Competency Exam	0
PHY 153/153L	General Physics and Lab	4
SCM 285	Principles of Speech	3

**TOTAL HOURS REQUIRED** 15

#### THIRD YEAR – FALL SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 305/305L	Computer Organization and Lab	4
HUM 210	Humanities Elective I or FIA 201 or MUS 301	3
IMT 205	Industrial Safety and Mgmt.	3
MTH 250	Elementary Statistics Concepts	3
PSY 210 or SOC 101	Social Science Elective	3

**TOTAL HOURS REQUIRED** 16

#### THIRD YEAR – SPRING SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 315/315L	Microprocessors and Lab	4
CIT 336/336L	Computer Network Technology I and Lab	4
HIS 100	History Elective	3
HUM 211	Humanities Elective II or FIA 201 or MUS 301	3
TMD 151	Introduction to CAD	3

**TOTAL HOURS REQUIRED** 17

Continue to next page →



## B.S. in Computer Technology (cont'd)

### FOURTH YEAR – FALL SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 432/432L	Computer Interfaces and Lab	4
CIT 436/436L	Computer Networks Technology II and Lab	4
ELT 413/413L	Digital Communications Systems and Lab	4
IMT 410 or 413	Project Management	3

**TOTAL HOURS REQUIRED 15**

### FOURTH YEAR – SPRING SEMESTER

COURSE NO.	COURSE TITLE	CREDIT HOURS
CIT 499L	Senior Project Lab	1
IMT 445	Statistical Quality Control	3
XXX XXX	Cultural Elective (HIS 335/336/371, FIA 370, MUS 234, SOC 237, POS 315 or PSY 340)	3
XXX XXX	Elective	3
XXX XXX	Elective	3

**TOTAL HOURS REQUIRED 13**

### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education	40
Major Requirements	59
Other Requirements	15
Electives	6
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>120</b>

## B.S. in Electronic Technology

The Electronic Technology program is designed to provide graduates with technical-management competencies needed for professional careers in science, technology, education and management. These careers often require a thorough understanding of electronic instrumentation, industrial controls, and communications.

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
CSC 150	Computer Literacy	3
ELT 111	Circuit Analysis I	3
ELT 111L	Circuit Analysis I Lab	1
ENG 101	Communication Skills I	3
ENG 102	Communication Skills II	3
HED 100	Personal & Community Health	2
HIS 100	History of World Societies I	3
MTH 151	College Algebra	3
MTH 153	College Algebra and Trigonometry	3
PED 100	Fundamentals of Fitness for Life	1
IMT 170	Society and Technology	3
SOC 101	Introduction to Social Science	3

**TOTAL HOURS REQUIRED** 31

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
ELT 212	Circuit Analysis II	3
ELT 212L	Circuit Analysis II Lab	1
ELT 213	Electronic Devices I	3
ELT 213L	Electronic Devices I Lab	1
ELT 310	Digital Electronics	3
ELT 310L	Digital Electronics Lab	1
ITM 205	Industrial Safety	3
MTH 184	Calculus I	4
PHY 152	General Physics	3
PHY 152L	General Physics Lab	1
PHY 153	General Physics	3
PHY 153L	General Physics Lab	1
IMT 244	Indus. Specifications & Tech Documentation	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 30

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Restrictive Elective	3
CHM 221	General Chemistry	3
CHM 221L	General Chemistry Lab	1
CIT 315	Microprocessors	3
CSC 170	Computer Programming I	3
APS 350	Scientific Instrumentation	3
ELT 211	Electronic Instruments & Measurements	3
ELT 313	Electronic Devices II	3
ELT 313L	Electronic Devices II Lab	1
ELT 315	Analog Communication Systems	3
SCM 285	Principles of Speech	3
TMD 151	Introduction to CAD	3

**TOTAL HOURS REQUIRED** 32

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective	6
XXX XXX	Humanities Elective	3
XXX XXX	Humanities Elective	3
ELT 413	Digital Communication	3
ELT 499	Senior Project	3
HIS 335	African American History or other Cultural Elective	3
IMT 410	First-line Supervision	3
IMT 445	Statistical Quality Control	3

**TOTAL HOURS REQUIRED** 27

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	36
Other Requirements	44

**TOTAL DEGREE HOURS REQUIRED** 120

# TIDEWATER COMMUNITY COLLEGE AND NORFOLK STATE UNIVERSITY ARTICULATION AGREEMENT

## B.S. in Electronic Technology

### CURRICULUM

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
CHM 221	General Chemistry	3
CHM 221L	General Chemistry Lab	1
CSC 170	Computer Programming I	3
ELT 211	Electronic Instruments and Measurements	3
ELT 313	Industrial Electronics	3
ELT 313L	Industrial Electronics Lab	1
ELT 315	Analog Communication Systems	3
IMT 205	Industrial Safety and Management	3
IMT 244	Indus. Specifications & Tech Documentation	3
HED 100	Personal & Community Health	2
SCM 285	Principles of Speech	3
TMD 151	Introduction to CAD	3
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
XXX XXX	Humanities Elective	3
XXX XXX	Restructured Elective	3
APS 350	Scientific Instrumentation	3
CIT 315	Microprocessors	3
ELT 413	Digital Communication	3
ELT 499	Senior Project	3
IMT 410	First-Line Supervision	3
IMT 445	Statistical Quality Control	3
<b>TOTAL HOURS REQUIRED</b>		<b>27</b>

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	12
Major Requirements	37
Other Requirements	9
<b>TOTAL DEGREE HOURS REQUIRED</b>	<b>58</b>

## **SPECIAL ACADEMIC PROGRAMS**

### **Dozoretz National Institute for Minorities in Applied Sciences (DNIMAS)**

**Dr. Aliecia R. McClain, Director**

**(757) 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 Electronics Engineering, a Bachelor of Science in Mathematics, a Bachelor of Science in Optical Engineering 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.

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### **ADMISSION**

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Students are admitted to the DNIMAS Program from high school for the fall semester 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  
(757) 823-2511

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.

**B.S. in Biology (DNIMAS)****CURRICULUM****FIRST YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
BIO 110H	General Biology I	4
BIO 111H	General Biology II	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	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 33****SECOND YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Social Science Elective	3
APS 210	Applied Science Seminar	0
APS 211	Applied Science Seminar	0
BIO 260	General Zoology	4
BIO 261	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
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 37****THIRD YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
BIO 270	Comparative Anatomy or BIO 263	4
BIO XXX	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 160	University Physics	4
PHY 160L	University Physics Lab	1
PHY 161	University Physics	4
PHY 161L	University Physics Lab	1

**TOTAL HOURS REQUIRED 35****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
ENG 203/303	Advanced Communication Skills	3
XXX XXX	Biology Elective	4
XXX XXX	Humanities Elective/MUS 301*	3
APS 410	Applied Sciences Seminar	0
BIO 351	Principles of Genetics	4
BIO 364	Seminar/Genetics	1
BIO 459	General Physiology	4
BIO 474	Molecular Biology	4
BIO 495	Biostatistics	4
BIO 497	Introduction to Research	2

**TOTAL HOURS REQUIRED 29****TOTAL DEGREE HOURS REQUIRED 133***\*Select from HUM 210, MUS 301, FIA 301, ENG 207*

## B.S. in Biology - Pre-Professional (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
BIO 110H	General Biology I	4
BIO 111H	General Biology II	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	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1

**TOTAL HOURS REQUIRED 33**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
XXX XXX	Social Science Elective	3
BIO 260	General Zoology	4
BIO 261	General Botany	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 and Community Health	2
SCM 285H	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 33**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
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 I Lab	2
CHM 432	General Biochemistry II	3
CHM 432L	General Biochemistry II Lab	2
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1

**TOTAL HOURS REQUIRED 31**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 411	Applied Sciences Seminar	0
ENG 203/303	Advanced Communication Skills	3
XXX XXX	Humanities Elective	3
APS 410	Applied Sciences Seminar	0
BIO 351	Principles of Genetics	4
BIO 362	History/Micro Technique	4
BIO 364	Seminar/Colloquium	1
XXX XXX	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 HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 127**

**B.S. in Chemistry (DNIMAS)****CURRICULUM****FIRST YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
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 HOURS REQUIRED 33****SECOND YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities or Social Science Elective	3
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
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 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
SCM 285H	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 33****THIRD YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Elective	1
CHM XXX	Restricted Chemistry Elective*	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
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 HOURS REQUIRED 28****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 411	Applied Sciences Seminar	0
XXX XXX	Electives	6
XXX XXX	Humanities Elective	6
XXX XXX	Restrictive Chemistry Elective*	6
XXX XXX	Social Science Seminar	3
APS 410	Applied Sciences Seminar	0
CHM 451	Seminar or CHM 452	1
CHM 473	Advanced Inorganic Chemistry	3
CHM 431	Biochemistry	3
CHM 497	Research or CHM 498	1
ENG 203/303	Advanced Communication Skills	3

**TOTAL HOURS REQUIRED 32****TOTAL DEGREE HOURS REQUIRED 128**

\*Select 6 hours from: CHM 397, 398, 473L, 431L, 432, 432L, 475, 481, 497, 498 (Maximum of 1 elective hour of research)



## B.S. in Chemistry - Pre-Medicine (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
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 HOURS REQUIRED 33**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
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 160	University Physics I	4
PHY 160L	University Physics I Lab	1
BIO 110H	General Biology	4
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
SCM 285H	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 34**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities Elective	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
XXX XXX	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 Lab	3
CHM 363L	Physical Chemistry Lab	2
CHM 397	Research or CHM 398	1
CHM 473	Advanced Inorganic Chemistry	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 411	Applied Sciences Seminar	0
XXX XXX	Biology Electives	3
ENG 203/303	Advanced Communication Skills	3
XXX XXX	Social Science Elective/Humanities	6
APS 410	Applied Sciences Seminar	0
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 HOURS REQUIRED 24**

**TOTAL DEGREE HOURS REQUIRED 121**

## B.S. in Computer Science (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
CHM 223A	General Chemistry I	4
CHM 221L	General Chemistry I Lab	1
CHM 224A	General Chemistry II Lab	4
CHM 222L	General Chemistry II Lab	1
CSC 101	Introduction to the Comp Science Profession	1
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
CSC 260	Computer Programming II	3
CSC 260L	Computer Programming II Lab	1

**TOTAL HOURS REQUIRED 33**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
CSC 268	Computer Organization	3
CSC 292	Unix and C Programming	3
MTH 252H	Calculus III	4
MTH 371	Discrete Mathematical Structures	4
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
HED 100	Personal & Community Health	2
PED 100	Fundamentals of Fitness for Life	1
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 27**

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities Elective	3
XXX XXX	Foreign Language Elective	3
XXX XXX	Cultural Elective	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
CSC 372	Data Structures	3
CSC 295	Java Applications Programming	3
CSC 361	Survey of Programming Language	3
CSC 380	Software Engineering	3
ENG 303	Technical Writing	3
SCM 285H	Principles of Speech	3
MTH 351	Probability & Statistics I	3

**TOTAL HOURS REQUIRED 30**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 411	Applied Sciences Seminar	0
XXX XXX	CSC or Math Electives (300 Level or Above)	6
XXX XXX	Social Science Electives	6
XXX XXX	Computer Science Elective (300 Level or Above)	6
APS 410	Applied Sciences Seminar	0
CSC 430	Data Communication	3
CSC 464	Operating Systems	3
CSC 468	Computer Architecture	3
CSC 498	Computer Science Seminar	1
CSC 499	Computer Science Seminar	2

**TOTAL HOURS REQUIRED 30**

**TOTAL DEGREE HOURS REQUIRED 120**

## B.S. in Computer Science - Engineering (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
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
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
CSC 101	Introduction to Computer Science Profession	1
CSC 170	Computer Programming I	3
CSC 170L	Computer Programming I Lab	1
CSC 260	Computer Programming II	3
CSC 260L	Computer Programming II Lab	1

**TOTAL HOURS REQUIRED** 33

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
MTH 252	Calculus III	4
MTH 371	Discrete Mathematical Structures	4
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal & Community Health	2
XXX XXX	Social Science Elective	3
CSC 268	Organization	3
CSC 292	Unix and C Programming	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED** 30

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
EEN 201	Electronic Network Theory I	3
EEN 201L	Electronic Network Theory I Lab	1
EEN 301	Engineering Electronics I	3
EEN 301L	Engineering Electronics I Lab	1
MTH 351	Probability and Statistics I	3
MTH 372	Differential Equations	3
SCM 285H	Principles of Speech	3
CSC 295	Java Applications Programming	3
CSC 361	Survey of Programming Languages	3
CSC 372	Data Structures	3
CSC 380	Software Engineering	3
CSC XXX	Computer Science Elective (300 Level or Above)	3

**TOTAL HOURS REQUIRED** 32

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 410	Applied Sciences Seminar	0
XXX XXX	EEN Elective (300 Level or Above)	3
XXX XXX	Foreign Language Elective	3
XXX XXX	Cultural Elective	3
XXX XXX	Humanities Elective	3
EEN 231	Digital Logic Design	3
XXX XXX	Social Science Electives	3
ENG 303	Technical Writing	3
CSC 430	Data Communications	3
CSC 464	Operating Systems	3
CSC 468	Computer Architecture	3
CSC 498	Senior Seminar I	1
CSC 499	Senior Seminar II	2

**TOTAL HOURS REQUIRED** 33

**TOTAL DEGREE HOURS REQUIRED** 128

## B.S. in Applied Mathematics (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
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
<b>TOTAL HOURS REQUIRED</b>		<b>33</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Foreign Language Electives	6
XXX XXX	Free Electives	3
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
MTH 252H	Calculus III	4
MTH 300	Linear Algebra	3
MTH 372	Differential Equations	3
MTH 384	Math Modeling and Simulation	3
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>32</b>

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Mathematics Elective (MTH 311 or Higher)	3
XXX XXX	Mathematics Elective (MTH 431 or Higher)	3
XXX XXX	Social Sciences Elective	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
ENG 303	Technical Writing	3
MTH 351	Probability & Statistics I	3
MTH 352	Probability & Statistics II	3
MTH 471	Advanced Calculus I	3
MTH 472	Advanced Calculus II	3
SCM 285H	Principles of Speech	3

**TOTAL HOURS REQUIRED 27**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 411	Applied Sciences Seminar	0
XXX XXX	Free Electives	3
XXX XXX	Mathematics Electives (MTH 431 or Higher)	6
XXX XXX	Social Science Elective	3
APS 410	Applied Sciences Seminar	0
MTH 382	Introduction to Applied Mathematics	3
MTH 401	Numerical Analysis I	3
MTH 402	Numerical Analysis II	3
MTH 484	Topics in Applied Mathematics	3
MTH 496	Mathematics Seminar	2
MTH 497	Mathematics Seminar	2

**TOTAL HOURS REQUIRED 28**

**TOTAL DEGREE HOURS REQUIRED 120**

## B.S. in Electronics Engineering (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
EEN 100	Introduction to Engineering	3
EEN 102	Engineering Use of Computers	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities Elective	3
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
CHM 223A	General Chemistry	4
CHM 221L	General Chemistry Lab	1
EEN 201	Electronic Network Theory I	3
EEN 201L	Electronic Network Theory I Lab	1
EEN 202	Electronic Network Theory II	3
EEN 202L	Electronic Network Theory II Lab	1
EEN 211	Materials Science and Engineering	3
EEN 231	Digital Logic Design	3
MTH 252	Calculus III	4
HED 100	Personal & Community Health	2
MTH 372	Differential Equations	3
SCM 285H	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 34**

The Technical Elective may be chosen from 300 level or above courses in math, computer science, chemistry, physics or engineering.

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Humanities Elective	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
EEN 301	Engineering Electronics I	3
EEN 301L	Engineering Electronics I Lab	1
EEN 302	Engineering Electronics II	3
EEN 302L	Engineering Electronics II Lab	1
EEN 305	Signals and Systems	3
EEN 321	Electromagnetic Field Theory	3
EEN 331	Microprocessors	3
EEN 331L	Microprocessors Lab	1
EEN 333	Digital Integrated Circuits	3
EEN 333L	Digital Integrated Circuits Lab	1
EEN 351	Communications Engineering	3
MTH 300	Linear Algebra	3
MTH 351E	Probability and Statistics I	3

**TOTAL HOURS REQUIRED 34**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
XXX XXX	Engineering Elective	3
XXX XXX	Social Sciences Elective	6
XXX XXX	Technical Elective	3
XXX XXX	Unrestrictive Elective	3
APS 410	Applied Sciences Seminar	0
APS 411	Applied Sciences Seminar	0
EEN 401	Electronics Engineering Seminar	1
EEN 411	Engineering Economics	3
EEN 471	Control Systems	3
EEN 498	Senior Project I	3
EEN 499	Senior Project II	3

**TOTAL HOURS REQUIRED 31**

**TOTAL DEGREE HOURS REQUIRED 130**

## B.S. in Optical Engineering (DNIMAS)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
EEN 100	Introduction to Engineering	3
EEN 102	Engineering Use of Computers	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1

**TOTAL HOURS REQUIRED 31**

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
CHM 223A	General Chemistry	4
CHM 221L	General Chemistry Lab	1
EEN 201	Electrical Network Theory I	3
EEN 201L	Electrical Network Theory I Lab	1
EEN 203	Electronic Principles	3
EEN 211	Materials Science and Engineering	3
HED 100	Personal & Community Health	2
OEN 200	Geometrics & Instrumentation Optics	3
OEN 200L	Geometrics & Instrumentation Optics Lab	1
OEN 201	Physical & Instrumentation Optics	3
OEN 201L	Physical & Instrumentation Optics Lab	1
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
SCM 285H	Principles of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 35**

The Technical Elective may be chosen from 300 level or above courses in math, computer science, chemistry, physics or engineering.

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Elective	3
XXX XXX	Humanities Elective	3
XXX XXX	Social Sciences Elective	3
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
EEN 321	Electromagnetic Field Theory	3
OEN 320	Optical Systems Analysis	3
OEN 340	Lasers and Photonics	3
OEN 340L	Lasers and Photonics Lab	1
OEN 360	Introduction to Optical Materials	3
OEN 380	Introduction to Quantum Optics	3
MTH 300	Linear Algebra	3
MTH 351E	Probability and Statistics I	3

**TOTAL HOURS REQUIRED 31**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Engineering Elective	3
XXX XXX	Humanities Elective	3
XXX XXX	Social Sciences Elective	3
XXX XXX	Technical Elective	3
XXX XXX	Unrestrictive Elective	3
APS 410	Applied Sciences Seminar	0
APS 411	Applied Sciences Seminar	0
EEN 411	Engineering Economics	3
OEN 460	Optical Communications I	3
OEN 460L	Optical Communications I Lab	1
OEN 461	Optical Communications II	3
OEN 461L	Optical Communications II Lab	1
OEN 490	Senior Seminar	1
OEN 498	Senior Project I	3
OEN 499	Senior Project II	3

**TOTAL HOURS REQUIRED 33**

**TOTAL DEGREE HOURS REQUIRED 130**

**B.S. in Physics (DNIMAS)****CURRICULUM****FIRST YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
APS 110	Applied Sciences Seminar	0
APS 111	Applied Sciences Seminar	0
CSC 169	Introduction to Computer Science	3
ENG 101H	Communication Skills I	3
ENG 102H	Communication Skills II	3
MTH 184H	Calculus I	4
MTH 251H	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 160	University Physics I	4
PHY 160L	University Physics I Lab	1
PHY 161	University Physics II	4
PHY 161L	University Physics II Lab	1
HED 100	Personal & Community Health	2

**TOTAL HOURS REQUIRED 30****SECOND YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
CSC 170	Computer Programming I	3
XXX XXX	Humanities Elective	3
APS 210	Applied Sciences Seminar	0
APS 211	Applied Sciences Seminar	0
XXX XXX	Computer Science Elective	3
MTH 252	Calculus III	4
MTH 372	Differential Equations	3
PHY 241	Physics Seminar	1
PHY 260	University Physics III	4
PHY 350	Modern Physics	3
PHY 351	Experimental Concepts in Modern Physics	1
PHY 345	Math Methods in Physical Science I	3
SCM 285H	Principle of Speech	3
ENG 299	Writing Competency Exam	0

**TOTAL HOURS REQUIRED 31****THIRD YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Social Science Elective	C
APS 310	Applied Sciences Seminar	0
APS 311	Applied Sciences Seminar	0
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
PHY 365	Mechanics I	3
PHY 366	Mechanics II	3
PHY 375	Electricity & Magnetism I	3
PHY 380	Quantum Mechanics I	3
PHY 399	Advanced Lab	2
PHY 445	Math Methods for Physical Science II	3

**TOTAL HOURS REQUIRED 30****FOURTH YEAR**

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Free Electives	5
XXX XXX	Humanities Elective	3
XXX XXX	Cultural Elective	3
XXX XXX	Social Science Elective	3
APS 410	Applied Sciences Seminar	0
APS 411	Applied Sciences Seminar	0
PHY 356	Thermodynamics	3
PHY 468	Optics	3
PHY 475	Electricity & Magnetism II	3
PHY 480	Quantum Mechanics II	3
PHY 498	Senior Project I	1
PHY 499	Senior Project II	2

**TOTAL HOURS REQUIRED 29****TOTAL DEGREE HOURS REQUIRED 120**



## NAVAL SCIENCE

**Captain Michael Barea**  
**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 in 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.

## Naval Reserve Officers Training Corp (NROTC)

### CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
NSC 101*	Naval Orientation	2
NSC 111	Naval Laboratory I	1
NSC 112	Naval Laboratory II	1
NSC 102*	Seapower & Maritime Affairs/HIS 380	3

**TOTAL HOURS REQUIRED** 8

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
NSC 201	Naval Ship Systems I (Engineering)	3
NSC 202	Naval Ship Systems II (Weapons)	3
NSC 211	Naval Laboratory III	1
NSC 212	Naval Laboratory IV	1

**TOTAL HOURS REQUIRED** 8

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
NSC 301	Navigation & Naval Operations I	3
NSC 302	Navigation & Naval Operations II	3
NSC 310	Evolution of Warfare (Marine Option Only)	3
NSC 311	Naval Laboratory V	1
NSC 312	Naval Laboratory VI	1

**TOTAL HOURS REQUIRED** 11

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
NSC 401*	Leadership & Management	3
NSC 402*	Leadership & Ethics	3
NSC 410	Amphibious Warfare (Marine Option Only)	3
NSC 411	Naval Laboratory VII	1
NSC 412	Naval Laboratory VIII	1

**TOTAL HOURS REQUIRED** 11

This Department does not offer a major course program.

*\*Indicates courses required for NROTC nursing college program and scholarship students.*

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## SCHOOL OF SOCIAL WORK

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**Mrs. Carrie R. Waites, Interim Dean**  
**(757) 823-8668**

The Ethelyn R. Strong School of Social Work provides social work education through its Baccalaureate Social Work (BSW) Program, Master of Social Work (MSW) Program, Doctoral (Ph.D.) Program, and continuing education programs.

The School's mission is to provide social work education programs which prepare students with competence to develop and deliver services that strengthen and/or empower individuals, families, groups, organizations, and communities. The School and its program emphasize the values of social justice, social responsibility and respect for human rights, dignity and diversity. The School is especially committed to address the strengths and challenges for an ethnically and culturally diverse client population in an evolving global community.

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.

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### ACCREDITATION

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The School of Social Work is accredited by the Council on Social Work Education which accredits programs at the BSW and MSW levels.

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### ORGANIZATION OF THE SCHOOL

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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 Ph.D. Program is responsible for the Ph.D. Program.

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### COMMUNITY AND OUTREACH SERVICES

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*(formerly known as Brambleton Community Outreach Center)*

**Mrs. Dierdre W. Sanderlin, Program Coordinator**  
**(757) 823-8743**

The Community and Outreach Center provides educational, recreational, social and health needs of students and residents in the adjacent neighborhoods. It is the operational center for the University's Community Outreach Program. University resources are used to supplement, improve and increase the effectiveness of services normally provided by community constituents. The Community and Outreach Services Program is administratively responsible to the Ethelyn R. Strong School of Social Work. The Center serves children, families, adults and seniors with programs which include technology training, curriculum, recreation, family management and counseling, health maintenance, educational support, volunteer service, internships and community services.

## ADMISSION REQUIREMENTS

BSW applicants must meet University requirements for admission. After successfully completing the first two years of pre-social work course requirements, students may apply to the Professional Program for the BSW degree. This is the official application process for admission to the professional phase of the Social Work Program. Professional Program requirements are:

1. Student must have completed the first two years of basic core requirements and pre-social work requirements. 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 Professional Program application materials to the Director of the Baccalaureate Social Work Program.
3. Student must complete or be enrolled in ENG 299.
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.

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### GENERAL EDUCATION REQUIREMENTS

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The School follows University requirements for the general education core of 40 hours.

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### ASSESSMENT REQUIREMENT

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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

**Mrs. Carrie R. Waites, Baccalaureate Program  
Director  
(757) 823-8122**

The Baccalaureate Social Work (BSW) 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.

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### BSW PROGRAM MISSION

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The Baccalaureate Social Work Program develops students capable of delivering social work services at the first professional level of practice using a generalist approach. The program emphasizes social justice and responsibility, and respect for human rights, dignity, and diversity.

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### GOALS

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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 the student to work differentially with diverse populations with a special commitment to the affirmation of the unique characteristics and needs of populations.
3. To teach students to competently develop and deliver direct services that strengthen and/or empower individuals, families, groups, organizations, and communities.
4. To provide students with a foundation of values and ethics which guide professional practice, and enhance lifelong professional development.

## Baccalaureate in Social Work

### PRE SOCIAL WORK CURRICULUM

#### FIRST YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
UNI 101	Introduction to University Life	0
PED 100	Fundamentals of Fitness for Life	1
HED 100	Personal & Community Health	2
ENG 101	Communication Skills I***	3
ENG 102	Communication Skills II***	3
BIO 105/105L or BIO 165/165L		4
MTH 105	Intermediate Algebra	3
CSC 150	Computer Literacy ***	3
PSY 210	Introduction to Psychology ***	3
SOC 110 or SOC 101 ***		3
HIS 100 or HIS 101 HIS 102, or HIS 103		3
XXX XXX	Restrictive Elective *	2
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

#### SECOND YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
SWK 200	Introduction to Social Work	3
HUM 210	Humanities **	3
HUM 211	Humanities **	3
XXX XXX	Restrictive Elective (Natural Science)****	3
ECN 211	Principles of Microeconomics	3
SWK 220	Human Behavior & Social Environment I	3
PSY 280	Abnormal Psychology ***	3
POS 231	American State & Local Government ***	3
SCM 285	Principles of Speech	3
SWK 207	Social Welfare Policies & Services I	3
ENG 299	Writing Competency Exam	0
<b>TOTAL HOURS REQUIRED</b>		<b>30</b>

### PROFESSIONAL SOCIAL WORK CURRICULUM

#### THIRD YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Cultural Perspective ****	3
SWK 309	Human Behavior and Social Environment II	3
SWK 312	Introduction to Generalist Practice	3

COURSE NO.	COURSE TITLE	CREDIT HOURS
SWK 300	Social Welfare Policy and Services II	3
SWK 313	Generalist Practice: Individuals & Families	3
SWK 319	Human Behavior and Social Environment III	3
SOC 331	Social Psychology	3
SOC 344	Methods of Social Research ***	3
SOC 355	Elementary Social Statistics ***	3
SWK XXX	Social Work Elective	3

**TOTAL HOURS REQUIRED 31**

#### FOURTH YEAR

COURSE NO.	COURSE TITLE	CREDIT HOURS
XXX XXX	Optional Electives	6
SWK XXX	Social Work Elective (Restricted – Advanced Policy)*****	3
SWK XXX	Social Work Elective	3
SWK 318	Generalist Practice: Groups, Organizations and Communities	3
SWK 416	Generalist Practice: Evaluation	3
SWK 490	Practicum Seminar I	1
SWK 491	Practicum Seminar II	1
SWK 495	Practicum in Social Work I	5
SWK 496	Practicum in Social Work II	5
SWK 498A	BSW Field Practicum Orientation I	0
SWK 498B	BSW Field Practicum Orientation II	0

**TOTAL HOURS REQUIRED 30**

\* 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-371, PSY-340, SOC-237

\*\*\*\*\* Restrictive Elective (Natural Sciences) – CHM 100, PHY 100 SCI 100, Astronomy, Geology, Oceanography, Zeteorology

\*\*\*\*\* Social Work Elective (Restrictive-Advanced Policy) Select one: SWK 411 or SWK-497

#### SUMMARY OF GRADUATION REQUIREMENTS

SUBJECT AREA	CREDIT HOURS
General Education Requirements	40
Major Requirements	72
Electives	8

**TOTAL DEGREE HOURS REQUIRED 121**

## COURSE DESCRIPTION CODES

Course descriptions are notated with the following abbreviations and are listed on the following pages in alphabetical order.

SUBJECT
Accounting (ACC)
Arabic (ARA)
Astronomy (AST)
Biology (BIO)
Building Construction Technology (BCT)
Business Administration (BUS)
Chemistry (CHM) Chinese (CHI)
Communication Sciences and Disorders (CSD)
Computer Information Technology (CIT)
Computer Science (CSC)
Cooperative Education (CED)
Criminal Justice (CJS)
Decision Sciences (DSC)
Design Technology Mechanical (TMD)
Economics (ECN)
Education (EDU)
Electronics Engineering (EEN)
Electronics Technology (ELT)
Elementary Education (EED/ECE)
English (ENG)
Entrepreneurial Studies (ENT)
Exercise Science (EXS)
Fashion Design (FDM)
Finance (FNC)
Fine Arts (FIA)
Food Science Nutrition (FSN)
French (FRN)
General Studies (GST/UNI)
Geography (GEO)
German (GRM)
Health Education (HED)
Health Information Management (HIM)
Health Related Professions (HRP)
Health Rehabilitation Services (HRS)
Health Services Management (HSM)
History (HIS)
Humanities (HUM)
Industrial Education (IED)
Industrial Management Technology (IMT)
Interdisciplinary Studies (INT)
Japanese (JPN) Journalism (JRN)
Korean (KOR)
Latin (LAT)
Logic (LOG)
Management (MGT)

SUBJECT
Management Information Systems (MIS)
Manufacturing Technology (ITM)
Marketing (MKG)
Mass Communications (MCM)
Mathematics (MTH)
Medical Technology (MDT)
Military Science (MSL)
Music (MUS)
Naval Science (NSC)
Nursing (NUR)
Optical Engineering (OEN)
Physical Education (PED)
Physics (PHY)
Political Science (POS)
Psychology (PSY)
Religion (REL)
Earth Science (SCI)
Secondary Education and Leadership (SED)
Social Work (SWK)
Sociology (SOC)
Spanish (SPN)
Special Education (SPE)
Speech Communication (SCM)
Swahili (SWA)
Theatre (DRM)
Tourism and Hospitality Management (HRM)
Urban Planning (URP)

### VARIATION CODE

CODE	TITLE
SS	Summer School Only
FO	Fall Semester Only
SO	Spring Semester Only
E	Each Semester including Summer
EE	Each Semester excluding Summer
FS	Fall and Summer Semesters Only
SI	Sufficient Student Interest
SU	Spring and Summer Semesters Only
O	Offered Every Other Year



## Description of Courses

### ACCOUNTING - ACC

**201                      Three Credits**  
**PRINCIPLES OF FINANCIAL ACCOUNTING (E)**

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 MANAGERIAL ACCOUNTING (EE)**

PREREQUISITE: ACC 201

An introduction to managerial accounting concepts and principles, job order cost systems, process cost systems, cost behavior, cost-volume-profit analysis, budgeting, variance analysis, differential analysis, and capital investment analysis.

**301                      Three Credits**  
**INTERMEDIATE ACCOUNTING I (EE)**

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 (EE)**

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 (E)**

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 (SO)**

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**  
**INTERMEDIATE MANAGERIAL ACCOUNTING (SI)**

PREREQUISITES: ACC 202; MIS 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 (EE)**

PREREQUISITES: ACC 301; MIS 284

Study of the analysis, design, and implementation of computerized accounting systems. Emphasis on internal control and reporting. Design issues will be explored through an integrated computerized accounting system.

**361                      Three Credits**  
**FINANCIAL STATEMENT ANALYSIS (SO)**

PREREQUISITES: FNC 360; ACC 202; MIS 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 (FO)**

PREREQUISITE: ACC 302

Continuation of ACC 302. Emphasis on the accounting literature and the concepts of accounting theory.

**412                      Three Credits**  
**ADVANCED ACCOUNTING (SI)**

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 (EE)**

PREREQUISITES: ACC 202; MIS 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 (EE)**

PREREQUISITES: ACC 302; MIS 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.

**418                      Three Credits**  
**GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING (SI)**

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 (SI)**

PREREQUISITE: ACC 302

Topics covered give additional consideration to selected accounting problems. Current accounting issues are examined.

**455                      Three Credits**  
**THEORY OF ACCOUNTING (SI)**

PREREQUISITE: ACC 302

Thorough study and review of accounting literature and pronouncements of rule-making organizations. Financial Accounting Standards Board Statements



## Description of Courses (cont'd)

explored in depth. Current issues and developments are also studied.

### ARABIC – ARA

#### 111 Three Credits ELEMENTARY ARABIC I

Introduces students to the basic grammar and sentence structures of Arabic and to some aspects of Arab culture. The course includes reading, speaking, listening and writing to familiarize students with Arabic as it is used in communication situations of everyday life.

#### 112 Three Credits ELEMENTARY ARABIC II

PREREQUISITE: ARA 111

A continuation of the introduction to Arabic language and culture, with emphasis on the basic skills of understanding, reading, speaking, and writing Arabic.

#### 211 Three Credits INTERMEDIATE ARABIC I PREREQUISITE : ARA 112

Emphasis on grammar, reading and discussion of moderately difficult prose in Modern Standard Arabic, oral practice, and written composition.

#### 212 Three Credits INTERMEDIATE ARABIC II PREREQUISITE : ARA 211

Intensive and extensive study and reading of modern standard Arabic prose, oral practice, and written composition

### 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, multi-media 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. Astrography, photometry and spectrography using CCD cameras.

#### 302 Three Credits ASTROBIOLOGY

PREREQUISITE: AST 201

Study of the 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 simplified computer model of a star.

### BIOLOGY - BIO

#### 100 Three Credits BIOLOGICAL SCIENCE (E)

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 (E)

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 Three Credits HUMAN BIOLOGY (E)

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.

#### 105L One Credit HUMAN BIOLOGY LABORATORY (E)

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.

#### 110 Three Credits GENERAL BIOLOGY I (E)

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 biomolecules, cell organelle structure and function, chemical aspects of cells, introduction to contemporary genetics, cellular metabolism, and some contrasting aspects of DNA structure and function in prokaryotes and eukaryotes.

## Description of Courses (cont'd)

### 110L One Credit

#### GENERAL BIOLOGY LABORATORY (E)

COREQUISITE: BIO 110 or Consent of Chair

First part of a two part General Biology laboratory course to be completed in the first semester of the first year of the Biology Curriculum. Science majors only. Reemphasizes lecture concepts at the cellular and molecular level of biological systems. Also introduces genetics as heredity and nucleic acid, metabolism, the scientific method, and protein structural function.

### 111 Three Credits

#### GENERAL BIOLOGY II (E)

PREREQUISITE: BIO 110 or Consent of Chair

COREQUISITE: BIO 111L or Consent of Chair

The course is a comprehensive survey of basic biological concepts and principles with emphasis at the organismal level of biological systems. While kingdom organisms are included, plant/animal structure and function, human anatomy/physiology (human organ systems), and ecosystems are also emphasized.

### 111L One Credit

#### GENERAL BIOLOGY II LABORATORY (E)

PREREQUISITE: BIO 110L

COREQUISITE: BIO 111 or Consent of Chair

The second part of an introductory laboratory course for science majors designed as a hands-on study of the organismal level of biological systems. Experimental topics in the course include the structure and function of prokaryotes, plants, and animals. The scientific method is emphasized as students collect, analyze, and discuss data relevance to each topic.

### 163 Three Credits

#### MICROBIOLOGY FOR THE HEALTH SCIENCES (E)

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.

### 163L One Credit

#### MICROBIOLOGY FOR THE HEALTH SCIENCES LABORATORY (E)

COREQUISITE: BIO 163 or Consent of Chair

Study of culture methods, microscopic sterilization, and aseptic techniques.

### 165, 166 Three Credits Each

#### HUMAN ANATOMY AND PHYSIOLOGY (E)

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).

### 165L, 166L One Credit Ea.

#### HUMAN ANATOMY AND PHYSIOLOGY LABORATORY (E)

PREREQUISITES: BIO 165; 166 or Concurrent

Emphasis on teaching aids such as computed managed instructions and hands-on experience with animal tissues.

### 253 Three Credits

#### HUMAN PHYSIOLOGY (E)

PREREQUISITE: BIO 272 or Consent of the Instructor

Survey of the integration of functions in the human body, noting their structural relationships.

### 258 Three Credits

#### GENERAL ENTOMOLOGY (SI)

PREREQUISITE: BIO 260

COREQUISITE: BIO 258L or Consent of Chair

Study of the basic morphology, physiology, ecology, and economic importance of insects.

### 258L One Credit

#### GENERAL ENTOMOLOGY LABORATORY (SI)

PREREQUISITE: BIO 260

COREQUISITE: BIO 258 or Consent of Chair

Demonstrates the basic morphology, physiology, ecology, and economic importance of insects.

### 260 Three Credits

#### GENERAL ZOOLOGY (E)

PREREQUISITE: BIO 110, 111

COREQUISITE: BIO 110L or Consent of Chair

Biological concepts of animal life, including morphology, taxonomy, life histories, reproduction and distribution.

### 260L One Credit

#### GENERAL ZOOLOGY LABORATORY (E)

PREREQUISITE: BIO 110, 111

COREQUISITE: BIO 260 or Consent of Chair

Biological concepts of animal life, including morphology, taxonomy, life histories, reproduction and distribution.

### 261 Three Credits

#### GENERAL BOTANY (E)

PREREQUISITE: BIO 110, III

COREQUISITE: BIO 261L 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.

### 261L One Credit

#### GENERAL BOTANY LABORATORY (E)

PREREQUISITE: BIO 110, 111

COREQUISITE: BIO 261 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.

### 262 Two Credit

#### NATURAL HISTORY (SI)

PREREQUISITE: NONE

Survey of the principal plant and animal kingdom representatives

## Description of Courses (cont'd)

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).

**263                      Three Credits**  
**VERTEBRATE EMBRYOLOGY (SO)**

PREREQUISITE: BIO 260

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.

**263L                      One Credit**  
**VERTEBRATE EMBRYOLOGY LABORATORY (SO)**

PREREQUISITE: BIO 260

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.

**270                      Three Credits**  
**COMPARATIVE ANATOMY OF VERTEBRATES (FO)**

PREREQUISITE: BIO 260

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.

**270L                      One Credit**  
**COMPARATIVE ANATOMY OF VERTEBRATES LABORATORY (FO)**

PREREQUISITE: BIO 260

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.

**271                      Three Credits**  
**ECOLOGY (FO)**

PREREQUISITES: BIO 260; BIO 261

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.

**271L                      One Credit**  
**ECOLOGY LABORATORY (FO)**

PREREQUISITES: BIO 260; BIO 261

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.

**272                      Three Credits**  
**HUMAN ANATOMY (EE)**

PREREQUISITE: BIO 110

COREQUISITE: BIO 272L or Consent of Chair

Study of the basic structure of organs and organ systems of the body.

**272L                      One Credit**  
**HUMAN ANATOMY LABORATORY (EE)**

PREREQUISITE: BIO 110

COREQUISITE: BIO 272 or Consent of Chair

Study of the basic structure of organs and organ systems of the body.

**274                      Three Credits**  
**PLANT MORPHOLOGY (SI)**

PREREQUISITE: BIO 261

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.

**274L                      One Credit**  
**PLANT MORPHOLOGY LABORATORY (SI)**

PREREQUISITE: BIO 261

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.

**276                      Three Credits**  
**INVERTEBRATE ZOOLOGY (SI)**

PREREQUISITE: BIO 260

COREQUISITE: BIO 276L or Consent of Chair

Development, morphology, comparative anatomy, phylogeny, classification and physiology of invertebrates.

**276L                      One Credit**  
**INVERTEBRATE ZOOLOGY LABORATORY (SI)**

PREREQUISITE: BIO 260

COREQUISITE: BIO 276 or Consent of Chair

Laboratory focuses on the development, morphology, comparative anatomy, phylogeny, classification and physiology of invertebrates.

**278                      Three Credits**  
**CELL BIOLOGY (SU)**

PREREQUISITES: BIO 260; BIO 261; CHM 222; CHM 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.

**278L                      One Credit**  
**CELL BIOLOGY LABORATORY (SU)**

PREREQUISITES: BIO 260; BIO 261; CHM 221/ 221L; CHM 222/ 222L

COREQUISITE: BIO 278 or Consent of Chair

Study of intracellular mechanisms and the influence of such processes

## Description of Courses (cont'd)

on the cell and its extracellular environment.

**310 Three Credits**  
**GENERAL MICROBIOLOGY (E)**

PREREQUISITES: BIO 260 or BIO 261; 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.

**310L One Credit**  
**GENERAL MICROBIOLOGY LABORATORY (E)**

PREREQUISITES: BIO 260 or BIO 261; 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.

**320 Three Credits**  
**PATHOPHYSIOLOGY (E)**

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 (SI)**

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 (SI)**

PREREQUISITES: BIO 166 and BIO 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 (SO)**

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 (SO)**

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 (EE)**

PREREQUISITES: BIO 260 and BIO 261; 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 (EE)**

PREREQUISITES: BIO 260 and BIO 261; 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 (SI)**

PREREQUISITES: BIO 260 and BIO 261

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 (SI)**

PREREQUISITES: BIO 260 and BIO 261

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 (EE)**

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 (EE)**

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

## Description of Courses (cont'd)

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 (EE)**

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 (EE)**

PREREQUISITES: CHM 221/ 221L and CHM 222/ 222L

Training and practice in various bioinstrumental techniques, including statistical analysis of data, respirometry, photo microscopy, pectrophotometry, chromatography, electrophoresis, and physiological measurements.

**457 Two Credits**  
**EVOLUTION (SI)**

PREREQUISITE: BIO 351 or Consent of Instructor

Discussion and lectures on the organic evolution of plants and animals.

**459 Three Credits**  
**GENERAL PHYSIOLOGY (E)**

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 (E)**

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 (SI)**

PREREQUISITES: BIO 261; 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.

**461L One Credit**  
**PLANT PHYSIOLOGY LABORATORY (SI)**

PREREQUISITES: BIO 261; 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 (SI)**

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 (SI)**

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 (SI)**

PREREQUISITES: BIO 260, 161; CHM 222, 222L

Introduction to biochemistry, cellular metabolism, and cellular ultrastructure as they relate to cell function.

**474 Three Credits**  
**MOLECULAR BIOLOGY (EE)**

PREREQUISITES: BIO 310; CHM 222 and 222L

Semiquantitative 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 (EE)**

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 of endonuclease digestion, gel-electrophoresis, transformation of competent cells, nick translation, southern and northern blots, and DNA sequencing.

**480 Four Credits**  
**INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY (SO)**

PREREQUISITES: CHM 322, 322L

## Description of Courses (cont'd)

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 (FO)**

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 (SI)**

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 (SI)**

PREREQUISITE: BIO 260

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 (SI)**

PREREQUISITE: BIO 260

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 (FO)**

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 (SI)**

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 (EE)**

PREREQUISITE: Junior or Senior Standing

Introduction to independent experimental work under the guidance of staff members. Provisions or Honors and undergraduate research participation projects and investigations.

**499 Three Credits**  
**TISSUE AND CELL CULTURE (SI)**  
 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 (SI)**

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.

## Description of Courses (cont'd)

### 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 cells function and organization; topics include animal cells, assembly cell structure, principles and mechanisms.

### 510 Three Credits EXPERIENCE IN BIOLOGY

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.

## BUILDING CONSTRUCTION/ TECHNOLOGY - BCT

### 162 Three Credits MATERIALS OF CONSTRUCTION (FO)

A comprehensive study of construction materials, their characteristics, advantages, and limitations. Emphasis will be placed upon how these materials are used in various building systems, with emphasis on costs and durability.

### 260 Three Credits BUILDING CODES AND SPECIFICATIONS (FO)

Emphasis on regional and national building codes, history of building regulations, zoning and its influence on construction and business, including specifications and acceptance on costs and durability.

### 262 Three Credits METHODS OF BUILDING CONSTRUCTION I (SO)

PREREQUISITE: BCT 162

A comprehensive study where emphasis is placed on the design, planning and methods of the 16 CSI divisions. Local and national building codes and techniques are emphasized.

### 263 Three Credits FUNDAMENTALS OF SURVEYING (FO)

Principles and practices of using basic surveying instruments, error analysis, and note keeping. (Meets 4 hrs. per week.)

### 264 Three Credits INTERMEDIATE SURVEYING (SO)

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 (FO)

PREREQUISITE: TMD 150, TMD 151

A comprehensive study of building, components for light residential construction. It covers all aspects of residential planning and design. The basic planning principles and procedures are presented in detail. Electrical and mechanical systems will be covered to include the efficient use of energy in architecture design. (Meets 6 hrs. per week.)

### 266 Three Credits ARCHITECTURAL DRAFTING (SO)

PREREQUISITES: TMD 150, TMD 151, BCT 265

A comprehensive study of building components for light commercial construction. It covers all aspects of residential planning and design. The basic planning principles and procedures are presented in detail. Electrical and mechanical systems will be covered to include the efficient use of energy in

architecture design. (Meets 6 hrs. per week.)

### 363 Three Credits METHODS OF BUILDING CONSTRUCTION II (FO)

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 (E)

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 (SI)

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 (SO)

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., as well as, blueprint reading techniques.

### 372 Three Credits BUILDING CONSTRUCTION PRACTICES (SI)

Designed to provide practical experiences using the latest techniques in working with masonry, wood, electrical,



## Description of Courses (cont'd)

plumbing, steel and concrete structures.

**376 Three Credits**

### **SOIL MECHANICS (SO)**

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 (SO)**

COREQUISITE: BCT 376

Study of the skills necessary to perform soils testing.

**462 Three Credits**

### **PROBLEM ANALYSIS AND PLANNING (FO)**

PREREQUISITES: BCT 260 and 370

Consideration given to individual problem solving and analysis in specialized areas.

**464 Three Credits**

### **ORGANIZATION AND SUPERVISION OF CONSTRUCTION (FO)**

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 (SO)**

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 - BUS**

**175 Three Credits**

### **INTRODUCTION TO BUSINESS AND ENTREPRENEURSHIP (E)**

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 inter-departments and business functional areas.

**281 Three Credits**

### **LEGAL ENVIRONMENT FOR BUSINESS (EE)**

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.

**300 Three Credits**

### **INTERNSHIP (SI)**

PREREQUISITE: Consent of an Instructor and a Manager in the workplace

Supervised work experience in an approved business environment. Students will submit a proposed work plan to the start of the experience and a paper detailing the experience after its completion.

**330 Three Credits**

### **BUSINESS COMMUNICATIONS (EE)**

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.

**382 Three Credits**

### **COMMERCIAL LAW (SS)**

PREREQUISITE: FNC 281

Introduction to commercial law 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.

**400 Three Credits**

### **INDEPENDENT STUDY (SI)**

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.

## **CHEMISTRY - CHM**

**100 Three Credits**

### **CHEMISTRY: MAN AND ENVIRONMENT (E)**

PREREQUISITES: ENG 101; MATH 103

COREQUISITE: CHM 100L

Survey of the principles and applications of chemistry, designed for non-science majors 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 (E)**

COREQUISITE: CHM 100

Introduction to laboratory techniques in chemistry for the non science majors.

**110 Three Credits**

### **BASIC CONCEPTS IN CHEMISTRY (SI)**

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

## Description of Courses (cont'd)

courses. Designed for students with no chemistry background.

### 119, 120                      Three Credits

#### **GENERAL CHEMISTRY FOR NON-SCIENCE MAJORS (SI)**

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 Ea.

#### **GENERAL CHEMISTRY LABORATORY (SI)**

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 (SI)**

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 (SI)**

COREQUISITE: CHM 200

Laboratory demonstrates concrete examples of the concepts.

### 210                              Three Credits

#### **GENERAL CHEMISTRY FOR ENGINEERS(FO)**

COREQUISITE: MTH 153

General Chemistry for engineering majors, emphasizing theoretical principles necessary for an understanding of the nature of matter and the physical and chemical changes which it undergoes. A good understanding of algebra is needed because of the problem solving nature of much of the work.

### 215, 216                      Three Credits Each

#### **CHEMISTRY (FO) (SI)**

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 Ea.

#### **CHEMISTRY LABORATORY (FO) (SI)**

COREQUISITE: CHM 215, 216

Introduction to laboratory techniques in chemistry. For the Health Science/Exercise Science Majors.

### 221, 222                      Three Credits Each

#### **GENERAL CHEMISTRY I, II (EE)**

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 Ea.

#### **GENERAL CHEMISTRY LABORATORY I, II (EE)**

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 (EE)**

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 (O)**

PREREQUISITE: CHM 222 or 120

Study of organic nomenclature, structure of organic compounds, the classes of organic compounds, and the reactions of organic molecules. A one semester organic chemistry for Health Science Majors.

### 312L                              One Credit

#### **ORGANIC CHEMISTRY LABORATORY (O)**

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 (O)**

PREREQUISITE: CHM 312

COREQUISITE: CHM 313L

Introduction to the structure of molecules in biochemical systems and the reactions involved in their metabolism for Health Science Majors.

### 313L                              One Credit

#### **BIOCHEMISTRY LABORATORY (O)**

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 (EE) (E)**

PREREQUISITE: CHM 222 or 224

COREQUISITES: CHM 321L, 322L

Introduction to the chemistry of carbon-containing compounds, with

## Description of Courses (cont'd)

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 (EE)**

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 (SO)**

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 (SO)**

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 (SO)**

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 (FO)**

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 (FO)**

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 (FO)**

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 Ea.**

#### **SEMINAR (EE)**

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 (FO) (SO)**

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 rests. Covers energy changes accompanying physical and chemical changes. Must be taken in sequence.

### **363L                              Two Credits**

### **PHYSICAL CHEMISTRY LABORATORY (SO)**

COREQUISITE: CHM 361, 362

Typical physicochemical measurements which seek to refine computational skills and experimental techniques. Instrumentation associated with spectroscopy, kinetics, and macromolecular characterization regularly employed.

### **370                                Three Credits**

#### **INDUSTRIAL CHEMISTRY (SI)**

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 Ea.**

#### **INTRODUCTION TO RESEARCH (EE)**

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 (FO) (SO)**

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 (FO) (SO)**

PREREQUISITE: CHM 322L or CHM 323L

Emphasis on the procedures and operations of modern instrumentation used for isolation, purification, and study of

## Description of Courses (cont'd)

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 (SI)**

PREREQUISITE: CHM 432

Study of the biochemical principles and mechanisms as they apply to the disease state.

**451, 452 One Credit Ea.**  
**SEMINAR (EE)**

Presentation and discussion of current topics in all areas of chemistry. Required of all senior chemistry majors.

**461L Two Credits**  
**CHROMATOGRAPHY (SI)**

PREREQUISITE: CHM 332L

Problem solving in separation of mixtures using gas, liquid, column and thin-layer chromatography.

**462L Two Credits**  
**SPECTROSCOPY (SI)**

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 (SI)**

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 (FO)**

PREREQUISITE/ COREQUISITE: CHM 362

Study of chemical bonding, molecular structure, coordination

compounds, and descriptive inorganic chemistry.

**473L Two Credits**  
**ADVANCED INORGANIC CHEMISTRY LABORATORY (FO)**  
 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 (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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.

**497, 498 One Credit Ea.**  
**INTRODUCTION TO RESEARCH (EE)**

PREREQUISITE: Approval of the Instructor Involved Investigation of current problems in chemistry supervised by one of the Chemistry Department instructors. (5 hours per week).

### CHINESE - CHI

**111 Three Credits**  
**ELEMENTARY CHINESE I**

Introduces students to the basic grammar and sentence structures of Chinese and to some aspects of Chinese culture. The course includes reading, speaking, listening, and writing to familiarize students with Chinese as it is used in communication situations of everyday life.

**112 Three Credits**  
**ELEMENTARY CHINESE II**

PREREQUISITE: CHI 111

A continuation of the introduction to Chinese language and culture, with emphasis on the basic skills of understanding, reading, speaking, and writing Chinese.



## Description of Courses (cont'd)

### COMMUNICATION SCIENCES AND DISORDERS PROGRAM - CSD

#### 101 Three Credits ORAL COMMUNICATION ENHANCEMENT (E)

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 (E)

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 (SO)

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 (SO)

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 (FO)

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 (FO)

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 (FO)

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 these materials in clinical practicum activities.

#### 312 Three Credits PHONOLOGICAL, ARTICULATORY AND RELATED LANGUAGE DISORDERS (FO)

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 (FO)

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.

#### 314 Three Credits AUDIOLOGY AND HEARING SCIENCES II (SO)

PREREQUISITES: Introduction to Audiology and Hearing Sciences

Audiology II is a continuation to the introduction to Audiology and hearing sciences. Students identify the various auditory pathologies and their associated audiological manifestations. Assessments of special populations are considered.

#### 315 Three Credits NEUROGENIC AND OTHER ORGANIC COMMUNICATIONS DISORDERS (SO)

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.

## Description of Courses (cont'd)

### **320 Three Credits** **VOICE AND SPEECH SCIENCES (SO)**

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 (FO)**

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 (FO)**

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 (E)**

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 (SO)**

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 (E)**

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 (E)**

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.)

### **420 Three Credits** **DIFFERENTIAL DIAGNOSTIC AUDIOLOGY (SO)**

PREREQUISITE: CSD 314

A comprehensive review of the hearing process in health and disease; the medical aspects of hearing impairment, techniques currently in use to evaluate hearing disorders, treatment and management of patients with advanced types and degrees of auditory pathology.

## **COMPUTER INFORMATION TECHNOLOGY - CIT**

### **204 Three Credits** **DIGITAL LOGIC (SO)**

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 (SO) PREREQUISITES: ELT 212, 212L**

COREQUISITE: CIT 204

Practical experience in designing, building, and testing digital circuits and methods.

### **304 Three Credits** **DIGITAL SYSTEM DESIGN (SO)**

PREREQUISITES: CIT 204, 204L

COREQUISITE: CIT 304L

Study of the building blocks of digital system design: encoders, decoders, comparators,

## Description of Courses (cont'd)

multiplexers, demultiplexers, adders, subtractors, arithmetic logic unit, programmable logic devices and an introduction to microprocessors.

### **304L                      One Credit** **DIGITAL SYSTEM DESIGN (SO)**

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 (FO)**

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 (FO)**

PREREQUISITES: CSC 150; CIT 204, 204L

Practical experience in UNIX commands, windows, utility and diagnostic software and data protection and recovery.

### **315L                      One Credit** **MICROPROCESSOR LABORATORY (EE)**

PREREQUISITE: CIT 304, CIT 304L

COREQUISITE: CIT 315

This course is the laboratory component of CIT 336 Computer Networks I lecture. Students will perform laboratory exercises on such topics as cabling programming network devices and setting up simple networks.

### **335                      Three Credits** **PROGRAMMABLE LOGIC CONTROLLERS (PLC's) (FO)**

PREREQUISITE: MTH 153

Introduction to electrical control devices, control diagrams, and programmable logic controllers

(PLC's) with emphasis on PLC programming and analysis.

### **336                      Three Credits** **COMPUTER NETWORKS TECHNOLOGY (SO)**

The study of the hardware and software aspects of computer and communications networks, topics include cabling, local area networks (LANs) wide area networks (WANs), protocols, standards and the OSI reference model. The setup and programming of switches, routers (distance vector), security devices and other network devices is included.

### **336L                      One Credit** **COMPUTER NETWORKS TECHNOLOGY I LABORATORY (SO)**

COREQUISITE: CIT 336

This course is the laboratory component of CIT 336 Computer Networks I lecture. Students will perform laboratory exercises on such topics as cabling programming network devices and setting up simple networks.

### **432                      Three Credits** **COMPUTER INTERFACES AND PERIPHERAL DEVICES (FO)**

PREREQUISITES: CIT 304, 304L, 315

Study of computer interfaces and peripheral devices, the programming, operation, and interfacing of the microprocessor, 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.

### **432L                      One Credit** **COMPUTER INTERFACES LABORATORY (FO)**

PREREQUISITES: CIT 315, 315L

COREQUISITE: CIT 432

Course consists of individual or small group projects of building a Microprocessor controlled robot.

### **436                      Three Credits** **COMPUTER NETWORKS TECHNOLOGY II (FO)**

PREREQUISITES: CIT 336, CIT 336L

COREQUISITE: CIT 436L

The study of advanced networking concepts. Topics include variable length, subnet masking, link state router protocols, Internet Protocol Version 6 (IPv6), Virtual LANS (VLANs), Asynchronous transfer mode (ATM), Virtual Private Networks, Security, Voice over Internet Protocol (VOIP) and optical networking.

### **436L                      One Credit** **COMPUTER NETWORKS TECHNOLOGY II LABORATORY (SO)**

PREREQUISITES: CIT 336, CIT 336L

COREQUISITE: CIT 436

This course is the laboratory component for CIT 436 lecture. The student will perform laboratory exercises in related to computer network design, development and troubleshooting.

### **499                      Three Credits** **SENIOR PROJECT (SO)**

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.

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## **COMPUTER SCIENCE - CSC**

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### **101                      One Credit** **INTRODUCTION TO THE COMPUTER SCIENCE PROFESSION (FO)**

An introduction to career opportunities for computer scientists and strategies to improve academic performance in the discipline. Course topics include lectures by computer science professionals and



## Description of Courses (cont'd)

seminars on active coping, collaborative learning, pair programming, and the development of inclusive relationships.

**111                      Three Credits**  
**INFORMATION TECHNOLOGY PRINCIPLES (EE)**

An introductory course that exposes students to the academic discipline of Information Technology (IT). Pervasive IT themes; IT history, organizational, social, and ethical issues, and relationship of IT to other computing disciplines will be covered.

**150                      Three Credits**  
**COMPUTER CONCEPTS AND APPLICATIONS (E)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (EE)**

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 (E)**

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.

**170L                      One Credit**  
**COMPUTER PROGRAMMING I LAB (E)**

COREQUISITE: CSC 170

PREREQUISITE: MTH 151

Supplementary course to CSC 170 structured as a closed computer laboratory to complete specific programming tasks within a fixed time.

**192                      One Credit**  
**INTRODUCTION TO THE INTERNET (SI)**

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 (SI)**

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 (E)**

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.

**211                      Three Credits**  
**INFORMATION TECHNOLOGY OPERATING SYSTEMS (EE)**

PREREQUISITES: CSC 111; CSC 260

An introduction to the basics of computer operating systems including file systems, configuration, interprocess communication, security, administration, interfacing, multitasking, and performance analysis.

**251                      Four Credits**  
**INTERNETWORKING III (SI)**

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).

## Description of Courses (cont'd)

### 252 Four Credits

#### INTERNETWORKING IV (SI)

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 (EE)

PREREQUISITE: CSC 170

Introduction to data structures, algorithms and building objects. Topics include linked lists, stacks and queues, recursion and binary trees.

### 260L One Credit

#### COMPUTER PROGRAMMING II LAB (EE)

COREQUISITE: CSC 260

PREREQUISITE: MTH 251

Supplementary course to CSC 260 structured as a closed computer laboratory to complete specific programming tasks within a fixed time.

### 268 Three Credits

#### COMPUTER ORGANIZATION (EE)

PREREQUISITE: CSC 170

Fundamentals of the architecture and operation of modern computers. Computer arithmetic: binary, hexadecimal and decimal number conversions, binary number arithmetic and IEEE binary floating point number standard. Basic computer logic: gates, combinational circuits, sequential circuits, adders, ALU, SRAM and DRAM. Basic assembly language programming, basic Instruction Set Architecture (ISA), and the design of single cycle CPU. The MIPS based computers are used as example architecture, and alternative architectures are also discussed.

### 270 Three Credits

#### DISCRETE STRUCTURES (SI)

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 (EE)

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 (EE)

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.

### 311 Three Credits

#### FUNDAMENTALS OF NETWORKING (EE)

PREREQUISITE: CSC 111

This is an introductory course that covers the basics of how networks work, including the topics of OSI model, Internet model, network components, LANs, WANs, routers, switches, wireless communication, network security, TCP/IP Internet protocols, and network applications such as web and email. It also covers the fundamental aspects of configuring and troubleshooting network features on a Windows or Unix workstation.

### 312 Three Credits

#### TOPICS IN INFORMATION TECHNOLOGY (SI)

PREREQUISITE: CSC 311

Advanced Information Technology topics not generally covered in the curriculum. Designed as a Computer Science Applied Computing elective, not as a replacement for any specific

required course. Course topic and syllabus must be approved by Department Head.

### 313 Three Credits

#### NETWORK ADMINISTRATION (EE)

PREREQUISITE: CSC 311

This is an intermediate-level course for students who are interested in Networking. This course is designed to provide students with essential knowledge and skills that an effective network administrator must possess. It provides an overview of the essential TCP/IP protocols, and discusses how to properly configure and manage the network services based on these protocols (including DNS, DHCP, AD/LDAP directory services, print and file servers, NFS/NIS, and routing services). It also has a hands-on lab component for students to learn how to setup, configure, troubleshoot, and administer these network services in both Windows and Linux/Solaris environments.

### 314 Three Credits

#### ADVANCED INTERNET PROGRAMMING (EE)

PREREQUISITES: CSC 195 and CSC 260

A second Internet programming course concentrating on advanced Internet application development. Creation of relatively sophisticated web pages and application that allow interactions between web page users and the web page as well as network programming, JSP, JDBC, XML processing are the main focus of the course. Different Internet programming language and tools will also be included.

### 360 Three Credits

#### INTERFACE DESIGN AND IMPLEMENTATION (SO)

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.

## Description of Courses (cont'd)

### 361 Three Credits SURVEY OF PROGRAMMING LANGUAGES (EE)

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 (SO) 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 (SI) 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 (SI) 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 (EE) 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.

### 411 Three Credits WEB SERVER ADMINISTRATION (EE)

PREREQUISITE: CSC 313

An introductory course providing individuals with the core skills needed to meet the demands of the Web development and Internet community. The three key skill areas focused in this course are Web management, content management, and technical management.

### 420/ 521 Three Credits DATA BASE PRINCIPLES AND DESIGN (FO) PREREQUISITE: CSC 260

An introductory course emphasizing the basic concepts and principles of database systems. Topics include introduction to database systems and databases, different database system models, basic systems and language support for database systems; relational modes, relational algebra and introduction to relational database design as well as overview of common database system issues.

### 422 Three Credits DATABASE IMPLEMENTATION (SO) PREREQUISITES: CSC 372, CSC 292, CSC 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 (EE) 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.

### 432 Three Credits WIRELESS DATA NETWORKING (FO) PREREQUISITE: CSC 260

An introduction to various wireless data network standards at a

technical level. Emphasis will be on learning wireless network architectures for wireless LANs, wireless PANs, broadband wireless access (BWA) and cellular data networks (3G and beyond).

### 435/ 535 Three Credits COMPUTER SECURITY I (FO)

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.

### 445 Three Credits COMPUTER NETWORK DEFENSE (FO)

PREREQUISITE: CSC 260 or Permission of Instructor

Students will have hands-on analysis of defending computer networks against the common methods and tools used to harm them. Topics covered include the weaknesses of current network topologies, passive and active information gathering and common attack methods including viruses, worms, denial of service attacks, e-mail bombs, and buffer overflow attacks. Ethics and legal implications are also discussed.

### 450 Three Credits ELECTRONIC PUBLISHING (SI) 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 Three Credits OPERATING SYSTEMS (E) 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, multiprocessing, memory management and file systems. Concepts of distributed operating systems are also introduced.

## Description of Courses (cont'd)

### 465 Three Credits MICROCOMPUTERS (SI)

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 Three Credits ADVANCED COMPUTER TOPICS I and II (SI)

PREREQUISITE: Consent of the Instructor

Elective course for Computer Science.

### 468 Three Credits COMPUTER ARCHITECTURE (EE)

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 Three Credits ARTIFICIAL INTELLIGENCE (FO)

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 Three Credits ADVANCED COMPUTER TOPICS III and IV (SI)

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 Three Credits COMPUTER GRAPHICS (SO)

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 Three Credits INDEPENDENT STUDY (E)

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 Three Credits SYSTEMS PROGRAMMING (SO)

PREREQUISITE: CSC 464/ 564

Fundamentals of system and network programming methodology, techniques, system calls and library calls.

### 496/ 596 Three Credits COMPILER CONSTRUCTION (SI)

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 One/ Two Credits COMPUTER SCIENCE SEMINAR I and II (FO) (SO)

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 One Credit CAREER DEVELOPMENT AND LEADERSHIP SEMINAR (EE)

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 Three Credits COOPERATIVE EDUCATION (ACTUAL CO-OP ASSIGNMENT) (E)

Required for all students who have secured a cooperative work assignment through the Career Services/Cooperative Education office, their department, or on their own. The student must register for this course and go to the Career Services/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 Three Credits COOPERATIVE EDUCATION (ACTUAL CO-OP ASSIGNMENT) (E)

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 go 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 Three Credits INTRODUCTION TO CRIMINAL JUSTICE

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 Three Credits JUVENILE DELINQUENCY

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



## Description of Courses (cont'd)

classical works and empirical findings.

### **225                      Three Credits** **LAW ENFORCEMENT**

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                      Three Credits** **INTRODUCTION TO CORRECTIONS**

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 extralegal, and institutional and community-based programs.

### **310                      Three Credits** **CRIMINOLOGY**

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                      Three Credits** **AMERICAN COURT SYSTEMS**

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                      Three Credits** **SOCIOLOGY OF DRUG USAGE**

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                      Three Credits** **TOPICS IN CRIMINAL JUSTICE**

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                      Three Credits** **BUSINESS STATISTICS (E)**

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.

### **376                      Three Credits** **STATISTICS AND QUANTITATIVE METHODS (E)**

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.

## **DESIGN TECHNOLOGY - MECHANICAL - TMD**

### **145                      Three Credits** **ENGINEERING MATERIALS TECHNOLOGY**

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                      Three Credits** **ENGINEERING GRAPHICS**

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. A fresh perspective on using AutoCAD is also introduced.

### **151                      Three Credits** **INTRODUCTION TO CAD** PREREQUISITE: TMD 150

Awareness of computers in engineering design and problem solving, with emphasis on AutoCAD program on microcomputers for engineering graphics at a beginning level of design. Hands-on sessions using personal computers will provide practice to reinforce the concepts and to provide practical experience.

### **225                      Three Credits** **MECHANICS I: STATICS** PREREQUISITE: MTH 153

Develops analytic abilities of various types of force acting on a rigid body at rest with emphasis on systems using algebra and trigonometry, including vectors, couples, equilibrium, centroids, moments, friction and moments of inertia.

### **227                      Three Credits** **DYNAMICS** PREREQUISITE: MTH 184

Introduction to a vector treatment of the kinematics and laws of motion of particles and rigid bodies,

## Description of Courses (cont'd)

including acceleration, momentum, work, energy and power.

### **251 Three Credits**

#### **ADVANCED CAD**

PREREQUISITE: TMD 151

Advanced aspects of CAD using AutoCAD, to produce engineering drawing 2D architecture and mechanical drawings. Special emphasis is placed on 3-D techniques, solid modeling, and rendering. Hands-on sessions using personal computers will provide practice to reinforce the concepts and to provide practical experience.

### **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

Study of behavior of materials when subjected to different loadings and constraints, and the prediction of material behavior in various applications. It covers stress, strain, mechanical properties of materials, axial torsion, bending and shears. Beams, shafts and columns are studied.

### **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.) It will acquaint students with techniques of testing materials, making accurate observations of phenomena and correct interpretations of results.

### **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 MICROECONOMICS (E)**

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 MACROECONOMICS (E)**

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.

## EDUCATION - EDU

### **381 Three Credits**

#### **CLASSROOM AND BEHAVIOR MANAGEMENT (EE)**

PREREQUISITE: Pass Praxis I/ SAT/ ACT

Skills in this course shall contribute to an understanding and application of classroom and behavior management techniques and individual interventions, including techniques that promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational

## Description of Courses (cont'd)

environment. This area shall address diverse approaches based upon behavioral, cognitive, affective, social and ecological theory and practice.

### ELECTRONICS ENGINEERING - EEN

#### 100 Three Credits

##### INTRODUCTION TO ENGINEERING (FO)

The Introduction to Engineering course is an activity-based course with a number of life skills exercises, and hands-on activities integrated into the lectures. The intent of this course is to familiarize students with many of the skills that engineers must perform on a daily basis in the workplace with emphasis on engineering ethics and introductory concepts in electronics and optical engineering.

#### 102 Three Credits

##### ENGINEERING USE OF COMPUTERS (SO)

PREREQUISITE: MTH 153

This course is an introduction to the use of computers to model systems and to solve engineering problems using a high-level language. Flowcharts and algorithms will be used in the process of program design.

#### 201 Three Credits

##### ELECTRICAL NETWORK THEORY I (FO)

PREREQUISITE: PHY 161, PHY 161L, MTH 251

COREQUISITE: EEN 201L

This course is an introduction to the basic principles on DC electrical circuit theory for electronics engineering and technology majors. The focus of the course is the study of methods for analyzing resistive circuits. Circuits incorporating independent and dependent energy sources are studied. Methods covered include: Ohm's Law, Kirchhoff's Laws, nodal analysis, loop analysis, superposition, Thevenin's Theorem, Norton's Theorem, and the maximum power transfer principle. Computer software tools such as MATLAB and Electronics Workbench are utilized as an analysis aid.

#### 201L One Credit

##### ELECTRICAL NETWORK THEORY I LABORATORY (FO)

COREQUISITE: EEN 201

This course provides hands-on experience in constructing, troubleshooting, and testing simple DC electrical circuits. The student experiences circuit theory in action by performing a series of increasingly difficult experiments. Basic instruments, such as the digital multimeter, DC power supply, and laboratory breadboard are introduced and utilized.

#### 202 Three Credits

##### ELECTRICAL NETWORK THEORY II (SO)

PREREQUISITE: EEN 201, EEN 201L

COREQUISITE: EEN 202L

This is the second course in electrical circuit theory for electronics engineering and technology majors. The course provides the student with an understanding of advanced electrical circuit concepts. The following topics are studied: capacitors, inductors, first & second order transient circuits, AC circuit analysis, and power analysis.

#### 202L One Credit

##### ELECTRICAL NETWORK THEORY II LABORATORY (SO)

COREQUISITE: EEN 202

This is the laboratory that accompanies EEN 202 Electrical Networks Theory II. This course provides the student with hands-on experience with advanced electrical circuit components, measurement techniques, and data collection. The student will construct advanced electrical circuits that illustrate principles covered in the lecture. To successfully complete the course, the student will be required to perform a series of experiments of increasing difficulty. A formal report is required for each experiment.

#### 203 Three Credits

##### ELECTRONIC PRINCIPLES (SO)

PREREQUISITE: EEN 201

This is the second electronics engineering course for Optical Engineering majors. This course provides the student with advanced

concepts of circuit theory as well as an introduction to the theory and application of electronic devices.

#### 211 Three Credits

##### MATERIALS SCIENCE AND ENGINEERING (SO)

PREREQUISITE: CHM 221, PHY 161, PHY 161L

This course introduces students in the optical and electronics engineering programs to concepts that are necessary to understand important ideas in materials science and engineering. Also, this course relates these concepts to engineering design and manufacturing of electronic and photonic devices.

#### 231 Three Credits

##### DIGITAL LOGIC DESIGN (SO)

PREREQUISITES: EEN 201, EEN 201L

This course involves the study of number systems, binary arithmetic and codes, Boolean algebraic simplification, Karnaugh Maps, and flip-flops. The design and analysis of synchronous and asynchronous sequential circuits, counters, and shift registers are also studied.

#### 301 Three Credits

##### ENGINEERING ELECTRONICS I (FO)

PREREQUISITE: EEN 202, EEN 202L

COREQUISITE: EEN 301L

This course provides an 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 electronic circuits using PSPICE or an equivalent software will be implemented in this course.

#### 301L One Credit

##### ENGINEERING ELECTRONICS I LABORATORY (FO)

COREQUISITE: EEN 301

This is the laboratory that accompanies EEN 301 Engineering Electronics I. The goal of this course is to provide the student hands-on experience with electronic



## Description of Courses (cont'd)

components such as BJT'S, FET'S and diodes. The student will design and construct electronic circuits that will illustrate principles covered in the lecture. This course includes practical examinations, laboratory experiments, and report preparation.

**302 Three Credits**  
**ENGINEERING ELECTRONICS II (SO)**

PREREQUISITE: EEN 301, EEN 301L

COREQUISITE: EEN 302L

This is the second course in electronics for electronics engineering and technology majors. The goal of this course is to provide the student with an understanding of advanced electronics concepts. The following topics are covered: multi-stage amplifiers, frequency response using Bode plots, feedback, oscillators, and active filters. To successfully complete this course, the student must demonstrate a working knowledge of the concepts covered through assignments and written examinations.

**302L One Credit**  
**ENGINEERING ELECTRONICS II LABORATORY (SO)**

COREQUISITE: EEN 302

This is the laboratory that accompanies EEN 302 Engineering Electronics II. The goal of this course is to provide the student additional hands-on experience with more advanced electronic circuits. The student will construct advanced electronics circuits that will illustrate principles covered in the lecture. To successfully complete this course, the student will be required to perform a series of experiments of increasing difficulty. A formal report is required to be turned in one (1) week after performing an experiment.

**305 Three Credits**  
**SIGNALS & SYSTEMS (FO)**

PREREQUISITES: EEN 202; EEN 202L, MTH 372

This course is an 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 are also studied. A design project is required.

**321 Three Credits**  
**ELECTROMAGNETIC FIELD THEORY (SO)**

PREREQUISITES: PHY 161, PHY 161L, MTH 372

This course involves the study of static and propagating electromagnetic fields, a review of Maxwell's equations, propagation of EM-fields in dielectric materials, transmission theory.

**331 Three Credits**  
**MICROPROCESSORS (FO)**

PREREQUISITES: EEN 231

COREQUISITE: EEN 331L

This course is a study of microprocessors in relation to computers. Description of the architecture of a microprocessor. Buses, memory mapping, registers, flags, interrupts, instruction sets, addressing modes, Macros, timing diagrams, supporting chips, and interfacing are also covered.

**331L One Credit**  
**MICROPROCESSORS LABORATORY (FO)**

COREQUISITE: EEN 331

Procedures for reliable digital microcomputer design, understanding manufacturers' specifications, use of special test equipment, machine representation of numbers, assembler basics, experiments to assemble, debug, and interface with peripherals are studied in this course.

**333 Three Credits**  
**DIGITAL INTEGRATED CIRCUITS (SO)**

PREREQUISITES: EEN 331

COREQUISITE: EEN 302, EEN 302L, EEN 333L

This course involves the study of digital CMOS circuits, MOSFET transistors, combinational circuits, and sequential circuits. The design of simple digital gates and circuits at the transistor level, and simulation of designed circuits for

performance verifications are also studied.

**333L One Credit**  
**DIGITAL INTEGRATED CIRCUITS LABORATORY (SO)**

PREREQUISITES: EEN 331, EEN 331L

COREQUISITES: EEN 302, EEN 333

Laboratory work and a design project are intended to give the students good knowledge of design and verification of CMOS logic circuits. Laboratory exercises to cover CMOS Propagation Delay and Layout Parasitics, Gate Styles, CMOS Arithmetic Blocks, Bipolar Devices, Bipolar Devices Propagation Delay, Very High Speed Combinational Logic, Sequential Circuits, Sequential Circuits and Timing Issues, Memory and Array Structures are also done.

**351 Three Credits**  
**COMMUNICATIONS ENGINEERING (SO)**

PREREQUISITE: EEN 301, EEN 301L, EEN 305

This course consists of the study of the following concepts: amplitude, frequency, phase, frequency modulation, phase modulation, sampling, pulse modification, time division multiplexing, detection, frequency mixing, filters, receivers, transmitters, and noise analysis.

**401 One Credit**  
**ELECTRONICS ENGINEERING SEMINAR (FO)**

PREREQUISITE: Senior Standing

This course provides an introduction to various aspects of engineering practice and engineering ethics.

**411 Three Credits**  
**ENGINEERING ECONOMICS (SO)**

PREREQUISITE: MTH 251, Junior/Senior Standing

This course provides an introduction to economic principles and techniques used in making decisions about the acquisition and retirement of capital goods by government and industry. Special emphasis is given to methods of analysis based on the mathematics of compound interest. Study of time value of money, annual cost,

## Description of Courses (cont'd)

present worth, future value, capitalized cost, along with break-even analysis, valuation, and depreciation, and ethics in economics is covered. The class will also include entrepreneurial topics, such as business plans, sources of capital and marketing strategies.

**451 Three Credits**  
**INTRODUCTION TO WIRELESS COMMUNICATIONS (FO)**

PREREQUISITE: EEN 351

This course will introduce wireless communication technologies. Topics covered include: transmission fundamentals, signal encoding techniques, coding and error control, cellular wireless networks, Mobile IP and wireless access protocols.

**462 Three Credits**  
**SEMICONDUCTOR PROCESSING TECHNOLOGY (FO)**

PREREQUISITES: EEN 301 or EEN 200; EEN 211; or Permission of instructor

This course presents the fundamentals of semiconductor processing technology, including semiconductor substrates, microfabrication techniques, and process integration. Lithography, oxidation, diffusion, ion implantation, methods of film deposition and etching, metal interconnections, measurement techniques and packaging will be discussed.

**463 Three Credits**  
**SEMICONDUCTOR THEORY AND DEVICES (SO)**

PREREQUISITE: EEN 211, EEN 301 or Equivalent

This course presents fundamental semiconductor devices physics and the operation principles of semiconductor devices. It focuses on the operation of devices such as diodes, field effect transistors, and bipolar junction transistors. It also covers optoelectronic devices such as photodetectors, light-emitting diodes, and solar cells.

**471 Three Credits**  
**CONTROL SYSTEMS (FO)**

PREREQUISITES: EEN 302, 302L, 305

Introduction to control systems; mathematical models, feedback control systems characteristics and stability, root locus, frequency responses, stability in the frequency domain analysis.

**498 Three Credits**  
**SENIOR PROJECT I (FO)**

PREREQUISITE: EEN 302, EEN 302L

Seniors in this course will plan, design, and execute various experimental projects. An emphasis is placed on the use of computer simulation to aid in the design process. Preparation of both a report and oral presentation is required. Formal design topics are covered.

**499 Three Credits**  
**SENIOR PROJECT II (SO)**

PREREQUISITE: EEN 498

The final hardware and software design of the senior project is completed in this course. A presentation and final report are required.

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### ELECTRONICS TECHNOLOGY - ELT

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**111 Three Credits**  
**CIRCUIT ANALYSIS I (EE)**

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 (EE)**

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 (EE)**

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 (EE)**

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**  
**ELECTRONIC INSTRUMENTS AND MEASUREMENTS (SO)**

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.

**213 Three Credits**  
**ELECTRONIC DEVICES I (EE)**

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.

## Description of Courses (cont'd)

### 213L One Credit

#### **ELECTRONIC DEVICES I LAB (EE)**

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.

### 310 Three Credits

#### **DIGITAL ELECTRONICS (SO)**

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 (SO)**

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 (FO)**

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 (FO)**

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 (FO)**

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.

### 413 Three Credits

#### **DIGITAL COMMUNICATIONS SYSTEMS (SO)**

PREREQUISITES: ELT 310, 315

Theory of communications systems utilizing digital signals. Includes coding, multiplexing, digital modulation, information codes, and error detection codes.

### 413L One Credit

#### **DIGITAL COMMUNICATIONS SYSTEMS LABORATORY (FO)**

COREQUISITE: ELT 413

This course is the laboratory component for ELT 413 lecture. Students will design, build, and troubleshoot such circuits and systems as modulators, transceivers, line coders, multiplexers, fiber optics and data acquisition systems.

### 416 Three Credits

#### **WIRELESS COMMUNICATIONS SYSTEMS (SO)**

PREREQUISITES: ELT 413, ELT 413L

COREQUISITE: ELT 416L

Theory of communications systems utilizing digital signals. Includes coding, multiplexing, digital modulation, information codes, and error detection codes.

### 416L One Credit

#### **WIRELESS COMMUNICATIONS SYSTEMS LABORATORY (SO)**

PREREQUISITES: ELT 413, ELT 413L

COREQUISITE: ELT 416

This course is the laboratory component for ELT 416 lecture. The student will perform laboratory exercises.

### 499 Three Credits

#### **SENIOR PROJECT (SO)**

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, issuing a formal project proposal, and 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 One Credit

#### **SENIOR PROJECT LAB (SO)**

PREREQUISITES: ELT 313, 313L

COREQUISITE: ELT 499

Individual or small group electronic design projects.

## ELEMENTARY EDUCATION – EED/ECE

### 110 Two Credits

#### **INTRODUCTION TO THE PROFESSION (FO) (SO)**

Introduction to the various fields of education thought and practice with some emphasis on the historical influences on our present system of education. Study includes the role and place of education in preschool and elementary (PreK-3) settings. Lectures, discussions, demonstrations, films, field trips, observation and participation in PreK-3 preschool and elementary school classrooms are provided. This class is conducted as a career decision seminar.

### 201 Three Credits

#### **THE AMERICAN SCHOOLS AND THE TEACHING PROFESSION (FO) (SO)**

This course is an orientation to contemporary elementary schools in America with interview or on-site experiences in diverse classrooms in local schools. Emphasis will be placed upon issues raised in current reform movements, and upon the

## Description of Courses (cont'd)

changing nature of the teaching profession. This course does include a 10 hour observation requirement to be coordinated by the Office of Student Teaching and the course instructor

(see Handbook:  
<http://www.nsu.edu/schools/education/handbk1.pdf>)

**233 Three Credits**  
**CRITICAL THINKING AND ASSESSMENT SKILLS (FO) (SO)**

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-stylus reinforcement.

**274 Three Credits**  
**THE STUDY OF YOUNG CHILDREN (FO) (SO)**

This course is a comprehensive introduction to the growth and development of children from conception to twelve years. It includes an emphasis on the major theories of development with an examination of physical, cognitive, language and social-emotional development for each chronological period. Students are required to spend twelve (12) scheduled hours observing and participating in programs/schools that serve children from age three to twelve years. (Pre-kindergarten through Grade Six) Observational techniques will be discussed.

**324 Three Credits**  
**CHILDREN'S LITERATURE FOR EARLY CHILDHOOD EDUCATION (FO) (SO)**

The scope of this course includes the study of children's literature and an appraisal of its value in meeting the language, cognitive, social emotional, recreational and aesthetic needs of pre-school and primary grade school children. Emphasis will be placed on applying literature selective criteria, methodology and implementation in educational and home settings. Practical experiences will be provided that allow candidates opportunities to observe the implementation of children literature programs in educational settings.

**\*360 Three Credits**  
**CURRICULUM AND INSTRUCTION FOR Primary Grades (Pre-K – 3<sup>rd</sup> Grade) (FO) (SO)**

This course is designed to prepare teachers to implement an effective curriculum for children in grades preK-3. As a prerequisite, you will need to have adequate content knowledge to teach mathematics, science, reading, social studies, physical education, health and technology. The course will assist you in the development of a broad-based educational philosophy, extensive knowledge of human growth and development, practical experience with children, and the ability to digest and interpret a body of research about teaching and learning, creating learning communities, differentiating instruction for all learners, managing the classroom, assessment, the effective use of technology, and working with colleagues and parents. PRAXIS Principles of Learning and INTASC Standards will be covered. Ultimately, the goal is for you to use and apply theoretical and research knowledge to improve learning at the early childhood level.

**362 Three Credits**  
**METHODS AND MATERIALS OF INSTRUCTION IN MATH FOR YOUNG CHILDREN (FO)**

Methods and techniques of teaching mathematics to early childhood school children include preparation and practice with materials in classroom situations. This course is designed especially to meet the needs of elementary school teachers in grades Pre-K-3.

**450 Three Credits**  
**TEACHING LITERACY IN THE ELEMENTARY SCHOOL**

This course is designed to teach pre-service teacher candidates how to prepare children for a lifetime of literacy appreciation and how to diagnose, correct, and remediate mild to moderately severe reading difficulties among children in grades kindergarten through six. Emphasis will be placed on developing students' competencies in teaching oral communication, phonemic awareness, phonics, fluency, vocabulary, text comprehension, and literature appreciation. Teacher

candidates will also be provided with knowledge of ways to utilize various types of media to support literacy in classrooms, including technological media instruction.

**\*461 Three Credits**  
**CURRICULUM AND INSTRUCTION FOR EARLY SCHOOL (Grades 4-6) (FO) (SO)**

Prerequisites: EED 461

Curriculum, instructional processes, learning environments and the professional responsibilities of teachers for linking knowledge of subject fields, pedagogy, classroom management and insights will be the thrust of this course. It will focus on fourth, fifth, and sixth grade curriculum and will also include three major components: Goal, setting, content, and methodology. Candidates are required spend twenty scheduled hours during the semester in a fourth, fifth or sixth grade classroom. They will plan, design, and implement activities. Videotaping of activities/lessons, demonstrations, and classroom simulations will be required.

**465 Three Credits**  
**METHODS AND MATERIALS FOR TEACHING SCIENCE, MATHEMATICS AND TECHNOLOGY (FO)**

Study of methods and techniques of teaching mathematics, science and technology to elementary school children, including preparation and practice with materials in classroom situations; designed especially to meet the needs of primary and elementary school teachers in grades NK-G.

**470 Three Credits**  
**METHODS OF TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (FO) (SO)**

The objective of this course is to provide you, the novice teacher, the knowledge for social studies teaching and learning in the elementary school. Though not exclusive, topics covered will include the what and why of social studies; assessing student learning; planning units, lessons, and activities; effective instructional strategies; and knowledge of social studies content. The course will include a focus on technology



## Description of Courses (cont'd)

integration, the Virginia Standards of Learning, the Virginia teaching standards and the standards proposed by the Association of Childhood Education International, the National Council for the Accreditation of Teacher Education, and the National Council for Social Studies.

### 490 Three Credits DIAGNOSTIC READING (FO) (SO)

PREREQUISITES: EED 450

Preparation for elementary school student teachers to diagnose and 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.

### 495 Nine Credits PRACTICUM (E)

This program is designed to provide a period of supervised experiences during which the prospective teacher of a preschool child, child care, or a Head Start setting takes gradual responsibility for a group of pupils for a definite period of time. The teacher is observed by a university supervisor for a minimum of three times during the experience. This sixteen week practicum experience including a one week observation is a mandatory requirement of the program.

### 499 Twelve Credits DIRECTED TEACHING AND SEMINAR (FO) (SO)

This program is designed to provide two supervised experiences at two levels, PK-3 and 4-6, during which the prospective teacher of grades PK-6 takes gradual responsibility for a group of pupils for a specified period of time. The teacher is observed by a university supervisor a minimum of three times during

each experience. This sixteen week practicum experience including a one week observation is a mandatory requirement of the program.

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

## ENGLISH - ENG

### 100 Four Credits INTRODUCTION TO COLLEGE COMMUNICATION (SI)

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 (SI)

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 (E)

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 (E)

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 (SI)

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 (SI)

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 (SI)

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 (EE)

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 (E)

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 (E)

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

## Description of Courses (cont'd)

**210                      Three Credits**  
**PRACTICAL ENGLISH**  
**GRAMMAR (E)**

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 (FO)**

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 (SI)**

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 (O)**

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 (E)**

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 (E)**

Discipline-specific course designed to provide writing experiences across the curriculum.

**306                      Three Credits**  
**INTRODUCTION TO LITERARY CRITICISM (E)**

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 nondramatic poetry of Shakespeare.

**312                      Three Credits**  
**WRITING IN A GENRE (FO)**

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 (SI)**

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 (FO)**

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 (SO)**

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 (FO)**

Reading selections from the Old and New Testaments and the Apocrypha with emphasis on their literary aspects.

**318                      Three Credits**  
**WRITING POETRY II (O)**  
 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.

**319                      Three Credits**  
**SEVENTEENTH CENTURY ENGLISH LITERATURE**

Critical study of Milton, Donne, the metaphysical and cavalier poets, the Jacobean dramatists, and prose writings of Burton and Brown.

**320                      Two/Three Credits**  
**THE ART OF POETRY**

Analytical study of poetry with emphasis on meaning, technique, and form.

**336                      Three Credits**  
**MODERN ENGLISH AND AMERICAN LITERATURE (SI)**

Study of the major writers of the twentieth century with emphasis on main currents of thought within the century.

**341                      Three Credits**  
**AMERICAN LITERATURE I (FO)**

Survey of American Literature from the Colonial Period to the Civil War.

**342                      Three Credits**  
**AMERICAN LITERATURE II (SO) (SS)**

Survey of American Literature from the Civil War to the present.

**350                      Three Credits**  
**SEMINAR IN LITERARY ANALYSIS AND INTERPRETATION (EE)**

PREREQUISITES: ENG-207 ENG-210 ENG-286 ENG-306

Offers students in-depth instruction in the skills of analysis and interpretation of literary texts to prepare them for thesis-writing. Students practice close reading and analysis of texts in different genres and learn to develop thesis-driven essays about literature.

## Description of Courses (cont'd)

### 383 Three Credits AFRICAN-AMERICAN LITERATURE (E)

PREREQUISITE: Junior Standing or Permission of Instructor.

Survey of African-American literature, including selected African-American writers from slavery to the present time.

### 384 Three Credits AFRICAN-AMERICAN LITERATURE: POETRY (SO)

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.

### 385 Three Credits AFRICAN-AMERICAN LITERATURE: FICTION (FO)

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.

### 387 Three Credits THE TEACHING OF ENGLISH IN SECONDARY SCHOOLS (SI)

PREREQUISITE: Junior or Senior Standing

Study of methods and materials in the teaching of English literature, language, composition, and grammar.

### 400/ 500 Three Credits 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.

### 410 Three Credits HISTORY OF THE ENGLISH LANGUAGE (FO)

Structure and development of the language in England and America with emphasis on historical grammar and linguistic changes with the cultural factors involved.

### 412 Three Credits CHAUCE (FO)

Designed to provide a general acquaintance with The Canterbury Tales, Troilus and Criseyde and some of Chaucer's minor poems.

### 413 Three Credits SHAKESPEARE (EE)

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.

### 416 Three Credits MILTON (SI)

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.

### 419/ 519 Three Credits CONTEMPORARY AMERICAN ENGLISH GRAMMAR (EE)

Survey of the function of American English grammar in modern communication with emphasis on usage, dialectology, stylistics, and aesthetics.

### 420/ 520 Three credits BLACK ENGLISH, DIALECTS, AND LINGUISTIC UNIVERSALS (SI)

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.

### 421 Three Credits EIGHTEENTH CENTURY ENGLISH LITERATURE

Introduction to Addison, Steele, Dryden, Swift, Pope, Johnson, and their contemporaries.

### 430 Three Credits ROMANTIC WRITERS (SI)

Critical study of the development of the Romantic Movement. Special emphasis upon Wordsworth, Coleridge, Byron, Shelly, and Keats.

### 431 Three Credits STUDIES IN THE NOVEL

Study of selected novels of the nineteenth and twentieth centuries from the Continent, England, and the Americas.

### 432 Three Credits AFRICAN AND AFRICAN- AMERICAN NOVEL (SI)

PREREQUISITES: ENG 383 or Permission of Instructor

Detailed study of selected African and African-American novelists and their works.

### 433 Three Credits AFRICAN AND AFRICAN- AMERICAN BIOGRAPHY AND AUTOBIOGRAPHY (SI)

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.

### 435 Three Credits VICTORIAN LITERATURE (SI)

Study of representative British writers from 1837-1901.

### 440 Three Credits SEMINAR IN AFRICAN AND AFRICAN-AMERICAN LITERATURE (SO)

PREREQUISITES: ENG 383 or Permission of Instructor

Study of selected works and authors in the African and African-American tradition.

### 449, COM 549 Three Credits TEACHING OF COMPOSITION (FO)

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.

### 450 Three Credits RESEARCH SEMINAR AND SENIOR THESIS (EE)

Independent research on a topic selected by the student, approved by the departmental advisor and



## Description of Courses (cont'd)

completed under the guidance of the advisor.

**452 Three Credits**  
**LITERATURE FOR CHILDREN (FS)**

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.

**453 Three Credits**  
**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.

**454 Three Credits**  
**YOUNG ADULT LITERATURE (EE)**

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.

**455 Three Credits**  
**LITERATURE AND POPULAR CULTURE (FO)**

Introduction to the systematic study of popular media, focusing on the development of selected print, film, and video genres.

**456 Three Credits**  
**WOMEN'S STUDIES: MYTHS AND IMAGES (SO)**

Exploration of the universal myths that promote certain images of women that relate to their biological function in modern fiction written by women.

**457 Three Credits**  
**MULTIETHNIC FICTION (SI)**

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.

**458 Three Credits**  
**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 the racial, sexual politics influencing their cultural expressions.

**459 Three Credits**  
**INTERNATIONAL WOMEN'S LITERATURE (SI)**

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.

**460/ 550 Three Credits**  
**ASSESSMENT AND EVALUATION OF WRITING (SO)**

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.

**465/ 565 One, Two, Three Credits**  
**SPECIAL TOPICS IN LITERATURE AND LANGUAGE**

Engaging in modern literary or linguistic topics by using a variety of perspectives, disciplines, and related themes.

**475/COM 575 Three Credits**  
**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.

**480 Three Credits**  
**AMERICAN FOLKLORE AND LITERATURE (SI)**

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.

### ENTREPRENEURIAL STUDIES - ENT

**364 Three Credits**  
**MANAGING THE FAMILY BUSINESS (SI)**

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.

**386 Three Credits**  
**NEW VENTURE FINANCE (FO)**  
 PREREQUISITES: FNC 360

In-depth analysis of the process of funding an entrepreneurial venture with a critical examination of the decisions and alternatives on 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 sources such as individuals, angel funds, venture capital, investment banks, government, and commercial banks. Study of how entrepreneurs identify and commit the necessary resources to create and fund ventures.

## Description of Courses (cont'd)

### 387 Three Credits

#### INTRODUCTION TO ENTREPRENEURSHIP (E)

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 (FO)

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 (SI)

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 (SI)

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 (SI)

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 (SI)

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 (SI)

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 (FO)

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 (SO)

COREQUISITES: 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 (SO)

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 (FO)

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 (SO)

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 (FO)

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.

## Description of Courses (cont'd)

**363 Two Credits**  
**CLINICAL ASPECTS OF AGING (FO)**

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 conditions.

**364 Two Credits**  
**TECHNIQUES OF WEIGHT TRAINING & CONDITIONING (SO)**

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 (FO)**

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.

**380 Three Credits**  
**STRESS MANAGEMENT**

This course offers a comprehensive approach to stress management. It will investigate and examine factors that causes stress within our lives and how the stressors can be managed and the use of various relaxation techniques are incorporated.

**430 Three Credits**  
**NEUROLOGICAL AND PATHOLOGICAL FOUNDATIONS IN EXERCISE SCIENCE (FO)**

PREREQUISITES: EXS 447, 447L

Survey of illnesses relating to neurological dysfunction, and the nature and physiological consequence of disease processes for healthy and diseased populations.

**445 Three Credits**  
**THERAPEUTIC MODALITIES (FO)**

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 (SO)**

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 (SO)**

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 (FO)**

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 (SO)**

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 of neurological dysfunction/rehabilitation, orthopedic/rehabilitation, prosthetics, orthotics, respiratory and cardiac dysfunction.

**489 Three Credits**  
**ADVANCED ATHLETIC TRAINING (SO)**

PREREQUISITE: EXS 237

Introduction to injury prevention techniques, specific athletic injuries, and the techniques used to enhance the healing process.

**493 C and D Six Credits Each**

**CLINICAL INTERNSHIP IN EXERCISE SCIENCE (FO) (SO)**

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.

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## FASHION DESIGN - FDM

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**142 Three Credits**  
**INTRODUCTION TO FASHION INDUSTRY (FO)**

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 (EE)**

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 (EE)**

PREREQUISITE: FDM 149 or equivalent

Emphasis on perfecting sewing skills using more challenging patterns and fabrics to create quality garments with an

## Description of Courses (cont'd)

introduction to simple pattern modification techniques.

**151 One Credit**

### **FRESHMAN REVIEW (SO)**

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 (SO)**

Survey of socio-psychological and economic factors affecting selection and use of clothing by individuals and families.

**\*250 Three Credits**

### **PATTERNMAKING I (EE)**

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 Three Credits**

### **DESIGN STUDIO I (EE)**

PREREQUISITES: FDM 149, 150, 250

Introduction to design research. Completion of a full-size, original designed garment or garment ensemble is required.

**253 One Credit**

### **SOPHOMORE DESIGN REVIEW (EE)**

COREQUISITE: FDM 251

Evaluation of competency in the application of apparel line development theory.

**334 Three Credits**

### **TEXTILES (FO)**

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 Three Credits**

### **FASHION FORECASTING & SOURCING (SO)**

Explorations in the use of the Internet and other resources to determine trends and sources

related to fashion apparel and accessories.

**\*365 Two Credits**

### **DESIGN STUDIO II (EE)**

PREREQUISITE: FDM 364

Studio practice in the creation and production of original fashion apparel using computer applications.

**366 Three Credits**

### **APPAREL PRODUCTS EVALUATION (EE)**

PREREQUISITE: FDM 149

Development of visual and verbal precision in the identification, classification, and evaluation of quality in apparel structures.

**368 One Credit**

### **JUNIOR DESIGN REVIEW (SO)**

COREQUISITE: FDM 365

Evaluation of student progress in documenting the professional portfolio in fashion and accessory design.

**373 Three Credits**

### **FASHION HISTORY (EE)**

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 Three Credits**

### **VISUAL MERCHANDISING (EE)**

PREREQUISITES: FIA 114, 180

Study of merchandising displays and promotion with emphasis on store design, in-store visual display and store windows.

**395P Three Credits**

### **FASHION MERCHANDISING PRACTICUM (EE)**

PREREQUISITE: Junior Standing

Developing a field experience plan that results in 75 hours of paid employment in an apparel-related agency.

**\*449 Three Credits**

### **DESIGN COLLECTIONS**

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 Three Credits**

### **CURRENT ISSUES IN FASHION DESIGN/MERCHANDISING (EE)**

PREREQUISITE: Senior Standing

Seminar course in which emerging issues related to the fashion industry will be explored.

**\*495 Three Credits**

### **DESIGN STUDIO III**

PREREQUISITE: FDM 449

Independent study, with faculty guidance and evaluation, resulting in the spring fashion show or gallery exhibition.

**496 Three Credits**

### **FASHION MERCHANDISING INTERNSHIP (EE)**

PREREQUISITE: FDM 395

Two hundred hours of supervised work experiences in an approved apparel retail agency are 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

**310 Three Credits**

### **RISK MANAGEMENT (SO)**

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 Three Credits**

### **CORPORATE FINANCE (E)**

PREREQUISITES: ACC 202; ECN 212

Study of the major finance functions of modern corporations, including



## Description of Courses (cont'd)

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 Three Credits**  
**INVESTMENTS (EE)**

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 Three Credits**  
**FINANCIAL INSTITUTIONS (EE)**

PREREQUISITE: FNC 360

Fundamentals of financial institutions with emphasis on the actual operations and business of commercial banks, mutual savings banks, savings and loan associations, credit unions and other financial institutions.

**372 Three Credits**  
**ENTREPRENEURIAL FINANCE (SI)**

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 Three Credits**  
**PRINCIPLES OF REAL ESTATE (FO)**

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.

**395 Three Credits**  
**INTRODUCTION TO PERSONAL FINANCIAL PLANNING (EE)**

PREREQUISITES: ECN 211, 212

Study of professional manuals in personal financial planning.

**474 Three Credits**  
**INTERMEDIATE FINANCIAL MANAGEMENT (EE)**

PREREQUISITES: FNC 360

This course builds on and reinforces concepts that were introduced in FNC 360. Among the topics covered are risk measurement and management, capital market theory, capital budgeting, valuation, capital structure theory, and dividend policy. This course concentrates on quantitative techniques and financial theory and integrates the discussion of globalization and ethics throughout the course.

**475**  
**TAXES, RETIREMENT, PLANNING AND ESTATE PLANNING**

PREREQUISITES: FNC 363, 395

Study of professional manuals in personal financial planning.

**488 Three Credits**  
**INTERNATIONAL FINANCE (EE)**

PREREQUISITES: ECN 212; FNC 360; Junior Standing

Analysis of the international monetary system and multi-national 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 Three Credits**  
**PORTFOLIO MANAGEMENT**

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.)

**499 Three Credits**  
**CASES IN FINANCIAL MANAGEMENT (EE)**

PREREQUISITE: FNC 474

This is a capstone course for finance majors and is designed to integrate all the material offered under the finance curriculum and reinforce material learned in previous courses. The course uses lectures, class discussion, and case analysis to allow students to synthesize previous course work. Students will work in teams to analyze problems using current technology to resolve financial issues in corporate financial management.

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### FINE ARTS - FIA

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**114 Three Credits**  
**BASIC DESIGN (FO)**

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 Three Credits**  
**BASIC DESIGN II (SO)**

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 Three Credits**  
**BASIC DESIGN III (EE)**

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 Three Credits**  
**DRAWING (FO)**

Development of ability to see and record through the use of a variety

## Description of Courses (cont'd)

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 Three Credits  
DRAWING (SO)**

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 Three Credits  
CERAMICS (FO)**

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 Three Credits  
CERAMICS (SO)**

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 Three Credits  
LETTERING (FO)**

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 Three Credits  
LETTERING (SO)**

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.

**201 Three Credits  
BASIC ART APPRECIATION (E)**

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 (FO)**

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 (SI)**

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 (SI)**

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 (FO)**

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 (FO)**

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 (FO)**

PREREQUISITES: FIA 114; 115; 120; 121

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 (SO)**

PREREQUISITES: FIA 114; 115; 120; 121; 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 (FO)**

Introduction to the basic rules and techniques of sculpture, familiarizing students 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 (SO)**

PREREQUISITE: FIA 240

Introduction to the basic rules and techniques of sculpture, familiarizing students 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 (FO)**

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

## Description of Courses (cont'd)

heavy investments in supplies and professional equipment.

### **251 Three Credits**

#### **BASIC ANIMATION (SO)**

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 (FO)**

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 (FO)**

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 (SO)**

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 (FO)**

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 (SO)**

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 APPLICATIONS IN THE ARTS (E)**

Study of the concepts and skills necessary to explore the use of computers in the arts. Emphasizes intuitive understanding of technical material and encourages artistic experimentation with computer-related ideas.

### **314 Three Credits**

#### **FINE ARTS AND METHODS (SI)**

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 (SI)**

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 (FO)**

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 (SO)**

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 (FO)**

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 (SO)**

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 (FO)**

PREREQUISITES: FIA 140, 141

Opportunity to execute individual programs, making use of stoneware temperature, reduction, and raku firing.

### **341 Three Credits**

#### **INTERMEDIATE CERAMICS (SO)**

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 (SI)**

PREREQUISITES: FIA 220, 221, 250, 251

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."



## Description of Courses (cont'd)

### 351 Three Credits INTERMEDIATE ANIMATION II (SI)

PREREQUISITES: FIA 220, 221, 250, 251, 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 (FO)

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 (FO)

PREREQUISITES: FIA 261, 262

Exploration of the art of lithography and either intaglio or relief prints.

### 362 Three Credits GRAPHIC DESIGN I (FO)

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 (SO)

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 (FO)

Fundamental principles and practices of photography necessary for taking and making excellent prints.

### 366 Three Credits ADVANCED PHOTOGRAPHY (SO)

PREREQUISITE: FIA 365 or Equivalent

Study of composition and perspective in the following categories: advertising, copying, photographic drawings open and slide making (color). Emphasis on lighting, shadows, shape and form.

### 370 Three Credits AFRICAN/AFRO-AMERICAN ART (E)

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 (SI)

Study of contemporary sculptural forms in the following categories: soft sculpture, body adornments, container forms, and wall hangings. Techniques used are wrapping, coiling, weaving, offloom weaving, knot forming, trapunto, and fabric manipulation.

### 373 Three Credits FASHION ILLUSTRATION AND LAYOUT (EE)

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 Three Credits 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.

### 380 Three Credits COMPUTER IMAGING (E)

PREREQUISITE: FIA 280

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.

### 420 Three Credits ADVANCED DRAWING (FO)

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.

### 421 Three Credits ADVANCED DRAWING (SO)

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.

### 434 Three Credits ADVANCED PAINTING (FO)

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.

### 435 Three Credits ADVANCED PAINTING (SO)

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.

### 460 Three Credits ADVANCED GRAPHIC DESIGN (FO)

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.

## Description of Courses (cont'd)

**461 Three Credits**  
**ADVANCED GRAPHIC DESIGN (SO)**

PREREQUISITES: FIA 260, 360, 362, 363

Focus on research and experimentation in specialized visual communication media in a topical studio. Extensive experience in computer graphics required.

**462 Three Credits**  
**DESIGN IN COMMERCE (FO)**

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.

**463 Three Credits**  
**DESIGN IN COMMERCE (SO)**

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.

**470 Three Credits**  
**MODERN ART HISTORY (SO)**

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.

**472 Three Credits**  
**ENAMELING**

Study of master techniques in fusing colored glass to metal surfaces. Experiments conducted with both opaque and transparent enamels on a wide variety of metal surfaces.

**473 Three Credits**  
**JEWELRY MAKING**

Study of the concept of jewelry making with focus on usability and aesthetic quality.

**474 Three Credits**  
**FABRIC PRINTING (SI)**

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.

**491/491A/491B Three Credits**  
**ADVANCED STUDIO PROBLEMS (E)**

PREREQUISITE: Senior Standing

Study of studio problems in drawing, painting, printmaking, graphic design, sculpture, ceramics, and photography.

**492/492A/492B Three Credits**  
**ADVANCED STUDIO PROBLEMS (E)**

PREREQUISITE: Senior Standing or Permission of Chairman

Studio problems in drawing, painting, printmaking, graphic design, sculpture, ceramics, and photography. May be used for one semester major-field-related internship.

**495 Two Credits**  
**PORTFOLIO PREPARATION AND SENIOR EXHIBITION (E)**

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.

### FOOD SCIENCE NUTRITION - FSN

**110 Three Credits**  
**THE SCIENCE OF HUMAN NUTRITION (EE)**

The study of the science of food, the nutrients, and other substances therein, and their action, interaction,

and balance in relation to health and disease. Also, the study of the processes by which the human body ingests, digests, absorbs, transports, utilizes, and excretes food substances.

### FRENCH - FRN

**111 Three Credits**  
**ELEMENTARY FRENCH I (EE)**

Introduction to fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

**112 Three Credits**  
**ELEMENTARY FRENCH II (EE)**

PREREQUISITE: FRN 111 or Equivalent

Introduction to fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

**113 Three Credits**  
**BASIC CONVERSATION I (SI)**

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.

**114 Three Credits**  
**BASIC CONVERSATION II (SI)**

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.)

**211 Three Credits**  
**INTERMEDIATE FRENCH I (SI)**

PREREQUISITE: FRN 112 or Equivalent

Review of grammar, reading moderately difficult prose, oral practice, and written compositions.

**212 Three Credits**  
**INTERMEDIATE FRENCH II (SI)**

PREREQUISITE: FRN 211 or Equivalent

Intensive and extensive study and reading of modern prose, oral practice, and composition.

## Description of Courses (cont'd)

**213 Three Credits**

**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.

**214 Three Credits**

**ENTREPRENEURIAL FRENCH (SI)**

PREREQUISITE: FRN 112

Study of concepts of French business language and culture to prepare them to be competitive in an increasingly global marketplace.

**215 Three Credits**

**INTERMEDIATE CONVERSATION (SI)**

PREREQUISITE: FRN 212 or Equivalent

Practical use of daily conversation with emphasis on idiomatic expressions and acquiring fluency. Conducted largely in French.

**216 Three Credits**

**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.

**220 Three Credits**

**FRENCH CIVILIZATION I (SI)**

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.

**315 Three Credits**

**ADVANCED CONVERSATION (SI)**

PREREQUISITE: FRN 215 or Permission of Instructor

Intensive and extensive practice in the use of oral French. Conducted in French.

**320 Three Credits**

**FRENCH CIVILIZATION II**

PREREQUISITE: FRN 215 or Permission of Instructor

Survey of the most important elements of contemporary French culture. Conducted in French.

**321 Three Credits**

**SURVEY OF FRENCH LITERATURE I (SI)**

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.

**322 Three Credits**

**SURVEY OF FRENCH LITERATURE II (SI)**

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.

All literature courses beyond this level are conducted in French.

**326 Three Credits**

**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.

**330 Three Credits**

**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.

**331 Three Credits**

**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.

**332 Three Credits**

**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.

**333 Three Credits**

**LITERATURE OF THE 20TH CENTURY**

PREREQUISITE: FRN 322

Study of representative authors and works presenting contemporary literary trends.

**382/SPN 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 (SI)**

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.

**413 Three Credits**

**INDIVIDUALIZED LANGUAGE FOR PROFESSIONALS**

PREREQUISITE: FRN 315 or Permission of the Instructor

Intensive practice in the language of technical, vocational or professional areas.

## Description of Courses (cont'd)

### 450 Two Credits

#### PHONETICS (SI)

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 (SI)

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 principle 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.

## GENERAL STUDIES – GST/UNI

### UNI 101 Zero Credit

#### INTRODUCTION TO UNIVERSITY LIFE

Non-credit introduction to university life to enhance students' transition to college. The course is designed to facilitate student adjustment and *social integration* to the University, to develop student understanding of the learning process, and to help students acquire essential academic success skills.

### GST 180 Three Credits

#### CAREER EXPLORATION

This course is designed to help the student develop a plan for choosing an academic major and/or career path. Course assignments and activities will promote self-awareness, decision-making, career/major exploration, and transferable skill development.

### GST 200 Zero Credit

#### STUDY SKILLS SEMINAR

This course is designed to provide students with skills that are essential for successful study. Students will be given strategies to identify academic strengths and weaknesses, manage time, take notes, improve writing, and enhance test-taking skills. Weekly activities will promote utilization of positive study habits.

### GST 345H or 346H Three Credits

#### HONORS SEMINAR

Interdisciplinary topic-driven research course is designed for qualifying Juniors and Seniors in the NSU Honors College. Successful completion of the honors seminar course is required to graduate as a Parsons Vice-Presidential Scholar or a 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 in the NSU Honors College. Successful completion of the honors seminar course is required to graduate as a Parsons Vice-Presidential Scholar or a 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 (EE)

Survey of the basic factors that explain the interactions and adaptations of human beings with their environments. Critical thinking and writing competencies are introduced and emphasized.

### 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 (SI)

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 (SI)

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.



## Description of Courses (cont'd)

### 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 (O)

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.

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## GERMAN - GRM

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### 111 Three Credits ELEMENTARY GERMAN I (SI)

Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

### 112 Three Credits ELEMENTARY GERMAN II (SI)

PREREQUISITE: GRM 111 or Equivalent

Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

### 211 Three Credits INTERMEDIATE GERMAN I (SI)

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.

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## HEALTH EDUCATION - HED

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### 100 Two Credits PERSONAL AND COMMUNITY HEALTH (FO) (SO)

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 (FO)

Study of a basic knowledge necessary for meeting the state's approved professional preparation and responsibilities in the area of health.

### 368/368A Three Credits CURRICULUM AND METHODS IN HEALTH EDUCATION (FO) (SO)

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 (SO)

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.

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## HEALTH INFORMATION MANAGEMENT - HIM

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### 120 Three Credits MEDICAL TERMINOLOGY (EE)

Study of medical terminology including abbreviations, prefixes, suffixes, root words, and technical terms with emphasis on proper spelling and usage.

### 310 Three Credits CURRENT TRENDS IN HEALTH- CARE DELIVERY (FO)

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.

## Description of Courses (cont'd)

### HEALTH REHABILITATION SCIENCES - HRS

#### 120 One Credit INTRO TO HEALTH REHABILITATION AND RELATED SERVICES (E)

PREREQUISITES: None

This course serves to introduce students to the science of health rehabilitation (i.e., physical and mental,) and the health rehabilitation service professions. It includes information on their historical, philosophical, legal, educational, ethical and professional foundations. Students also will be introduced to the scope of rehabilitation practice across a wide variety of public and private settings, both nationally and internationally.

#### 220 Three Credits MEDICAL ASPECTS OF DISABILITY AND CHRONIC ILLNESS (FO)

PREREQUISITES: HRS 120, BIO 105 or higher (with grades of B or better)

Introduction to the structure of medicine in the United States; survey of medical specialties and terminology; survey of body systems; common malfunctions; therapeutic services; and restorative techniques.

#### 230 Two Credits REHABILITATION TECHNOLOGIES (FO)

PREREQUISITES: HRS 120 (with grade of B or better)

Principles and applications of rehabilitative assessment and therapy, with special focus on the use of technology to enhance access to rehabilitation care. Overview of sensorimotor systems, as related to human performance and usability analysis. Models for access engineering and telerehabilitation, with focus on accessible design strategies, telemonitoring and teletherapy, and wireless and augmentative communication technologies will be examined. Rehabilitation biomechanics for seated mobility

and for manipulation tasks will be explored. Innovations in assessment and intervention strategies for neurorehabilitation will also be included, as well as opportunities for hands-on laboratory demonstrations.

#### 320 Three Credits LEGAL AND ETHICAL ASPECTS OF REHABILITATION (SO)

PREREQUISITES: HRS 120, HRS 220 (with grades of B or better)

This course provides a foundation for rehabilitation services and decision-making through examination of client entitlements, eligibility, advocacy and protections. Health care law, public policy, ethics and confidentiality are discussed in this course. The obligations and impact of mandated reporting are also explored. This course will also examine the historical and legislative evolution of rehabilitation in America.

#### 420 Three Credits PSYCHOSOCIAL ASPECTS OF HEALTH REHABILITATION (FO)

PREREQUISITES: HRS 320, (with grades of B or better)

Social and psychological factors related to adjustment or adaptation to a disability and to the provision of rehabilitation services. This course also examines the psychological and social factors related to adjustment and diverse populations, including minorities, women, persons with disabilities, and older adults

#### 430 Three Credits VOCATIONAL ASPECTS OF HEALTH REHABILITATION (FO)

PREREQUISITES: HRS 320 (with grades of B or better)

This course is a survey of vocational aspects of disability, occupational classification as it is practiced in the United States, and career development for persons with disabilities. It examines the vocational impacts of disability, and the methods used to classify work activity, jobs and occupations. Job analysis as an outgrowth and function of occupational classification is explored. Job placement activities, labor market analysis, and post employment

services for persons with disabilities are examined.

#### 440 Three Credits CASE MANAGEMENT IN REHABILITATION (SO)

PREREQUISITES: HRS 230, HRS 320, HRS 420, HRS 430 (with grades of B or better)

This course will assist the student in integrating theory into practice, exploring various treatment strategies and interventions, and examining the relationship between consumer/client and counselor. Emphasis will be in the following specific areas: case management, and rehabilitation counseling procedures and techniques.

### HEALTH RELATED PROFESSIONS – HRP

#### 190 Three Credits INTRODUCTION TO HEALTH PROFESSIONS (EE)

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.

#### 242 Three Credits PHARMACOLOGY FOR HEALTH PROFESSIONS

PREREQUISITE: HIM 120

A survey of the drugs, routes of administration and dosage forms. Individual classes of drugs are examined for identification of usage, effects and contraindications.

#### 290 Three Credits AFRICAN-AMERICAN HEALTH (EE)

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-

## Description of Courses (cont'd)

related historical events and the current economic influences.

### HEALTH REHABILITATION SERVICES – HRS

#### 120 One Credit

##### INTRODUCTION TO HEALTH REHABILITATION AND RELATED SERVICES

This course serves to introduce students to the science of health rehabilitation (i.e., physical and mental,) and the health rehabilitation service professions. It includes information on their historical, philosophical, legal, educational, ethical and professional foundations. Students also will be introduced to the scope of rehabilitation practice across a wide variety of public and private settings, both nationally and internationally.

#### 220 Three Credits

##### MEDICAL ASPECTS OF DISABILITY AND CHRONIC ILLNESS

PREREQUISITES: HRS 120, BIO 105 or higher

Introduction to the structure of medicine in the United States; survey of medical specialties and terminology; survey of body systems; common malfunctions; therapeutic services; and restorative techniques.

#### 230 Two Credits

##### REHABILITATION TECHNOLOGIES

PREREQUISITE: HRS 120

Principles and applications of rehabilitative assessment and therapy, with special focus on the use of technology to enhance access to rehabilitation care. Overview of sensorimotor systems, as related to human performance and usability analysis. Models for access engineering and telerehabilitation, with focus on accessible design strategies, telemonitoring and teletherapy, and wireless and augmentative communication technologies will be examined. Rehabilitation biomechanics for seated mobility and for manipulation tasks will be

explored. Innovations in assessment and intervention strategies for neurorehabilitation will also be included, as well as opportunities for hands-on laboratory demonstrations.

#### 320 Three Credits

##### LEGAL AND ETHICAL ASPECTS OF REHABILITATION

PREREQUISITES: HRS 120, HRS 220

This course provides a foundation for rehabilitation services and decision-making through examination of client entitlements, eligibility, advocacy and protections. Health care law, public policy, ethics and confidentiality are discussed in this course. The obligations and impact of mandated reporting are also explored. This course will also examine the historical and legislative evolution of rehabilitation in America.

#### 420 Three Credits

##### PSYCHOLOGICAL ASPECTS OF HEALTH REHABILITATION

PREREQUISITES: HRS 320

Social and psychological factors related to adjustment or adaptation to a disability and to the provision of rehabilitation services. This course also examines the psychological and social factors related to adjustment and diverse populations, including minorities, women, persons with disabilities, and older adults.

#### 430 Three Credits

##### VOCATIONAL ASPECTS OF HEALTH REHABILITATION

PREREQUISITES: HRS 320, HRS 420

This course is a survey of vocational aspects of disability, occupational classification as it is practiced in the United States, and career development for persons with disabilities. It examines the vocational impacts of disability, and the methods used to classify work activity, jobs and occupations. Job analysis as an outgrowth and function of occupational classification is explored.

Job placement activities, labor market analysis, and post employment services for persons with disabilities are examined.

#### 440 Three Credits

##### CASE MANAGEMENT IN REHABILITATION

PREREQUISITES: HRS 320, HRS 420, HRS 430

This course will assist the student in integrating theory into practice, exploring various treatment strategies and interventions, and examining the relationship between consumer/client and counselor. Emphasis will be in the following specific areas: case management, and rehabilitation counseling procedures and techniques.

### HEALTH SERVICES MANAGEMENT - HSM

#### 300 Three Credits

##### HEALTH SERVICES MANAGEMENT (EE)

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 (EE)

Study of various problems and work settings of a health manager. Visit to various community health facilities required.

#### 310 Three Credits

##### HEALTH PERSONNEL MANAGEMENT (EE)

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 (EE)

Presentation of the historical perspectives, current status, and



## Description of Courses (cont'd)

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 (EE)**

Overview of economic theory and practice in the financial interactions between consumers and providers 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 (EE)**

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 (SO)**

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.

**494 Six Credits**  
**HEALTH SERVICES**  
**MANAGEMENT INTERNSHIP (SS)**

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 Three Credits**  
**HEALTH SERVICES**  
**MANAGEMENT PROBLEMS AND**  
**RESEARCH (SO)**

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 Three Credits**  
**HISTORY OF WORLD**  
**SOCIETIES, PART 1 (E)**

A comparative study of societies and cultures and their interactions from the earliest humans to the sixteenth century. Encourages critical thinking and geographical understanding; offers exercises in writing, discussion, and computer applications.

**101 Three Credits**  
**HISTORY OF WORLD**  
**SOCIETIES, PART 2 (E)**

A comparative study of societies and cultures and their interactions from the sixteenth century to the present, emphasizing modern issues. Encourages critical thinking and geographical understanding; offers exercises in writing, discussion and computer applications.

**102 Three Credits**  
**UNITED STATES HISTORY TO**  
**1865 (E)**

A comprehensive survey of American history from the development of indigenous cultures to the passage of the Thirteenth Amendment in 1865. Encourages critical thinking and geographical understanding; offers exercises in writing, discussion, and computer applications.

**103 Three Credits**  
**UNITED STATES HISTORY 1865**  
**TO PRESENT (E)**

A comprehensive survey of American history from the abolition of slavery in 1865 to the present. Encourages critical thinking and geographical understanding; offers exercises in writing, discussion and computer applications.

**205 Three Credits**  
**INTRODUCTION TO THE STUDY**  
**OF HISTORY (FO)**

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 Three Credits**  
**WESTERN THOUGHT, GLOBAL**  
**CHALLENGES (SI)**

PREREQUISITES: Junior or Senior Standing, or Sophomore with the Permission of the Instructor

Studies the development and characteristics of Western thought and ideologies and their application to modern global issues and challenges. Emphasizes critical thinking, writing, and oral competency.

**320 Three Credits**  
**LATIN AMERICAN HISTORY**  
**SINCE 1820 (SI)**

Survey of the political, social, economic, and cultural history of the Latin American nations since the early nineteenth century.

**325 Three Credits**  
**DIPLOMATIC HISTORY OF THE**  
**UNITED STATES (SI)**

Study of the development of American foreign relations from 1776 to the present with special emphasis on the twentieth century.

**328 Three Credits**  
**HISTORY OF VIRGINIA (O)**

Study of the history of Virginia to appreciate the roles that the Old Dominion has played in the development of the United States.

## Description of Courses (cont'd)

### 330 Three Credits COLONIAL AMERICA (O)

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 Three Credits THE AMERICAN REVOLUTION AND THE FEDERAL ERA, 1763- 1800 (SI)

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 Three Credits THE UNITED STATES: EARLY NATIONAL PERIOD, 1800-1840 (SI)

Study of the Jeffersonian and Jacksonian eras, with special emphasis on economic, political, and social forces shaping American development.

### 333 Three Credits THE CIVIL WAR AND RECONSTRUCTION (SI)

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 Three Credits AFRICAN-AMERICAN HISTORY (E)

Survey of African-American history from its African origins to the abolition of slavery in 1865. Emphasizes critical thinking, writing and oral competency.

### 336 Three Credits AFRICAN-AMERICAN HISTORY (E)

Survey of African-American history from the abolition of slavery in 1865 to the present. Emphasizes critical thinking, writing and oral competency.

### 340 Three Credits FROM ENGLAND TO GREAT BRITAIN, (1485 TO 1832) (O)

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 Three Credits GREAT BRITAIN SINCE 1832 (O)

Study of the rise and fall of Great Britain as the world's leading industrial and imperial power. Focuses also on the effects of decolonization, including African, West Indian, and Asian immigration to the United Kingdom, as well as the making of the welfare state after the Second World War.

### 343 Three Credits EUROPE FROM THE RENAISSANCE TO WATERLOO (SI)

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 Three Credits EUROPE, 1815 TO 1914 (SI)

Examines the balance of power from the Congress of Vienna to the First World War; Examines the rise of liberalism, nationalism, and imperialism. Looks carefully at the spread of representative democracy and industrialization.

### 346 Three Credits TWENTIETH-CENTURY EUROPE (O)

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 Three Credits ANCIENT HISTORY (SS)

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 Three Credits MEDIEVAL HISTORY (SI)

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 Three Credits LATIN AMERICA: ARGENTINA, BRAZIL, AND CHILE (SI)

Analysis of the political, economic, and social histories of these nations, 1810 to present.

### 361 Three Credits LATIN AMERICA: READINGS IN LATIN-AMERICAN HISTORY (SI)

Intensive directed reading for exceptionally able students.

### 362 Three Credits INTRODUCTION TO THE MODERN MIDDLE EAST, PART 1 (FO)

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 Three Credits INTRODUCTION TO THE MODERN MIDDLE EAST, PART 2 (SI)

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 One to Three Credits READINGS IN AMERICAN HISTORY (SI)

Readings and discussions in selected historical problems.

### 365 Three Credits CARIBBEAN AND LATIN AMERICAN HISTORY (SO)

Survey of the political, economic, and social histories of the Caribbean and Latin America from

## Description of Courses (cont'd)

their earliest inhabitants through the end of the twentieth century.

**370                      Three Credits**  
**AFRICAN HISTORY AND CULTURE (FS)**

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                      Three Credits**  
**AFRICAN HISTORY AND CULTURE (SO)**

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                      Three Credits**  
**EAST ASIAN CIVILIZATION (SI)**

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                      Three Credits**  
**EAST ASIAN CIVILIZATION (SI)**

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 NeoConfucianism, and the influence of Chinese culture on feudal Japan.

**375                      Three Credits**  
**CONTEMPORARY ECONOMIC SYSTEM OF CHINA (SI)**

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                      Three Credits**  
**CONTEMPORARY ECONOMIC SYSTEMS OF JAPAN (SI)**

Study of postwar Japan's spectacular economic growth, with emphasis on lessons that Americans can learn from the Japanese experience.

**377                      Three Credits**  
**BLACK LEADERS, THEN AND NOW (SI)**

Survey of the role of Black leaders in American history from the period of exploration and discovery to the present.

**380                      Three Credits**  
**AMERICAN MILITARY HISTORY (E)**

Study of the development of the American military establishment, policies, and strategies from the American Revolution to the present.

**410                      Three Credits**  
**AMERICAN CONSTITUTIONAL HISTORY (SI)**

Study of 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.

**411                      Three Credits**  
**TWENTIETH-CENTURY RUSSIA (SI)**

Study of the background of the 1917 revolution, the emergence of the USSR, and its impact upon other nations.

**418                      Three Credits**  
**SOUTHERN HISTORY (SI)**

Survey of the 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 (SI)**

Focus on the diversity of America's population, the factors that shaped the coming of various people to America, their adjustments to a new homeland, and the contributions that various groups have made.

**438                      Three Credits**  
**THE UNITED STATES FROM THE 1890s TO 1932 (SI)**

Study of the impact of industrialism, urbanization, racial problems, foreign policy, and World War I upon American society.

**439                      Three Credits**  
**THE UNITED STATES FROM 1932 TO PRESENT (SO)**

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. This required course for majors reinforces and emphasizes student competencies in writing, speaking and critical thinking.

**446                      Three Credits**  
**LATIN AMERICA: THE COLONIAL PERIOD (O)**

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 (SI)**

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 (SI)**

Study of German history from the TransAlpine Renaissance and the

## Description of Courses (cont'd)

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 (SI)**

Study of political, cultural, and military development under Bismarck and William II, the First World War, defeat, and republican government; Nazism, the Second World War and defeat; partition, the postwar struggle to regain prestige and reunification.

**475 Three Credits**  
**EMERGENCE OF MODERN CHINA (13681911) AND MODERN JAPAN (18671921) (SI)**

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 (SI)**

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 (SI)**

Opportunities to study and examine historical problems of special interest.

**494 Three Credits**  
**INTERNSHIP (SI)**

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 (FO)**

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. This required course for majors reinforces and applies student competencies in writing, speaking, and critical thinking.

**501 Three Credits**  
**TOPICS IN AMERICAN HISTORY (O)**

Lecture or seminar topics to be selected by course instructor.

**502 Three Credits**  
**TOPICS IN EUROPEAN HISTORY (O)**

Lecture or seminar topics to be selected by course instructor.

**503 Three Credits**  
**TOPICS IN NON-WESTERN HISTORY (O)**

Lecture or seminar topics to be selected by course instructor.

**504 One-Three Credits**  
**WORLD HISTORY TOPICS FOR WORLD HISTORY TEACHERS (O)**

This course will feature selected topics of particular interest in world history to local teachers and school districts.

**516 Three Credits**  
**AMERICA AND THE RISE OF THE CITY: 1865 TO THE PRESENT (O)**

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 megropolis.

### HUMANITIES - HUM

**210 Three Credits**  
**HUMANITIES (FO)**

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 Three Credits**  
**HUMANITIES (SO)**

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 MANAGEMENT TECHNOLOGY - IMT

**170 One Credit**

**INTRODUCTION TO TECHNOLOGY (EE)**

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.

**205 Three Credits**  
**INDUSTRIAL SAFETY AND MANAGEMENT (EE)**

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 Three Credits**  
**INDUSTRIAL SPECIFICATIONS AND TECHNICAL DOCUMENTATION (EE)**

PREREQUISITE: ENG 102

Development of proficiency in writing technical reports through collecting, organizing, and presenting materials in specialized areas.

**303 Three Credits**  
**INTERNSHIP IN TECHNOLOGY (EE)**

Experience in developing and refining skills that requires 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



## Description of Courses (cont'd)

theory and content in the specialty program.

### **340 Three Credits ENGINEERING ECONOMICS (FO)**

Evaluation of engineering alternatives by quantitative methods. Application to problems in depreciation of assets, their replacement analysis, break-even points, increment costs, and production alternatives.

### **410 Three Credits FIRSTLINE SUPERVISION AND FOREMANSHIP (EE)**

Study of a management development for business, industrial, and institutional supervisors. Emphasis on motivation, leadership, decision-making, and supervisory skills.

### **411 Three Credits INVENTORY MANAGEMENT (FO)**

Study of inventory classifications, inventory control, optimum inventory, and future trends in inventory management.

### **412 Three Credits INFORMATION SYSTEMS FOR TECHNOLOGISTS (EE)**

This course focuses on how managers can apply knowledge of IT tools to solve technical problems and find new opportunities to improve their organizations. Problems relating to security, risk analysis, telecommunications, human-machine interaction, database management and artificial intelligence are addressed.

### **413 Three Credits PROJECT MANAGEMENT (EE)**

A thorough coverage of the all aspects of managing a project. The process covered by the course include: project planning, organizing, creating project organization control and final project completion activities. Participant should gain a concrete understanding and foundation to successfully manage every phase of the project life cycle, work within organizational cost constraints, set goals linked directly to stakeholder needs, and utilize proven project management tools to complete the project on time and within budget.

### **415 Three Credits INDUSTRIAL MAINTENANCE MANAGEMENT (SI)**

PREREQUISITES: IMT 205

Identification and appraisal of industrial maintenance management functions, organizational problems, and practices. Consideration given to key factors for optimizing maintenance efficiency and effectiveness.

### **420 Three Credits LABOR AND INDUSTRIAL RELATIONS (SO)**

Discussion of why 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 (SI)**

Methods, materials, tools and equipment of industry for purposes of improvement and standardization.

### **425 Three Credits PLANT LAYOUT AND MATERIAL HANDLING (SI)**

The fundamental theories, practices, and methods for design of manufacturing facilities; materials handling equipment and services.

### **445 Three Credits STATISTICAL QUALITY CONTROL (EE)**

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.

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## INTERDISCIPLINARY STUDIES - INT

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### **308 Three Credits INTRODUCTION TO INTERDISCIPLINARY STUDIES (E)**

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 (E)**

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 (E)**

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 (E)**

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

## Description of Courses (cont'd)

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 (E)**

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 (EE)**

Critical survey of the historical forces behind globalization-its promises, its impact on world culture, its tensions and opportunities, its biases and challenges and its shortcomings. Areas of theoretical concern include: Wallenstein's World-system Theory (WT), Clark's Global System Paradigm (GSP), and Dogbe's Geosociology Paradigm (GP). These paradigms are employed to critically investigate geo-social, geo-political, and global economic structures that influence contemporary inter-human activities, global intercommunications and technologies, human welfare, cultural diversity, education, world citizenship, outsourcing of labor, and the draining of knowledge and specialized skills from the developing nations.

**470 Three Credits**  
**SENIOR SEMINAR (EE)**

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 with normative perspectives grounded in configured traditional thought.

**477 Three Credits**  
**SENIOR THESIS (EE)**

PREREQUISITES: INT 308, 322, 360, 375, 411, 412, 470

Holistic, integrative research processes that accommodate concepts, language and paradigms of various disciplines using quantitative 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 (SI)**

Introduction to reading, writing, pronunciation, grammar, structure, vocabulary, and conversation.

**112 Three Credits**  
**ELEMENTARY JAPANESE II (SI)**

PREREQUISITE: JPN 111 or Equivalent

Introduction to reading, writing, pronunciation, grammar, structure, vocabulary, and conversation.

**113 Three Credits**  
**JAPANESE CULTURE (SI)**

Survey of aspects of culture and language of both traditional and modern Japan.

**211 Three Credits**  
**INTERMEDIATE JAPANESE I (SI)**

PREREQUISITE: JPN 112 or Equivalent

Review of grammar, reading of moderately difficult prose, oral practice, and written composition.

**212 Three Credits**  
**INTERMEDIATE JAPANESE II (SI)**

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 (FO)**

Introduction to the basic principles of advertising and its practice.

**220 Three Credits**  
**BASIC WRITING (EE)**

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 (EE)**

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 (SO)**

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 (SI)**

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 (FO)**

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

## Description of Courses (cont'd)

other methods to examine interactions between societal conditions and mediated reality.

### 313 Three Credits

#### ADVERTISING/PUBLIC CAMPAIGNS (SI)

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 (SI)

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 (EE)

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 (SI)

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 (FO)

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 (SO)

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.

### 493, 495 Three Credits

#### INTERNSHIP OR PRACTICUM (EE)

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 (SI)

PREREQUISITES: Consent of Instructor, Advisor and Department Head

Individual study and/or research in journalism under the guidance of a journalism instructor.

## KOREAN – KOR

### 111 Three Credits

#### ELEMENTARY KOREAN I

Introduces students to the basic grammar and sentence structures of Korean and to some aspects of Korean culture. The course includes reading, speaking, listening, and writing to familiarize students with Korean as it is used in communication situations of everyday life.

### 112 Three Credits

#### ELEMENTARY KOREAN II

PREREQUISITE: KOR 111

A continuation of the introduction to the Korean language and culture with emphasis on the basic skills of understanding, reading, speaking, and writing Korean.

## LATIN - LAT

### 111 Three Credits

#### ELEMENTARY LATIN (SI)

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 (EE)

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

### 350 Three Credits

#### THE ETHICS OF MANAGEMENT (SO)

PREREQUISITES: BUS 175 and Junior Standing

This course will focus on issues and perspectives of right and wrong in American business. Students will survey various philosophical approaches, values, moral reasoning, and social responsibility to determine ethical behavior and morality. These approaches will be applied to real world cases drawn from the various functional area or business.

### 365 Three Credits

#### ORGANIZATIONAL BEHAVIOR AND THEORY (E)

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



## Description of Courses (cont'd)

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 (E)**

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.

**370 Three Credits**

### **TOTAL QUALITY MANAGEMENT (SO)**

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.

**410 Three Credits**

### **LEADERSHIP AND DIVERSITY IN MANAGEMENT (SO)**

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 (FO)**

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 (SO)**

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 (SI)**

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's solution. Development of total quality-based solutions to the specific case studies.

**430 Three Credits**

### **LABOR RELATIONS AND COLLECTIVE BARGAINING (FO)**

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 (FO)**

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.

**476 Three Credits**

### **OPERATIONS MANAGEMENT (E)**

PREREQUISITE: DSC 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.

**478 Three Credits**

### **STRATEGIC MANAGEMENT (E)**

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.

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## **MANAGEMENT INFORMATION SYSTEMS - MIS**

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**284 Three Credits**

### **ADVANCED MICROCOMPUTING (E)**

Exploration of complex spreadsheet problems, sensitivity analyses, and the use of database management systems within microcomputer software.

**288 Three Credits**

### **PRINCIPLES OF E-BUSINESS (SI)**

PREREQUISITES: BUS 175, MIS 284

This course introduces the processes involved with planning, starting, operating, and marketing an e-business in today's environment. Timely topics such as creating business plans, securing financing, marketing, payment methods, Web site development, Web technologies, and e-business security are discussed.

**372 Three Credits**

### **BUSINESS APPLICATIONS IN VISUAL C++ (SO)**

PREREQUISITE: MIS 284

Application of the object model through C++ providing the necessary tools to design and

## Description of Courses (cont'd)

implement business applications using C++'s Visual Workbench/IDE.

**374 Three Credits**  
**BUSINESS APPLICATIONS IN VISUAL BASIC (EE)**

PREREQUISITE: MIS 284

Study of Visual Basic development, language syntax, and programming in an event-driven environment.

**375 Three Credits**  
**MANAGEMENT INFORMATION SYSTEMS AND E-COMMERCE (E)**

PREREQUISITE: MIS 284

Study of functional information systems, e-commerce concepts, and ethical issues in MIS and E-Commerce.

**378 Three Credits**  
**BUSINESS APPLICATIONS IN JAVA (EE)**

PREREQUISITE: MIS 284

An introduction to JAVA as an object-oriented language used to write JAVA applets and applications. Business examples incorporating multimedia, multithreading, networking, object-oriented concepts of: abstraction, encapsulation, inheritance, polymorphism, persistence, and dynamic binding.

**390 Three Credits**  
**BUSINESS DATABASE MANAGEMENT (EE)**

PREREQUISITE: MIS 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 (EE)**

PREREQUISITE: MIS 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.

**415 Three Credits**

**WEB APPLICATION DEVELOPMENT FOR E-BUSINESS (EE)**

PREREQUISITES: MIS 372 or MIS 374 or MIS 378

Study of current technologies for designing and developing web based e-business applications. Topics include Active Server Pages, Scripting Languages, database integration, and others.

**419 Three Credits**  
**NETWORKING (EE)**

PREREQUISITE: MIS 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.

**423 Three Credits**  
**DECISION SUPPORT AND EXPERT SYSTEMS (EE)**

PREREQUISITE: MIS 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**  
**SENIOR DEVELOPMENT PROJECT (EE)**

PREREQUISITES: MIS 415

Application of computer programming, and system development concepts, principles, and practices to comprehensive system development projects. Use of project management methods, project scheduling and control techniques, formal presentations, and walk-throughs in the solution of information systems problems.

### MANUFACTURING TECHNOLOGY - ITM

**147 Three Credits**

**INTRODUCTION TO MANUFACTURING PROCESSES (FO)**

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.

**353 Three Credits**  
**COMPUTER NUMERICAL CONTROL AND COMPUTER-AIDED MANUFACTURING (SO)**

PREREQUISITES: ITM 147; CSC 170; MTH 153

Development of insight into the advantages of computer numerical control systems manufacturing tools and techniques. The course will examine process planning, machine types, control systems, tooling and fixturing, and programming and operation of CNC lathes and mills.

### MARKETING - MKG

**366 Three Credits**  
**PRINCIPLES OF MARKETING (E)**

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 BEHAVIOR (SO)**

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.

## Description of Courses (cont'd)

**411 Three Credits**  
**SALESMANSHIP (E)**

PREREQUISITE: MKG 366; Junior Standing

Study of the principles and techniques of personal selling and sales presentations including sales policies and the problems involved.

**412 Three Credits**  
**MARKETING MANAGEMENT (FS)**

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 Three Credits**  
**PRINCIPLES OF RETAILING (SO)**

PREREQUISITE: MKG 366

Provide a basic understanding of the challenges and opportunities involved in the operations of retail business. Major areas of discussion include types of retail institutions, retail locations management, international retailing and the legal and ethical aspects of operating retail business.

**414 Three Credits**  
**ADVERTISING AND PROMOTION MANAGEMENT (SS)**

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 Three Credits**  
**NICHE MARKETING (SO)**

PREREQUISITE: MKG 366

Study of the economic, social, and psychological characteristics of various target markets 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 Three Credits**  
**INTERNATIONAL MARKETING (O)**

PREREQUISITE: MKG 366

Analysis of marketing principles relating to international marketing organizations, marketing channels, channels of distribution, selling, and pricing.

**418 Three Credits**  
**INTERNET MARKETING (O)**

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 Three Credits**  
**MARKETING SEMINAR (SI)**

PREREQUISITE: MKG 366

Discussion of topics related to the field of marketing.

**497 Three Credits**  
**MARKETING RESEARCH STRATEGIES AND OPPORTUNITIES (FO)**

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.

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### MASS COMMUNICATIONS - MCM

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**211 Three Credits**  
**SOCIETY AND MASS COMMUNICATIONS (EE)**

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 Three Credits**  
**RADIO BROADCASTING (SI)**

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 Three Credits**  
**TELEVISION PRODUCTION (EE)**

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 Three Credits**  
**INTRODUCTION TO MEDIA WRITING (EE)**

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 Three Credits**  
**HISTORY AND APPRECIATION OF MOTION PICTURES (FO)**

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 Three Credits**  
**HISTORY OF MASS COMMUNICATIONS (SO)**

PREREQUISITE: MCM 211

Study of the origin and development of mass media in the United States. Emphasis on the press, radio, television and motion pictures

## Description of Courses (cont'd)

**315 Three Credits**  
**INTERVIEWING AND INFORMATION GATHERING (FO)**

PREREQUISITE: MCM 211

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 Three Credits**  
**ELEC. FIELD PRODUCTION AND EDITING (FO)**

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 Three Credits**  
**TV DIRECTING (FO)**

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 Three Credits**  
**INTRODUCTION TO BROADCAST AND FILM CRITICISM (SO)**

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 Three Credits**  
**SPORTS BROADCASTING (SI)**

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 Three Credits**  
**BROADCAST NEWS WRITING AND REPORTING (SO)**

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 Three Credits**  
**AUDIO PRODUCTION (FO)**

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 Three Credits**  
**COMPARATIVE MASS MEDIA SYSTEMS (SO)**

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 Three Credits**  
**RADIO AND TELEVISION ANNOUNCING (FO)**

PREREQUISITE: MCM 211; 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 Three Credits**  
**LAW AND MASS COMMUNICATIONS (EE)**

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 Three Credits**  
**ETHICS IN MEDIA (SO)**

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 Three Credits**  
**MASS COMMUNICATIONS THEORY AND RESEARCH (SO)**

PREREQUISITE: ENG 303; 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 Three Credits**  
**CONTEMPORARY ISSUES AND SPECIAL PROBLEMS (FO)**

PREREQUISITES: MCM 211; ENG 203

Analysis of current issues and problems in mass media including the roles of media, ethics in media, media criticism, the role of the media and the marketing concept.

**464 Three Credits**  
**ADVANCED TV PRODUCTION (FO)**

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 comedic program or segment required.

**470/570 Three Credits Each**  
**BROADCAST/CABLE PROGRAMMING (SO)**

PREREQUISITE: Upper-Class Standing

Introduction to the field of telecommunications (broadcast, cable, and satellite) programming as it relates to programming history



## Description of Courses (cont'd)

and development, structure and formats, program strategies, research, regulation and operating practices.

**476 Three Credits**

### **BROADCAST SALES (FO)**

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 Three Credits**

### **MEDIA TECHNOLOGIES (FO)**

PREREQUISITE: Senior Standing

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 Three Credits**

### **MEDIA MANAGEMENT (FO)**

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 Three Credits**

### **SPECIAL TOPICS IN MEDIA (SO)**

Opportunities to study and examine media-related and special-interest issues in culture, society, history, economy and politics.

**491 Three Credits**

### **INTRODUCTION TO THE INTERNET: WEB PAGE DESIGN (EE)**

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.

**493, 494 Three Credits Each**

### **PRACTICUM (WNSB) (EE)**

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 (EE)**

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**

FOR ALL PREREQUISITES: GRADE 'C' OR HIGHER

**101 Three Credits**

### **ELEMENTARY ALGEBRA (E)**

Developmental approach for students whose backgrounds indicate a need for further review of arithmetic and basic algebra. Mathematics laboratory required. (Credits usually do not count toward the mathematics requirements of a student's major.)

**103 Three Credits**

### **CONTEMPORARY MATHEMATICS (E)**

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 (E)**

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 (E)**

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 (E)**

PREREQUISITE: MTH 131 or 151 (Grade: C or higher)

Introduction to elementary calculus including limits, continuity, differentiation, integration, and applications in business.

**141 Three Credits**

### **ELEMENTS OF MATHEMATICS FOR TEACHERS I (EE)**

PREREQUISITE: MTH 103 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. Computer-based laboratory component with manipulatives included.

**142 Three Credits**

### **ELEMENTS OF MATHEMATICS FOR TEACHERS II (EE)**

PREREQUISITE: MTH 141 or the Equivalent

Continued treatment of the modern mathematics curricula for prospective school teachers. Emphasis on geometry and measurement.

## Description of Courses (cont'd)

**151                      Three Credits**  
**COLLEGE ALGEBRA (E)**

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. Topics include algebraic operations, equations and inequalities, graphs and functions, polynomial and rational functions, and system of linear and non-linear equations.

**153                      Three Credits**  
**COLLEGE ALGEBRA AND TRIGONOMETRY (E)**

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. Topics include exponential and logarithmic functions, trigonometric functions, graphs of trigonometric functions, trigonometric identities and equations, and solving oblique triangles using the laws of sines and cosines.

**184                      Four Credits**  
**CALCULUS I (E)**

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 (SO)**

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; geometry; algebra;

trigonometry; calculus; and modern mathematics.

**250                      Three Credits**  
**ELEMENTARY STATISTICS CONCEPTS (SO)**

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 (E)**

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 (EE)**

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 (E)**

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 (SO)**

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 (SO)**

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 (SI)**

PREREQUISITE: MTH 251

Theoretical study of the properties of the integers including prime numbers, congruencies, continued fractions, Euclidean Algorithm, factorization, and Diophantine equations.

**331                      Three Credits**  
**ALGEBRAIC STRUCTURES (FO)**

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 (EE)**

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 (SO)**

PREREQUISITE: MTH 351

Second of a two-semester sequence of probability and mathematical statistics, primarily for majors. Topics include applications of probability, descriptive statistics, random samples, point estimators and their properties, tests of hypotheses, confidence intervals, and the comparison of two populations.

## Description of Courses (cont'd)

### 355 Three Credits

#### INTRODUCTION TO REGRESSION ANALYSIS (SI)

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 (EE)

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 (EE)

PREREQUISITE: MTH 251

A first course in ordinary differential equations. Topics include first-order equations, higher order linear differential equations, and the Laplace transform. Applications include growth/decay models, electric circuits, and the vibrational models.

### 373 Three Credits

#### ADVANCED VECTOR CALCULUS (EE)

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 (FO)

PREREQUISITE: MTH 372

A junior-level introduction to applications of mathematics designed for mathematics, computer science, and engineering

majors. Topics include Fourier Series, Laplace transforms, Sturm-Liouville problems, and Bessel functions.

### 384 Three Credits

#### MATHEMATICAL MODELING IN THE SCIENCES (SO)

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 (FO)

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 (SO)

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 (SO)

PREREQUISITE: MTH 331

Continuation of MTH 331. Topics include a more advanced discussion of groups, rings, fields, homomorphism, isomorphism, and automorphism.

### 451 Three Credits

#### STATISTICAL THEORY I (SI)

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.

### 454 Three Credits

#### EXPERIMENTAL DESIGNS (SI)

PREREQUISITE: MTH 352

Topics to be covered include single factor experiments, residuals, randomized block designs, general factorials, blocking, regression models, unbalanced data, confounding blocks, and Taguchi experiments.

### 457 Three Credits

#### STATISTICAL THEORY II (SI)

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.

### 473 Three Credits

#### INTRODUCTION TO REAL ANALYSIS (FO)

PREREQUISITE: MTH 251

A rigorous introduction to the analysis of real-valued functions of a real variable. Topics include types of proofs, real numbers, theory of sequences and limits of functions, continuity, differentiability, sequences and series of functions, uniform convergence, and Riemann integrals.

### 474 Three Credits

#### COMPLEX VARIABLES (SO)

PREREQUISITE: MTH 251

Treats the fundamentals of analytic function theory. Topics include algebra and geometry of the complex numbers, limits,



## Description of Courses (cont'd)

derivatives, Cauchy-Riemann equations, Cauchy's Theorem, Taylor and Laurent series, and contour integration.

**484 Three Credits**

### TOPICS IN APPLIED MATHEMATICS (SO)

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.

**491, 492 One to Twelve Credits**

### INDEPENDENT STUDY (SI)

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.

**496/497 Two Credits Each**

### MATHEMATICS SEMINAR (FO) (SO)

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 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.

**500 Three Credits**

### 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.

**501 Three Credits**

### MATHEMATICS FOR COMPUTING

PREREQUISITE: MTH 184

Introduction to the mathematics of computer science including mathematical logic, informal set theory, relations, functions, and networks.

**501A Three Credits**

### 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.

**505 Three Credits**

### 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.

**510 Three Credits**

### DISCRETE MATHEMATICS

PREREQUISITE: MTH 310

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.

**511 Three Credits**

### 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.

**520 Three Credits**

### 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.

**531 Three Credits**

### TOPICS IN ABSTRACT ALGEBRA

PREREQUISITE: MTH 331

Special emphasis on ring and field theory. Independent research project required.

**540 Three Credits**

### 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.

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## MEDICAL TECHNOLOGY - MDT

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**306 Two Credits**

### PHLEBOTOMY (E)

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)

**308 Two Credits**

### URINALYSIS/BODY FLUIDS (SO)

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)

**315 Four Credits**

### CLINICAL HEMATOLOGY (FO)

Introduction to the study of blood cells and blood-forming organ cells in the peripheral blood, bone marrows, and reticuloendothelial tissue; hematopoiesis; normal

## Description of Courses (cont'd)

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)

### **325 Four Credits**

#### **CLINICAL CHEMISTRY I (FO)**

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)

### **373 Five Credits**

#### **CLINICAL MICROBIOLOGY I (FO)**

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).

### **395 Four Credits**

#### **HEMATOLOGY/COAGULATION PRACTICUM (E)**

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.

### **396 Four Credits**

#### **IMMUNOHEMATOLOGY PRACTICUM (E)**

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.

### **397 Zero Credit**

#### **SEROLOGY PRACTICUM (E)**

Application of the immunological and serological procedures utilized

in the clinical laboratory under the direction of a proficient technologist. Examinations required.

### **410 Four Credits**

#### **IMMUNOLOGY AND SEROLOGY (FO)**

Introduction to the study of antigens, antibody reactions, basic immune mechanisms, and their manifestations. Presentations on current immunological concepts and molecular diagnostic concepts and their application in the diagnosis, prevention, and treatment of infectious and noninfectious disease processes. The laboratory component is used to investigate "in vitro" antigen-antibody reactions and the serological procedures used in the diagnosis of disease states. (3-hrs. lecture/2 hrs. laboratory)

### **425 Four Credits**

#### **CLINICAL CHEMISTRY II (SO)**

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)

### **450 Four Credits**

#### **CLINICAL HEMATOLOGY II (SO)**

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)

### **455 Four Credits**

#### **IMMUNOHEMATOLOGY (SO)**

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)

### **473 Four Credits**

#### **CLINICAL MICROBIOLOGY II (SO)**

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 isolate and identify these microorganisms. (3 hrs. lecture/2 hrs. laboratory)

### **475 One Credit**

#### **MEDICAL TECHNOLOGY SEMINAR (SO)**

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 Two Credits**

#### **CLINICAL LABORATORY ADMINISTRATION (FO)**

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.

## Description of Courses (cont'd)

**495 Four Credits**

**CLINICAL MICROBIOLOGY PRACTICUM (E)**

Rotation through the clinical microbiology laboratory, incorporating instruction and examinations in bacteriology, mycology, parasitology, and virology under the supervision of a clinical specialist.

**496 Four Credits**

**CLINICAL CHEMISTRY PRACTICUM (E)**

Rotation through the chemistry laboratory incorporating instruction and examinations in routine chemistry and special chemistry under the supervision of a clinical specialist.

**497 Zero Credit**

**URINALYSIS PRACTICUM (E)**

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.

### MEDICAL TECHNOLOGY - MDT

**306 Two Credits**

**PHLEBOTOMY (E)**

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)

**308 Two Credits**

**URINALYSIS/BODY FLUIDS (SO)**

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)

**315 Four Credits**

**CLINICAL HEMATOLOGY (FO)**

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)

**325 Four Credits**

**CLINICAL CHEMISTRY I (FO)**

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)

**373 Five Credits**

**CLINICAL MICROBIOLOGY I (FO)**

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)

**395 Four Credits**

**HEMATOLOGY/COAGULATION PRACTICUM (E)**

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.

**396 Four Credits**

**IMMUNOHEMATOLOGY PRACTICUM (E)**

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.

**397 Zero Credit**

**SEROLOGY PRACTICUM (E)**

Application of the immunological and serological procedures utilized in the clinical laboratory under the direction of a proficient technologist. Examinations required.

**410 Four Credits**

**IMMUNOLOGY AND SEROLOGY (FO)**

Introduction to the study of antigens, antibody reactions, basic immune mechanisms, and their manifestations. Presentations on current immunological concepts and molecular diagnostic concepts and their application in the diagnosis, prevention, and treatment of infectious and noninfectious disease processes. The laboratory component is used to investigate "in vitro" antigen-antibody reactions and the serological procedures used in the diagnosis of disease states. (3-hrs. lecture/2 hrs. laboratory)

**425 Four Credits**

**CLINICAL CHEMISTRY II (SO)**

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)

**450 Four Credits**

**CLINICAL HEMATOLOGY II (SO)**

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

## Description of Courses (cont'd)

disorders. Hemostasis and coagulation disorders will be presented. Laboratory exercises to diagnose disorders of hemostasis included. (3 hrs. lecture/2 hrs. laboratory)

**455 Four Credits**  
**IMMUNOHEMATOLOGY (SO)**

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)

**473 Four Credits**  
**CLINICAL MICROBIOLOGY II (SO)**

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 isolate and identify these microorganisms. (3 hrs. lecture/2 hrs. laboratory)

**475 One Credit**  
**MEDICAL TECHNOLOGY SEMINAR (SO)**

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 Two Credits**  
**CLINICAL LABORATORY ADMINISTRATION (FO)**

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 Four Credits**  
**CLINICAL MICROBIOLOGY PRACTICUM (E)**

Rotation through the clinical microbiology laboratory, incorporating instruction and examinations in bacteriology, mycology, parasitology, and virology under the supervision of a clinical specialist.

**496 Four Credits**  
**CLINICAL CHEMISTRY PRACTICUM (E)**

Rotation through the chemistry laboratory incorporating instruction and examinations in routine chemistry and special chemistry under the supervision of a clinical specialist.

**497 Zero Credit**  
**URINALYSIS PRACTICUM (E)**

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.

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### MILITARY SCIENCE - MSL

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**101 Two Credits**  
**FUNDAMENTALS OF LEADERSHIP/MANAGEMENT (FO)**

MSL 101 introduces cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. Focus is placed on developing basic knowledge and comprehension of Army Leadership Dimensions while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

**101D One Credit**  
**BASIC DRILL AND CEREMONY MODULE (FO)**

PREREQUISITE: MSL 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 Two Credits**  
**FUNDAMENTALS OF LEADERSHIP/MANAGEMENT (SO)**

MSL 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Continued emphasis is placed on recruitment and retention of cadets. Cadre role models and the building of stronger relationships among the cadets through common experience and practical interaction are critical aspects of the MSL 102 experience.

**102D One Credit**  
**BASIC DRILL AND CEREMONY MODULE (SO)**

PREREQUISITE: MSL 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 Two Credits**  
**APPLIED LEADERSHIP/MANAGEMENT (FO)**

MSL 201 explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Cadets practice aspects of personal motivation and team building in the context of planning, executing, and



## Description of Courses (cont'd)

assessing team exercises and participating in leadership labs.

Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties and basic aspects of land navigation and squad tactics. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment (COE).

**201D                      One Credit**  
**BASIC DRILL AND CEREMONY**  
**MODULE (FO)**

PREREQUISITE: MSL 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 (SO)**

MSL 202 examines the challenges of leading tactical teams in the COE. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. MSL 202 provides a smooth transition into MSL 301. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real world scenarios.

**202D                      One Credit**  
**BASIC DRILL AND CEREMONY**  
**MODULE (SO)**

PREREQUISITE: MSL 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**  
**(FO)**

PREREQUISITES: MSL 101, 102, 201, and 202 or Placement Credit

MSL 301 challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, cadets continue to develop their leadership and critical thinking abilities.

The focus is developing cadets' tactical leadership abilities to enable them to succeed at ROTC's summer Leadership Development and Assessment Course (LDAC).

**301D                      One Credit**  
**ADVANCED DRILL AND**  
**CEREMONY MODULE (FO)**

PREREQUISITE: MSL 301

Practical application of land navigation, physical training, marksmanship, small-arms training, and squad and platoon tactics. (Leadership Laboratory is required for continued advancement in ROTC.)

**302                      Three Credits**  
**ADVANCED**  
**LEADERSHIP/MANAGEMENT**  
**(SO)**

PREREQUISITE: MSL 301

MSL 302 uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading small units. Skills in decision-making, persuading and motivating team members when "under fire" are explored, evaluated, and developed. Aspects of military operations are reviewed as a means of preparing for the ROTC Leader Development and Assessment Course (LDAC). Cadets are expected to apply basic principles of the Law of Land Warfare, Army training, and motivation to troop leading procedures. Emphasis is also placed on conducting military

briefings and developing proficiency in Garrison operation orders. MSL 302 cadets are evaluated on what they know and do as leaders.

**302D                      One Credit**  
**ADVANCED DRILL AND**  
**CEREMONY MODULE (SO)**

PREREQUISITE: MSL 302

Practical application of land navigation, physical training, marksmanship, 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**  
**LEADERSHIP ASSESSMENT**  
**DEVELOPMENT COURSE (SS)**

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 (FO)**

PREREQUISITES: MSL 301, 302

MSL 401 develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to Army officers. MSL IV cadets analyze, evaluate, and instruct cadets at lower levels. Both their classroom and battalion leadership experiences are designed to prepare MSL 401 cadets for their first unit of assignment. They identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates.

**401D                      One Credit**  
**ADVANCED DRILL AND**  
**CEREMONY MODULE (FO)**

PREREQUISITE: MSL 401

Practical application of the development of leadership skills to ensure the successful transition from Cadet to Second Lieutenant.

## Description of Courses (cont'd)

Successful completion of 411D is required for commissioning.

### 402 Three Credits

#### THEORY AND DYNAMICS OF MILITARY TEAM (SO)

PREREQUISITE: MSL 401

MSL 402 explores the dynamics of leading in the complex situations of current military operations in the COE. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with nongovernmental organizations, civilians on the battlefield, and host nation support. The course places significant emphasis on preparing cadets for their first unit of assignment. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare cadets to face the complex ethical and practical demands of leading as commissioned officers in the United States Army.

### 402D One Credit

#### ADVANCED DRILL AND CEREMONY MODULE (SO)

PREREQUISITE: MSL 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

#### INDEPENDENT STUDIES (EE)

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

### 100 Zero Credit

#### APPLIED MUSIC (E)

MINOR COURSE: Open to nonmajors by permission of Department only.

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.)

### 101 Zero Credit

#### APPLIED MUSIC (E)

MAJOR COURSE: Open to nonmajors by permission of Department only.

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 Ea.

#### ENSEMBLE (E)

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 nonmajors by audition. Each course carries One Credit Hour.

### 112, 113 One Credit Ea.

#### PERFORMANCE WORKSHOP (E)

Hands-on experiences in performing individual works.

#### APPLIED MUSIC

### 121,122A One Credit Ea.

#### VOICE (E)

PREREQUISITE: Placement or MUS 100

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

#### APPLIED MUSIC

### 121, 122B One Credit Ea.

#### PIANO (E)

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; sightreading.

#### APPLIED MUSIC

### 121, 122C One Credit Ea.

#### ORGAN (E)

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).

#### APPLIED MUSIC

### 121, 122D One Credit Ea.

#### BRASS (E)

PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

#### APPLIED MUSIC

### 121,122E One Credit Ea.

#### WOODWIND (E)

PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

#### APPLIED MUSIC

### 121, 122F One Credit Ea.

#### STRINGS (E)

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 Ea.

#### APPLIED MUSIC - PERCUSSION (E)

PREREQUISITE: Placement or MUS 100

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

## Description of Courses (cont'd)

**APPLIED MUSIC****123, 124                      One Credit Ea.****PERFORMANCE CLASS (E)**

Seminar for Music Education students.

**APPLIED MUSIC****125, 126A                      Two Credits Each****VOICE (E)****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.

**APPLIED MUSIC****125, 126B                      Two Credits Each****PIANO (E)****PREREQUISITE:** Placement or MUS 101

Study of major scales (24 octaves), hands together, minor scales, hands separate; selected studies of Czerny, Hanon, Burgmuller, sonatinas of Clementi, Kuhlau, Beethoven; seventh arpeggio.

**APPLIED MUSIC****125, 126C                      Two Credits Each****ORGAN (E)****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's "Eight Little Preludes and Fugues," the "Orgelbuchlein;" and preBach compositions.

**APPLIED MUSIC****125, 126D                      Two Credits Each****BRASS WINDS (E)****PREREQUISITE:** Placement or MUS 101

Study of the fundamentals of trumpet playing including: breath control, proper attack, formation of embouchure; elementary exercises from Araban, 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: Slamagg Studies, Rochut Melidous Studies, Remington Warmups; 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 Angelicas" by Franck.

**APPLIED MUSIC****125, 126E                      Two Credits Each****WOODWINDS (E)****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.

**APPLIED MUSIC****125, 126F                      Two Credits Each****STRING (E)****PREREQUISITE:** Placement or MUS 101

Study of basic violin technique, lefthand 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.

**APPLIED MUSIC****125, 126G                      Two Credits Each****PERCUSSION (E)****PREREQUISITE:** Placement or MUS 101

Rudiment studies from the Gardner's Complete Method for Percussion; selected snare drum solos from the HaskellHarr Collection; major scales on marimba with alternating sticks; study of other instruments of the percussion family.

**131, 132                      Two Credits Each****MUSIC LITERATURE (FO) (SO)****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 (E)**

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****SIGHTSINGING AND EAR TRAINING (E)**

Study of Theory I, II including sightsinging; melodic and harmonic dictation; scales, intervals and triads; and the analyzation f melodies.

**143                              Three Credits**  
**PROGRESSIVE HARMONY (SO)**

Practice in writing and analyzing contemporary chord progressions with emphasis on keyboard skills, eartraining, 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 (E)**

Study of Theory I, II including partwriting, keyboard harmony, and harmonic analysis from triads and their inversions through nonh



## Description of Courses (cont'd)

armonic tones, the dominant seventh chord and its inversions, secondary dominant, and other chords. (Meets three hours per week.)

**151 Two Credits**

### **ELEMENTARY CONDUCTING (FO)**

PREREQUISITES: MUS 141, 145

Introduction to the art of conducting with emphasis on mastery of fundamental beat patterns.

**161 One Credit**

### **STRING CLASS (FO)**

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 Ea.**

### **ENSEMBLES (E)**

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 (E)**

Hands-on experiences in performing individual works. (Meets one hour per week.)

### **APPLIED MUSIC**

**221,222A One Credit Ea.**

### **VOICE (E)**

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

### **APPLIED MUSIC**

**\*221, 222B One Credit Ea.**

### **PIANO (E)**

Study of major and minor scales; arpeggios, technical exercises and studies continued; selected compositions; sightreading, transposition, harmonization of simple melodies; folk and patriotic songs. Passing of the Piano Facility Examination required.

### **APPLIED MUSIC**

**221, 222C One Credit Ea.**

### **ORGAN (E)**

Plan of study to be followed will be similar to the foregoing outline, but the expected rate of completion will be about onehalf that of the organ major. To receive credit for MUS 121 (Organ), for instance, the student would be required to complete approximately onehalf of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) would require the completion of all material outlined for MUS 125.

### **APPLIED MUSIC**

**221,222D One Credit Ea.**

### **BRASS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### **APPLIED MUSIC**

**221,222E One Credit Ea.**

### **WOODWINDS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### **APPLIED MUSIC**

**221,222F One Credit Ea.**

### **STRINGS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### **APPLIED MUSIC**

**221,222G One Credit Ea.**

### **PERCUSSION (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

**223,224 One Credit Ea.**

### **PERFORMANCE CLASS (E)**

Once a week seminar for Music Education students.

### **APPLIED MUSIC**

**225,226A Two Credits Each**

### **VOICE (E)**

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).

### **APPLIED MUSIC**

**225, 226B Two Credits Each**

### **PIANO (E)**

Study of major scales (4 octaves); minor scales (24 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 TwoPart Inventions; selected compositions of other periods. Passing of the Piano Facility Examination required.

### **APPLIED MUSIC**

**225, 226C Two Credits Each**

### **ORGAN (E)**

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.

### **APPLIED MUSIC**

**225, 226D Two Credits Each**

### **BRASS WINDS (E)**

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 sightreading; harmonization using primary triads; melodic transposition.

### **APPLIED MUSIC**

**225, 226E Two Credits Each**

### **WOODWINDS (E)**

Emphasis on technical development, finger all tone control; Giampieri Caprices; Kroepsch Daily Studies, major scales in thirds.

## Description of Courses (cont'd)

### APPLIED MUSIC

**225, 226F**                      **Two Credits**  
**Each**

#### STRINGS (E)

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.

### APPLIED MUSIC

**225, 226G**                      **Two Credits**  
**Each**

#### PERCUSSION (E)

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 (E)

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**

#### SIGHTSINGING AND EAR TRAINING (E)

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 (E)

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 (E)

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 sociohistorical influences relating to the outstanding composers of this time.

**260**                              **One Credit**

#### BAND INSTRUMENT SURVEY (SO)

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 (SO)

Development of the skills necessary for teaching instruments of the percussion family on the elementary and intermediate levels through practical experience. (Meets two hours per week.)

**265**                              **Three Credits**

#### PRACTICAL APPLICATION IN ELECTRONIC MUSIC (FO)

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 (FO)

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 (FO)

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 (SO)

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 (E)

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.

### ENSEMBLE

**310, 311 (E)**                      **One Credit Ea.**

Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

### PERFORMANCE WORKSHOP

**312, 313**                      **One Credit Ea.**

#### PERFORMANCE WORKSHOP (E)

Hands-on experiences in performing individual works (Meets one hour per week)

### APPLIED MUSIC

**321, 322A**                      **One Credit Ea.**

#### VOICE (E)

Continuation of MUS 221, 222C

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

### APPLIED MUSIC

**321, 322B**                      **One Credit Ea.**

#### PIANO (E)

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.

### APPLIED MUSIC

**321, 322C**                      **One Credit Ea.**

#### ORGAN (E)

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

## Description of Courses (cont'd)

required to complete approximately onehalf of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) requires the completion of all material outlined for MUS 125 (Organ).

### APPLIED MUSIC

**321, 322D**                      **One Credit Ea.**  
**BRASS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**321, 322E**                      **One Credit Ea.**  
**WOODWINDS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**321,322F**                      **One Credit Ea.**  
**STRINGS (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**321, 322G**                      **One Credit Ea.**  
**PERCUSSION (E)**

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**325, 326A**                      **Two Credits**  
**Each**  
**VOICE (E)**

Advanced study of greater technical difficulty; development of interpretation; repertoire 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.

### APPLIED MUSIC

**325, 326B**                      **Two Credits**  
**Each**  
**PIANO (E)**

Major and minor scales and arpeggios at increased speeds; scales in thirds; continued technical studies with exercises transposed to various keys; sightreading of more difficult accomplishments; compositions of the level of Bach Two and ThreePart Inventions, French and English Suites, Well Tempered Clavier, sonatas of Haydn, Mozart, Beethoven; selected compositions from Romantic and contemporary periods.

### APPLIED MUSIC

**325, 326C**                      **Two Credits**  
**Each**  
**ORGAN (E)**

Technical study continued as needed; repertoire selected from each of the major periods of organ composition with particular emphasis on proper styles in the following: preBach, J.S. Bach, Romantic, contemporary European and American.

### APPLIED MUSIC

**325, 326D**                      **Two Credits**  
**Each**  
**BRASS WINDS (E)**

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.

### APPLIED MUSIC

**325, 326E**                      **Two Credits**  
**Each**  
**WOODWINDS (E)**

Emphasis on performance repertoire; Recital Literature for clarinet, Stubbins, Vols. I, II, III, IV; one selection from the standard sonata repertoire; all scales, major, minor and chromatic; diminished arpeggios.

### APPLIED MUSIC

**325, 326F**                      **Two Credits**  
**Each**  
**STRINGS (E)**

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.

### APPLIED MUSIC

**325, 326G**                      **Two Credits**  
**Each**  
**PERCUSSION (E)**

Study of all scales in thirds and sixths on marimba; selected threestick marimba solos; timpani solos and difficult snare drum solos from HaskellHarr.

**331, 332**                      **Two Credits**  
**Each**

### MUSIC HISTORY (FO) (SO)

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 (SO)

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 (SO)

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.

## Description of Courses (cont'd)

### 345 Three Credits (DELETE)

#### FORM AND ANALYSIS (SO)

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 (SO)

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 (SO)

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 (FO)

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 (SO)

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 (FO)

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 (SO)

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.

### 367 Three Credits PRO TOOLS (FO)

Course is computer software instructional training sponsored by Digidesign that supports hands-on digital audio editing. Pro Tools 101 is designed to prepare students for intermediate digital audio editing in home and commercial studios.

### 368 Three Credits AVID XPRESS

This course is designed to teach students how to edit professional-quality video programs on Avid Xpress Pro or Avid Express DV, with hands-on practice, using documentary and dramatic footage. The course will provide editing skills that build successful careers in television, film, and broadcast news.

### 369 Three Credits PRO TOOLS 110

PREREQUISITE: MUS 365, MUS 367

This course is the second level of the four prerequisite courses that leads to certified operator status offered by Digidesign. The course covers all advance techniques of post production digital audio editing.

### 383 Two Credits METHODS IN PUBLIC SCHOOL MUSIC (SO)

PREREQUISITES: Completion of all Music courses in the Freshman and Sophomore Years; SED 201, 405, 420 486; 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 (SO)

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.)

#### APPLIED MUSIC

#### 410, 411 (E) One Credit Ea.

Ensembles available, Instrumental: University Bands; University/Community Orchestra; Small Ensembles: brass jazz, percussion, saxophone, string, guitar, woodwind; Vocal: Concert Choir and Jazz Choir.

#### PERFORMANCE WORKSHOP

#### 412 One Credit

#### PERFORMANCE WORKSHOP (E)

Hands-on experiences in performing individual works (Meets one hour per week.)

#### 421, 422A (E) One Credit Ea.

Emphasis on correct vocal production and exploration of a variety of representative vocal literature.

#### APPLIED MUSIC

#### 421, 422B One Credit Ea.

#### PIANO (E)

Study of major and minor scales; arpeggios, technical exercises and studies continued; selected compositions; sightreading, transposition, harmonization of simple melodies; folk and patriotic songs. Passing of the Piano Facility Examination required.

#### APPLIED MUSIC

#### 421, 422C One Credit Ea.

#### ORGAN (E)

Continuation of MUS 321, 322C

Plan of study to be followed is similar to the foregoing outline, but the expected rate of completion is about onehalf that of the organ major.

To receive credit for MUS 121 (Organ), for instance, the student is



## Description of Courses (cont'd)

required to complete approximately onehalf of the material outlined for MUS 125 (Organ); completion of MUS 122 (Organ) requires the completion of all material outlined for MUS 125 (Organ).

### APPLIED MUSIC

**421, 422D**      **One Credit Ea.**

#### BRASS (E)

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**421, 422E**      **One Credit Ea.**

#### WOODWINDS (E)

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**421, 422F**      **One Credit Ea.**

#### STRINGS (E)

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**421, 422G**      **One Credit Ea.**

#### PERCUSSION (E)

Emphasis on correct tone production and playing techniques. Exposure to a variety of literature for the particular minor instrument.

### APPLIED MUSIC

**425, 426A**      **Two Credits Each**

#### VOICE (E)

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.

### APPLIED MUSIC

**425, 426B**      **Two Credits Each**

#### PIANO (E)

Study of all major and minor scales, arpeggios, and studies executed with good technical mastery at approximately 100 to 120 MM. quarter note; advanced sightreading; compositions

representative of advanced literature from different periods; preparation for senior recital or senior examination.

### APPLIED MUSIC

**425, 426C**      **Two Credits Each**

#### ORGAN (E)

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.

### APPLIED MUSIC

**425, 426D**      **Two Credits Each**

#### BRASS WINDS (E)

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. 15. Solo literature: Trumpet Tune; Clark; Trumpet Voluntary; etc. Preparation for senior recital or senior examination.

### APPLIED MUSIC

**425, 426E**      **Two Credits Each**

#### WOODWINDS (E)

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, sightreading of advanced literature.

### APPLIED MUSIC

**425, 426F**      **Two Credits Each**

#### STRINGS (E)

Studies from Kreutzer Etudes 2442; Schradieck's Technical Violin School; preparation for senior recital or senior examination.

### APPLIED MUSIC

**425, 426G**      **Two Credits Each**

#### PERCUSSION (E)

Three or four stick marimba solos from HaskellHarr, Marimba solos; timpani solos using three and four timpani; difficult snare drum solos; preparation of senior recital or senior jury examination.

**440**      **Three Credits**

#### LEGAL PROTECTION FOR MUSIC AND MUSICIANS (SO)

Survey of the field of music law including performance and recording royalties, contract, performing rights organization, musical copyright procedures, and publication.

**448**      **Two Credits**

#### ARRANGING (SO)

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**      **Two Credits**

#### NAVAL ORIENTATION

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

## Description of Courses (cont'd)

officer and enlisted rank and rating structures, procurement and recruitment, training and education, promotion and advancement, and retirement policies.

### **102 Three Credits SEAPOWERS AND MARITIME AFFAIRS**

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 Three Credits NAVAL SHIP SYSTEMS I (ENGINEERING)**

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 Three Credits NAVAL SHIPS SYSTEMS II (WEAPONS)**

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 Six Credits NAVIGATION AND NAVAL OPERATIONS I AND II**

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 Three Credits THE EVOLUTION OF WARFARE**

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 Three Credits LEADERSHIP AND MANAGEMENT**

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 Three Credits LEADERSHIP AND ETHICS**

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 Three Credits AMPHIBIOUS WARFARE**

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**

**One Credit Ea.**

### **NAVAL LABORATORIES**

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 Three Credits CNA–RN BRIDGE**

Provides a transition course for the certified nursing assistant to the role of registered nurse by focusing on identified nursing content that is included in nursing theory and practice basic to preparation of the nurse with an Associate Degree.

### **150, 150L Seven Credits FUNDAMENTAL CONCEPTS OF NURSING**

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.

### **153 Three Credits FUNDAMENTAL PHARMACOLOGICAL SKILLS**

Promotes the development of skills necessary for the safe preparation and administration of medications to patients of all ages. Focus on the metric, apothecary, and household systems of measurements, calculation of drug dosages and practice in the safe administration of medications.

### **160, 160L Seven Credits CLINICAL NURSING I**

PREREQUISITES: NUR 150, 150L, 153;

Introduction to the design and implementation of systems of nursing assistance for individuals who are experiencing potential and/or actual difficulties in maintaining physiological homeostasis. Development of plans of care based on a comprehensive nursing assessment of individuals throughout the life span and

## Description of Courses (cont'd)

implementation of nursing interventions designed to restore homeostatic equilibrium.

### 170 Three Credits

#### CARE OF THE INDIVIDUAL WITH EMERGENT AND CHRONIC DISORDERS

PREREQUISITES: NUR 150, 150L, 153, 160, 160L;

Focus on nursing assistance to individuals of all ages who are experiencing self-care deficits associated with emergent and chronic disorders. The role of significant others in the care and treatment of emergent and chronic disorders is discussed. Emphasis is placed on the application of the nursing process for clients who are experiencing ongoing deviations from wellness.

### 199 Three Credits

#### LPN-RN BRIDGE

Provides a transition course for the LPN to the RN. Focuses on identified nursing content that is included in nursing theory and practice basic to preparation of the Associate Degree nurse.

### 272 One Credit

#### CONTEMPORARY TRENDS IN NURSING PRACTICE

PREREQUISITES: All Freshman Level Courses and NUR 275

This course is a survey of nursing practice, its development, present trends and implications for the future. Orientation to the structure of organized nursing, employment opportunities, legal 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. The course focuses on nursing assistance to individuals of all ages with increasingly complex self-care deficits. Emphasis is placed on the application of the nursing process to clients experiencing altered self-concept, altered body image, loss, and selected situations of chronicity.

### 285, 285L Nine Credits

#### CLINICAL NURSING III

PREREQUISITES: NUR 275, 275L; BIO 163, 165, 166; PSY 210

Focus on nursing assistance to individuals of all ages experiencing self-care deficits associated with major states of homeostatic disequilibrium. Emphasis is placed on the application of the nursing process for clients who are experiencing complex multiple stressors.

### 287 Two Credits

#### SEMINAR

PREREQUISITES: Completion of all Freshman Level Nursing Courses and NUR 275.

Small group work in which common nursing problems are identified and solutions are devised. Successful completion of the course is dependent upon passing a comprehensive examination.

### 321 Three Credits

#### MULTICULTURAL/BIO ETHICS

Study of the differences and similarities of culturally diverse people with regard to health and illness. Emphasis on clarification of personal values and an appreciation for the values that underpin health decisions made by the consumers of health care.

### 362, 362L Six Credits

#### ESSENTIALS OF NURSING: SKILLS AND RELATED CONCEPTS

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.

### 415 Three Credits

#### HEALTH ASSESSMENT

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.

### 418 Three Credits

#### CONCEPTUAL MODELS FOR NURSING

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.

### 419A, 419C Four Credits

#### PROVIDING NURSING SYSTEMS FOR INDIVIDUALS AND SMALL GROUPS DURING CHILDBEARING

PREREQUISITES: NUR 362, 362L, 415, 418

This course focuses on designing systems of nursing assistance for clients experiencing significant life cycle events which have major impact on lifestyles and activities of individuals and small groups. The specific life-cycle events include clients with selected alteration in physiologic homeostasis which promotes childbearing. Placement: Summer Session Junior Year

### 419B, 419D Six Credits

#### PROVIDING NURSING SYSTEMS FOR INDIVIDUALS AND SMALL GROUPS WITH MENTAL HEALTH AND CHILDBEARING ALTERATIONS

PREREQUISITES: NUR 362, 362L, 415, 418, 419A, 419C

This course focuses on designing systems of nursing assistance for clients experiencing significant life cycle events which have major impact on lifestyles and activities of individuals and small groups. These specific life-cycle events include clients with selected alteration in psychological



## Description of Courses (cont'd)

homeostasis across the life span and physiological homeostasis of infants/children/adolescents.

**PLACEMENT: FALL  
SESSION JUNIOR YEAR**

**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 having a potential for multiple risk factors.

**429A, 429C                      Five Credits**  
**PROVIDING NURSING SYSTEMS  
FOR INDIVIDUALS AND LARGE  
GROUPS**

PREREQUISITES: NUR 362, 362L,  
415, 418, 419A, 419C, 419B, 419D

This course focuses on the design and implementation for systems of nursing assistance for individuals, families, and large groups in tertiary care settings. These clients, throughout the lifespan and of diverse cultural backgrounds, experience self-care deficits with multiple etiologic factors. (2 hour lecture/9 hours laboratory)

**PLACEMENT: SPRING  
SESSION SENIOR YEAR**

**429B, 429D                      Three Credits**  
**PROVIDING NURSING SYSTEMS  
FOR INDIVIDUALS AND LARGE  
GROUPS**

PREREQUISITES: NUR 362, 362L,  
415, 418, 419A, 419C, 419B, 419D,  
429A, 429C

Admission into the second-degree  
BSN Evening/Weekend Track.

This course focuses on the design and implementation for systems of nursing assistance for families, groups and communities, specifically high-risk populations throughout the life cycle. Students will use 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.

**PLACEMENT: SUMMER  
SESSION SENIOR YEAR**

**435, 435L                      Five Credits**  
**PROVIDING NURSING SYSTEMS  
FOR FAMILIES, GROUPS AND  
COMMUNITIES**

PREREQUISITES: NUR 321, 415,  
418,.

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

**444                              Three Credits**  
**PLANNING NURSING SYSTEMS  
FOR ADULTS**

PREREQUISITES: NUR 362, 362L,  
321, 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.

**461                              Three Credits**  
**NURSING RESEARCH  
DIMENSIONS**

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**

Examination of theory and concepts concerning the leadership process, organizational structure, and management strategies. Analyze

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**

This course forces which affect health-care delivery and the impact of these changes on the scope of nursing practice. Emphasis is focused 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**

This capstone course promotes the integration of knowledge and concepts obtained in previous nursing, science and general education 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 preceptored clinical experience. Successful completion of the course is dependent upon passing a comprehensive examination.

**485                              Three Credits**  
**Contemporary Topics in Nursing  
and Health Care**

This course focuses on the study of a variety of contemporary topics in nursing and health care, for which the student may select topics of interest for group presentations, workshops, and/or research projects. Projects and/or presentations may be offered on weekday evenings and/or Saturdays.

## OPTICAL ENGINEERING - OEN

**200                              Three Credits**  
**GEOMETRIC AND  
INSTRUMENTATION OPTICS (FO)**

## Description of Courses (cont'd)

PREREQUISITES: PHY161; PHY 161L, Mth 251

COREQUISITE: OEN 200L

Basic principles of geometric optics, refraction and reflection will be discussed. Gaussian optics of axially symmetrical systems and other related topics as well as simple optical instruments such as magnifying lenses, compound microscopes, refracting telescopes and other simple optical systems will be discussed.

**200L One Credit**

### **GEOMETRIC AND INSTRUMENTATION OPTICS LABORATORY (FO)**

PREREQUISITE: PHY161L

COREQUISITE: OEN 200

This is a course in intermediate geometric optics that provides students with state-of-the-art laboratory exercises and equipment that will allow them to do fundamental experiments using lasers, fiber optic systems and diodes. This course complements OEN200 and students are advised to take these courses concurrently.

**201 Three Credits**

### **PHYSICAL AND INSTRUMENTATION OPTICS (SO)**

PREREQUISITES: OEN 200, OEN 200L

COREQUISITE: OEN 201L

This course is the second half of OEN 200 with more detailed discussion of topics such as interference and interferometers, Fresnel and Fraunhofer diffraction, spectroscopic instrumentation, electro-optic effects and elements of quantum and nonlinear behavior.

**201L One Credit**

### **PHYSICAL AND INSTRUMENTATION OPTICS LABORATORY (SO)**

COREQUISITE: OEN 201

This laboratory is designed to complement the topics discussed in OEN 201 and students are advised to take these courses concurrently.

**297 Three Credits**

### **SUMMER RESEARCH (SS)**

PREREQUISITES: Sophomore Status and Permission of the Instructor

Undergraduate research supervised by a faculty member. Development of the skills of research including preparations, design and execution of experiments, data analysis.

**320 Three Credits**

### **OPTICAL SYSTEMS ANALYSIS (SO)**

PREREQUISITES: OEN 340

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 (FO)**

PREREQUISITE: OEN 201

COREQUISITE: OEN 340L

Condensed matter physics including issues in solid state physics, laser physics, laser light, laser components and systems and measurements are covered in this course.

**340L One Credit**

### **LASERS AND PHOTONICS LABORATORY (FO)**

COREQUISITE: OEN 340

This course is the study of lasers and photonics in a laboratory setting.

**360 Three Credits**

### **INTRODUCTION TO OPTICAL MATERIALS (FO)**

PREREQUISITES: EEN 211; 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 OPTICS (FO)**

PREREQUISITES: EEN 211, MTH 252, OEN 201

This course will introduce students to theoretical concepts and experimental evidence of quantum

phenomena that allow them to gain a fundamental understanding of a number of novel semiconducting and photonic systems, including energy band and optical characteristics of materials, nano-structures, and other light emitting devices.

**397 Three Credits**

### **SUMMER RESEARCH (SS)**

PREREQUISITES: Junior Status and Permission of the Instructor

Undergraduate research supervised by a faculty member. Further development of the skills of research including preparations, design and execution of experiments, data analysis.

**460 Three Credits**

### **OPTICAL COMMUNICATIONS I (FO)**

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 One Credit**

### **OPTICAL COMMUNICATIONS I LABORATORY (FO)**

COREQUISITE: OEN 460

Study of optical communication components and applications to communications systems in a laboratory setting.

**461 Three Credits**

### **OPTICAL COMMUNICATIONS II (SO)**

PREREQUISITE: OEN 460

COREQUISITE: OEN 461L

Further discussion of coherent communications, as it relates to distribution networks for fiber-to-the-premises (FTTP) and optical sensing.

**461L One Credit**

### **OPTICAL COMMUNICATIONS II LABORATORY (SO)**

PREREQUISITE: 460L

COREQUISITE: OEN 461

## Description of Courses (cont'd)

This laboratory is designed to complement the topics discussed in OEN 461. Students are advised to take these courses concurrently.

**490 One Credit**

### **SENIOR SEMINAR (FO)**

PREREQUISITE: Senior Status and Permission of the Instructor

This course provides an introduction to various aspects of engineering practice and engineering ethics.

**498 Three Credits**

### **SENIOR PROJECT I (FO)**

PREREQUISITE: Senior Status and Permission of the Instructor

Topics selected by the student and his/her project advisor(s).

**499 Three Credits**

### **SENIOR PROJECT II (SO)**

PREREQUISITE: OEN 498 and Permission of the Instructor

Continuation of selected project resulting in a formal technical report and presentation.

**630 Three Credits**

### **OPTO-ELECTRONIC DEVICES (FO)**

PREREQUISITE: Permission of the Instructor

Materials for optoelectronics, optical processes in semiconductors, absorption and radiation, transition rates and carrier lifetimes are discussed. Principles of LEDs, lasers, photodetectors, modulators and solar cells and optoelectronic integrated circuits are discussed in detail.

**690 Three Credits**

### **APPLIED OPTICS RESEARCH SEMINAR (SO)**

PREREQUISITE: Permission of the Instructor

Invited speakers with optical engineering experience will meet with the class to describe their experiences, entrepreneurial ventures and research challenges.

**698 Six Credits**

### **MASTER'S THESIS RESEARCH**

PREREQUISITE: Permission of the Instructor

Required by thesis option students. Students must have a research advisor and be working on a research project.

## PHYSICAL EDUCATION - PED

**100 One Credit**

### **FUNDAMENTALS OF FITNESS FOR LIFE FO (SO)**

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, One Credit Ea.**

### **MODIFIED PHYSICAL EDUCATION (FO) (SO)**

Individualized programs of instruction for students with handicapping conditions. Medical excuse required.

**107 One Credit**

### **AEROBICS (FO) (SO)**

Aerobics is an experiential course designed to give students an introductory experience and orientation to basic cardiovascular development using aerobic workout and step training as physical fitness tools. Of particular interest will be the student's individual journey in a quest for healthier living.

**109 One Credit**

### **WATER AEROBICS (SO)**

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 One Credit**

### **BEGINNING SWIMMING (FO) (SO)**

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 One Credit**

### **ADVANCED BEGINNING SWIMMING (FO) (SO)**

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 One Credit Ea.**

### **RHYTHM AND FOLK DANCES (FO) (SO)**

Rhythm/Folk Dance is an experiential course designed to give students an introductory experience in basic rhythmic development using the folk dance of various cultures. The primary learning experiences for this class will include but are not limited to: rhythmic development including hand clapping and vocalizations, basic music value and notation, cardiovascular warm-up, use of gross motor skills including axial and locomotor skills, and historical and socio-cultural inquiry into various dances in different societies. Of particular interests will be the basic socio-cultural and historical background including the music and movements of each dance.

**158, 159 One Credit Ea.**

### **FUNDAMENTALS OF PHYSICAL EDUCATION (FO) (SO)**

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 Two Credits**

### **FIRST AID (FO) (SO)**

Study of the proper techniques and procedures for administering first aid and CPR.

## Description of Courses (cont'd)

**200 Two Credits**  
**BEGINNING FITNESS THROUGH WEIGHT TRAINING (FO) (SO)**

Near individualized personal fitness program utilizing the following apparatus and equipment: the variable resistance machines, Olympic free weights, and the pullup trainer.

**204 One Credit**  
**TENNIS I (FO) (SO)**

Development of basic skills in the game of tennis, including techniques, rules, and strategies.

**206 One Credit**  
**TENNIS II (FO) (SO)**

Development of performance skills at the beginning level, the knowledge of rules, terminology, equipment, and safety techniques in tennis.

**209 One Credit**  
**BOWLING (FO) (SO)**

Development of skills and appreciation for bowling, both as a fitness and leisure time activity.

**210 One Credit**  
**GOLF (SO) (SO)**

Development of performance skills at the beginning level, the knowledge of rules, terminology, equipment, and safety techniques in golf.

**235 One Credit**  
**INTERMEDIATE SWIMMING (FO) (SO)**

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 One Credit Ea.**  
**MODERN DANCE I (FO) (SO)**

Modern Dance I is an experiential course designed to give students an introductory experience and orientation to techniques and principles of modern dance. The primary learning experiences for this class will include but are not limited to: rhythmic development,

stretch and strength warm-up, use of gross motor skills including axial and loco motor skills, and cursory historical and socio-cultural inquiry. Of particular interests will be the basic socio-cultural and historical background of Modern dance specifically as it relates to the development of African American concert dance traditions. Primary teaching techniques for this class will include an introduction to primary Modern dance concepts and the Umfundalai technique.

**253 One Credit**  
**GYMNASTICS (SO)**

Development of performance skills and the knowledge of rules, terminology, equipment, safety techniques, and the learning procedures for apparatus work.

**254 One Credit**  
**JAZZ DANCE (SO)**

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 One Credit Ea.**  
**TEAM SPORTS (FO) (SO)**

PREREQUISITES: PED 158, 159

Development of performance skills at an intermediate level: knowledge of rules, terminology, equipment, safety techniques in the sports of flag/touch football, soccer/speedball, volleyball, and team handball; and assessment of students' fitness.

**271, 272 One Credit Ea.**  
**INDIVIDUAL SPORTS (FO) (SO)**

PREREQUISITES: PED 158, 159

Development of skills in archery, golf, tennis, badminton, bowling, racquetball, pickle ball; fitness testing.

**280 Three Credits**  
**INTRODUCTION TO PHYSICAL EDUCATION**

Introduction to historical, philosophical, educational, psychological, biological, sociological, and career emphasis related to the field of physical education.

**287, 287L Four Credits**  
**HUMAN ANATOMY (FO)**

PREREQUISITES: BIO 100, 100L

Introduction to the structure and function of the organ systems of the human body.

**288, 288L (SO) Four Credits**  
**HUMAN PHYSIOLOGY**

PREREQUISITES: PED 287, 287L

Introduction to the function, regulation, and the integration of organs and organ systems of the human body.

**300 Two Credits**  
**ADVANCED FITNESS THROUGH WEIGHT TRAINING (SO)**

PREREQUISITE: PED 200

Advanced experiences while working with the pullup trainers, Olympic free weights, and the variable resistance machines.

**325 Three Credits**  
**LIFEGUARD TRAINING (SO)**

Study of the American Red Cross Senior Life Saving course outline. Satisfactory completion leads to Red Cross certification.

**335 Three Credits**  
**TECHNIQUES FOR TEACHING SKILLS IN SPORTS (SO)**

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 Three Credits**  
**METHODS OF TEACHING PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS (FO) (SO)**

PREREQUISITES: PED158, 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 Three Credits**  
**KINESIOLOGY (SO)**

PREREQUISITES: PED 287, 287L, 288, and 288L

Study of the basic anatomical kinesiology and mechanical



## Description of Courses (cont'd)

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 Three Credits**  
**ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION PROGRAMS (FO)**

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 Three Credits**  
**METHODS AND MATERIALS OF TEACHING PHYSICAL EDUCATION IN SECONDARY SCHOOL (SO)**

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 One Credit**  
**ATHLETIC COACHING AND OFFICIATING (FO)**

PREREQUISITES: PED 158, 159, 261, 262

Study of the fundamentals, techniques, and strategies of coaching and officiating team and individual sports.

**362 One Credit**

PREREQUISITES: PED 158, 159, 261, 262, and 361

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 Three Credits**  
**ADAPTED PHYSICAL EDUCATION (FO) (SO)**

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 Three Credits**  
**MEASUREMENT AND EVALUATION (FO) (SO)**

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.

**441 Three Credits**  
**DRIVER EDUCATION: FOUNDATIONS OF TRAFFIC SAFETY (FO)**

PREREQUISITE: PED 440

Study of methods used for teaching driver education in public schools.

**444 Three Credits**  
**PRINCIPLES AND METHODS OF CLASSROOM AND IN-CAR INSTRUCTION (SO)**

Handson experiences in the understanding and application of principles and methodologies for teaching evasive maneuvers of driving. Practicum includes both simulation and incarexperiences.

**447 Three Credits**  
**PHYSIOLOGICAL BASIS OF EXERCISE**

Study of physiological responses, adjustments, and adaptations to the acute stress of exercise and physical activity, and the chronic stress of physical training.

**450 Three Credits**  
**MOTOR LEARNING (FO)**

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 Three Credits**

**PSYCHOLOGICAL ASPECTS OF SPORTS (SO)**

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 Three Credits**  
**PHYSIOLOGY OF MUSCLE EXERCISE (FO) (SO)**

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 Three Credits**  
**PRINCIPLES OF PHYSICAL EDUCATION (FO)**

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 sports, women in sports, and physical activity promotion for girls and minority populations. Emphasis on resume building and interviewing skills for careers in physical education.

**495 Three Credits**  
**INTERNSHIP (LOCAL)**

Practicum experiences at a local approved setting in fitness, athletic/sport industry. Requirements a minimum of 400 contact hours with supervision.

**496 Twelve Credits**  
**INTERNSHIP**

Practicum experiences with supervised field work conducted at an approved fitness related agency by the department which allows an opportunity for the student to utilize knowledge, skills, and training gained in the classroom.

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

## Description of Courses (cont'd)

### PHYSICS - PHY

#### 100                      Three Credits

##### PHYSICAL SCIENCE (EE)

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.

#### 100L                      One Credit

##### PHYSICAL SCIENCE LABORATORY

COREQUISITE: PHY 100

Laboratory exercises designed to illustrate the scientific method, specific experimental techniques and examples of the knowledge gained by scientists working in the various disciplines. Laboratory experiments are closely coordinated with topics covered in PHY 100.

#### 150, 151                      Three Credits Each

##### GENERAL PHYSICS (SI)

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                      One Credit Ea.

##### GENERAL PHYSICS LABORATORY (SI)

PREREQUISITES: MTH 153 or Permission of Instructor

COREQUISITE: PHY 150, 151

Emphasis on observational techniques and observations.

#### 152, 153                      Three Credits Each

##### GENERAL PHYSICS (E)

PREREQUISITE: MTH 153

COREQUISITE: PHY 152L, 153L

Study of mechanics, heat, sound, electricity, magnetism, light, and modern physics. (2 hours lecture/1 hour recitation)

#### 152L, 153L                      One Credit Ea.

##### GENERAL PHYSICS LABORATORY (EE)

PREREQUISITE: PHY 152, 153

Opportunity to investigate the laws and principles of physics and to make conclusions based on observations and analyses.

#### 154                      Three Credits

##### PHYSICS OF MUSIC (SO)

PREREQUISITE: MTH 153

Team-taught study of mechanical vibrations, sound, acoustics of halls and musical instruments, electro-acoustics, electronic music, musical scales, waveform analysis, recording and reproduction of musical sounds. (1 hour lecture, 2 hours experiment, project recitation)

#### 160, 161                      Four Credits Each

##### UNIVERSITY PHYSICS (FO)

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                      One Credit Ea.

##### UNIVERSITY PHYSICS LABORATORY (FO)

COREQUISITES: PHY 250, 251

Opportunity to investigate the laws and principles of physics and to make conclusions based on observations and analysis.

#### 241                      One Credit

##### SEMINAR (SO)

PREREQUISITES: PHY 160, 161

Presentation and discussion of current topics in all areas of physics. Required of sophomore physics majors.

#### 260                      Four Credits

##### UNIVERSITY PHYSICS III (FO)

PREREQUISITES: PHY 160, 161

Study of basic concepts and principles oscillatory motion, mechanical waves, electromagnetic waves, geometrical optics, physical optics, and special relativity. Calculus and vector methods used throughout the course.

#### 297                      Three Credits

##### INTRODUCTION TO RESEARCH

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                      Three Credits

##### WAVES (SI)

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                      Three Credits

##### MATHEMATICAL METHODS FOR PHYSICAL SCIENCES I (SO)

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                      Three Credits

##### MATHEMATICAL METHODS FOR PHYSICAL SCIENCES II

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



## Description of Courses (cont'd)

special emphasis on applications to physics topics.

### **350 Three Credits**

#### **MODERN PHYSICS (SO)**

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 One Credit**

#### **EXPERIMENTAL CONCEPTS IN MODERN PHYSICS (SO)**

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. (Two hours laboratory per week).

### **353 Three Credits**

#### **INTRODUCTION TO SOLID STATE PHYSICS**

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 Three Credits**

#### **HEAT AND THERMODYNAMICS (SO)**

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 Three Credits Each**

#### **PHYSICAL MECHANICS I, II (FO)**

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 Three Credits**

#### **ELECTRICITY AND MAGNETISM I (FO)**

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 Three Credits**

#### **QUANTUM MECHANICS I (FO)**

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 Three Credits**

#### **INTRODUCTION TO RESEARCH**

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 Two Credits**

#### **ADVANCED LABORATORY (SO)**

PREREQUISITES: PHY 350, 351, 365

Introduction to techniques of advanced experimentation and to development of research and in technical writing skills. Experiments in mechanics, heat, electronics, optical spectroscopy, and atomic and nuclear physics.

### **468 Three Credits**

#### **OPTICS (FO)**

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 Three Credits**

#### **ELECTRICITY AND MAGNETISM II**

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 Three Credits**

#### **QUANTUM MECHANICS II (SO)**

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 Three Credits**

#### **PHYSICS DEMONSTRATIONS**

PREREQUISITE: Permission of Instructor

Presentation and discussion of classical and modern demonstration

## Description of Courses (cont'd)

experiments used in the teaching of general and intermediate physics. Exercises in mechanics, heat, optics, electricity, magnetism, and modern physics.

**491 Three Credits**  
**EXPERIMENTAL CONCEPTS IN PHYSICS**

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 One Credit**  
**PHYSICS EDUCATION RESEARCH**

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 One Credit**  
**SENIOR PROJECT I (FO)**

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 Two Credits**  
**SENIOR PROJECT II (SO)**

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 Three Credits**  
**PHYSICS DEMONSTRATIONS**

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 Three Credits**  
**EXPERIMENTAL CONCEPTS IN PHYSICS**

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 Three Credits**  
**AMERICAN NATIONAL GOVERNMENT (E)**

Coordinated study of the development of American government including the historical development of the United States and the organization and functions of government.

**180 Three Credits**  
**INTRODUCTION TO POLITICAL SCIENCE (EE)**

Introduction to the basic concepts and fundamental substantive divisions of the field of political science.

**230 Three Credits**  
**AMERICAN PUBLIC POLICY (EE)**

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. The course also seeks to assess the impact of policy decisions on various groups in American society.

**231 Three Credits**  
**AMERICAN STATE AND LOCAL GOVERNMENT (E)**

Intensive study of the legal and political processes of the sub-systems of state and local government. There is a detailed emphasis on federal state, interstate, and state local relations.

**250 Three Credits**  
**INTRODUCTION TO PUBLIC ADMINISTRATION (EE)**

PREREQUISITE: POS 230

Focus on the organization, responsibility, personnel management, fiscal processes, functions and problems of public administration.

**310 Three Credits**  
**(SI)**  
**METROPOLITAN AND REGIONAL DEVELOPMENT**

Analysis of the impact of metropolitan growth on municipalities, with a focus on revenues, public services and political empowerment.

**315 Three Credits**  
**AFRICAN-AMERICAN POLITICS (EE)**

Systematic examination of the African-American in the American political system, covering various periods of the African-American political experience.

**320 Three Credits**  
**THE AMERICAN PARTY SYSTEM (SI)**

Study of the nature, function, evolution, and organization of political parties in the United States, with particular emphasis on the relationship of special interest groups with the party system.

**323 Three Credits**  
**Each**  
**COMPARATIVE GOVERNMENT (SI)**

Study of the organization, structure, and politics of the major European governments, with special emphasis on the political systems of Great Britain, France, West Germany, and the Former Soviet Union.

**325, 326 Three Credits**  
**AMERICAN FOREIGN POLICY (SI)**

Study of the background, responsibilities, and consequences of United States foreign policy from 1787 to the present. Special emphasis is based on the diplomatic origins of the major wars, the peacemaking efforts which followed each war, and assessment

## Description of Courses (cont'd)

of the role of diplomacy and the diplomat in a democratic society.

**332 Three Credits**  
**INTRODUCTION TO JURISPRUDENCE (E)**

Intensive examination of the schools and theories of jurisprudence, historical development of legal systems, legal reasoning, and juristic processes.

**333 Three Credits**  
**METHODS OF RESEARCH (EE)**

Focus on the problems of methodology in empirical research, emphasizing hypothesis testing and the quantification of data. This course provides experience in the use of public documents, aggregate data, and survey data in research designs and policy evaluation.

**334 Three Credits**  
**AMERICAN POLITICAL IDEAS (SI)**

Critical analysis of American political ideas in the areas of law, government, and the enduring political problems of liberty and authority, oligarchy and democracy, from Puritanism to the present. Emphasis is placed on Hamilton, Jefferson, Marshall, Jackson, Calhoun, Lincoln, Thoreau, Bellamy, Henry George, Wilson, Hoover, Roosevelt, Holmes, Dewey, and others.

**337, 338 Three Credits Each**  
**AMERICAN CONSTITUTIONAL LAW (FO) (SO)**

*Course should be taken in sequence*  
 PREREQUISITE: POS 332

Study of the basic principles of the American constitutional system. Emphasis is placed on the judicial interpretation and application of these principles in construing the powers of the government and the rights of individuals. These courses examine the historical background of major federal court decisions.

**340 Three Credits**  
**URBAN BELIEF SYSTEMS (SI)**

Examination of beliefs, values, and attitudes relevant to political processes in urban areas relative to physical development, change, and distribution of resources.

**345 Three Credits**  
**STATISTICS AND DATA PROCESSING FOR POLITICAL ANALYSIS (EE)**

Examination of parametric and non-parametric 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 (as applied to research problems).

**350 Three Credits**  
**ORGANIZATION THEORY AND BEHAVIOR (SO)**

Examination of the structure and function of public organizations, with emphasis on theories of administrative hierarchies and evaluation of bureaucracies.

**360 Three Credits**  
**INTERNATIONAL RELATIONS (FO)**

Focus on humans as a part of nature, acting in their political environment over time. This course examines relationships among nations relative to conflicts, treaties, economic integration, etc.

**422 Three Credits**  
**PUBLIC OPINION AND PROPAGANDA (SI)**

Intensive study of the nature, measurement, and function of public opinion. Special emphasis is placed on the problem of symbol manipulation and its relation to the formation of public policy in a democratic society.

**428 Three Credits**  
**VIRGINIA GOVERNMENT AND POLITICS (SI)**

Basic study of Virginia's constitution, political parties, election laws, legislative/executive/judicial functions, economic services, social services and social welfare.

**430 Three Credits**  
**POLITICAL THEORY (FO)**

Study of the political theories of Plato, Aristotle, selected Greek, Roman and medieval writers, to Machiavelli. Critical analyses of enduring political problems.

**431 Three Credits**  
**MODERN THEORY (SO)**

Critical analyses of enduring political problems in the writings of European theorists from Machiavelli to the present.

**435 Three Credits**  
**MUNICIPAL GOVERNMENT (SI)**

Study of the organizations, functions, problems, and approaches to the solution of problems in urban areas.

**442 Three Credits**  
**INTERNATIONAL LAW (SO)**

Intensive study of the substantive content of the law of international relations. Special emphasis is placed on problems of enforcement of laws, etc.

**443 Three Credits**  
**ADMINISTRATIVE LAW (SO)**

Introduction to the American legal system using a case study approach.

**451 Three Credits**  
**PUBLIC PERSONNEL ADMINISTRATION (FO)**

PREREQUISITE: POS 350

Focus is placed on the recruitment, examination, placement, remuneration, morale, retirement, training, and other related issues which impact public service.

**461 Three Credits**  
**INTERNATIONAL ORGANIZATION (SI)**

PREREQUISITE: POS 360

Study of the organization, functions, structure, and problems of the United Nations and other international organizations.

**462 Three Credits**  
**THE NEAR (MIDDLE) EAST IN INTERNATIONAL AFFAIRS (SI)**

PREREQUISITE: POS 360

Survey of the Near East, focusing on its relation to the struggle for international ascendancy of the Western powers. Emphasis is placed on the nineteenth and early twentieth centuries, as well as the contemporary period.

## Description of Courses (cont'd)

**463                      Three Credits**  
**POLITICS OF AFRICAN NATIONS**  
**((SI))**

Examination of the resolution of conflict, and the promotion of survival, of the independent nations south of the Sahara Africa, through comparison of political ideologies and through case studies of individual nations. There is an analysis of traditional African systems and the various colonial systems of the new governments.

**466                      One/Three Credits**

**READINGS IN GOVERNMENT**  
**AND PROBLEMS IN**  
**GOVERNMENT (E)**

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 is placed on the depth of various perspectives.

**467                      Three Credits**  
**INTRODUCTION TO NON-**  
**WESTERN POLITICS (SI)**

Introduction to the general patterns of politics in the areas of Latin America, the Middle East, the Far East, and areas of Africa, north of the Sahara. Class discussions will include an analysis of political instability, political groups and ideologies, organizations of political authority, and the problems of political integration.

**468                      Three Credits**  
**A SURVEY OF CONTEMPORARY**  
**GOVERNMENTS OF ASIA (SI)**

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**

**493A                      Three Credits**  
**PUBLIC ADMINISTRATION**  
**INTERNSHIP (E)**

PREREQUISITES: Organization Theory and Behavior (POS 350) and Public Personnel Administration (POS 451)

Internship in a private or governmental agency. See faculty Public Administration Internship

Coordinator for specific requirements.

**494                      Six Credits**  
**494A                      Three Credits**

**PRE-LAW INTERNSHIP (E)**

Internship offers an invaluable opportunity to gain knowledge, skills and exposure to the private and/or public legal profession. See faculty Pre-law Internship Coordinator for specific requirements.

**499                      Four Credits**  
**SENIOR PROJECT (SI)**

Selected research topic includes collection, analysis, and presentation of an organized research effort. The research topic chosen must be approved by instructor.

**510                      Three Credits**  
**POLITICS AND ECONOMICS OF**  
**AGING (SI)**

Examination of the implications for the political system concerning the growing numbers of elderly people in the population of the United States. Surveys, research, and analysis from a local, state, and national legislative perspective is included in the course content. Also, legislative and economic impact research will be conducted.

**570                      Three Credits**  
**SEMINAR IN LAW AND POLITICS**  
**(SI)**

Focus on contemporary problems in legal and governmental spheres. Preparation of research paper is required.

### PSYCHOLOGY – PSY

**210                      Three Credits**  
**INTRODUCTION TO**  
**PSYCHOLOGY (E)**

Introduction to the scientific study of human behavior and mental processes. Emphasis on theoretical approaches, concepts, principles, and research findings. Overview of selected areas in psychology that provides the foundation for further study in psychology. Topics include critical thinking, neuroscience, nature/nurture, consciousness, motivation, work, stress and health, and psychological disorders.

**211                      Three Credits**  
**BASIC PRINCIPLES OF**  
**PSYCHOLOGY (EE)**

PREREQUISITE: PSY 210

Overview of selected topics in psychology as a continued introduction to psychology begun in PSY 210. Emphasizes theoretical approaches, concepts, principles, and research findings. Topics include sensation, perception, learning, memory, thinking, language, intelligence, personality, therapy, and social psychology.

**220                      Three Credits**  
**CHILD PSYCHOLOGY (SI)**

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**  
**(SI)**

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 (EE)**

Comprehensive study of the psychological development of the individual, including linguistic, social, personality, and cognitive aspects of development from conception through late adulthood.

**230                      Three Credits**  
**EDUCATIONAL PSYCHOLOGY**  
**(SI)**

Introduction to the psychological principles relevant to the processes of education and the theory of educational institutions.

**250                      Three Credits**  
**SOCIAL PSYCHOLOGY (SO)**

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



## Description of Courses (cont'd)

interaction, social influence, aggression, prejudice and attitude change, and socialization.

**270                      Three Credits**  
**PSYCHOLOGICAL STATISTICS (EE)**

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 (EE)**

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 (SI)**

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**  
**BEHAVIOR ANALYSIS (SI)**

PREREQUISITE: PSY 210

Introduction to the concepts involved in behavioral change and in the planning of effective intervention strategies. Focuses on various methods of observing and measuring behavior with emphasis on behavioral task analysis.

**313                      Three Credits**  
**BEHAVIOR MANAGEMENT (SI)**

PREREQUISITES: PSY 210, PSY 312

Study of learning and behavioral programs. Emphasis on learning theory applications including contingency contracting, token economies, modeling, and similar techniques.

**322                      Three Credits**  
**PSYCHOLOGY OF EXCEPTIONAL CHILDREN (SI)**

PREREQUISITE: Consent of Instructor

Study of the unique and typically abnormal psychosocial 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 (FO)**

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 AFRICANAMERICAN (EE)**

Examination of the African-American person with a focus on the unique historical and current social influences on African-American personality development and functioning.

**360                      Four Credits**  
**EXPERIMENTAL PSYCHOLOGY (EE)**

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 (SI)**

PREREQUISITES: PSY 210, PSY 211, BIO 100

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 (SI)**

PREREQUISITE: Consent of Instructor

Supervised projects selected to suit the needs of the individual student.

**390                      Three Credits**  
**FUNDAMENTALS OF LEARNING (SI)**

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**  
**READINGS IN PSYCHOLOGY (SI)**

PREREQUISITE: Consent of Instructor

Directed readings and supervised independent study of contemporary issues. Comprehensive coverage of a subject from assigned materials required.

**392                      One Credit**  
**SEMINAR IN COMMUNITY RESOURCES (SI)**

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.

## Description of Courses (cont'd)

**397 (497) One/Three Credits**

**RESEARCH IN PSYCHOLOGY (SI)**

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 (SI)**

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 (EE)**

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 (SI)**

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 (SI)**

PREREQUISITES: PSY 280

Survey of major principles and mechanisms of drug action including basic pharmacological principles, basic nervous system function and neurochemistry, nonpharmacological variables (e.g., psychosocial, cultural), and a survey of specific classes of psychoactive drugs.

**450 Three Credits**  
**SYSTEMS IN PSYCHOLOGY (SI)**

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 (SI)**

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 (SI)**

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 (EE)**

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 Three to Six Credits**

**PRACTICUM IN PSYCHOLOGY (EE)**

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 (SI)**

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.

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## RELIGION - REL

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**110 Three Credits**  
**INTRODUCTION TO THE BIBLE: OLD TESTAMENT (FS)**

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 (SO)**

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 (SI)**

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 (SS)**

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,



## Description of Courses (cont'd)

theological and modern impact of the religions studied highlighted.

### **210 Three Credits MAJOR WORLD RELIGIONS (SI)**

Intensive research pertaining to a selected area of religious thought and expression, either contemporary or ancient.

### **220 Three Credits SYNOPTIC GOSPELS (SI)**

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 (SS)**

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 (SI)**

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 (SI)**

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 (SI)**

Examination of ethical issues confronting society and the Christian responses. Consideration given to philosophical and theological perspectives.

### **410 Three Credits PSYCHOLOGY OF RELIGION (SI)**

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 (SI)**

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(SI)**

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 (SI)**

Perennial themes in ancient and modern cultures which take into account individual, societal and cosmic appearances and views of reality, both present and futuristic.

## **EARTH 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 (EE)**

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 (E)**

PREREQUISITE: Sophomore Standing

Orientation to contemporary elementary and secondary schools in America with onsite experiences in diverse classrooms in local schools. Emphasis on issues raised in current reform movements and on the changing nature of the teaching profession.

### **210 Three Credits KEYBOARDING III (E)**

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.

### **233 Three Credits SEMINAR IN ASSESSMENT AND EVALUATION (E)**

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 assessing and evaluating thinking skills and knowledge.

### **324 Three Credits BUSINESS SYSTEMS AND PROCEDURES (E)**

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

## Description of Courses (cont'd)

information flow to analyze, design and implement proposed systems. Includes multimedia presentations, integration, and use of business microcomputer software.

**\*380 Three Credits**  
**FOUNDATIONS OF SECONDARY SCHOOL METHODS AND MANAGEMENT OF INSTRUCTION (FO) (SO)**

PREREQUISITE: Passing Praxis I score and 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 (SO)**

PREREQUISITES: Passing Score on Praxis I/SAT/ACT

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**

PREREQUISITES: Passing Score on Praxis I/SAT/ACT

Development of tools and strategies necessary to achieve high standards of learning for teaching social studies courses in secondary classrooms.

**SED 405 Three Credits**  
**READING IN THE CONTENT AREAS**

Comprehensive study of how to strategically use reading as a tool for learning in the content areas by incorporating a balanced approach, a realistic and practical usage of reading and methodological issues, theory, research, and historical perspective.

**420 Three Credits**  
**EDUCATIONAL TECHNOLOGY (FO) (SO)**

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 (FO) (SO)**

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 (FO) (SO)**

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.

**498 Three Credits**  
**BUSINESS METHODS FOR SECONDARY SCHOOLS (FO)**

PREREQUISITES: Passing Score on Praxis I/SAT/ACT; 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.

**499 Twelve Credits**  
**DIRECTED TEACHING IN SECONDARY SCHOOLS (E)**

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.*

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## SOCIAL WORK - SWK

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**200 Three Credits**  
**INTRODUCTION TO SOCIAL WORK (EE)**

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 (EE)**

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 (EE)**

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.

## Description of Courses (cont'd)

### 300                      Three Credits SOCIAL WELFARE POLICIES AND SERVICES II (EE)

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.

### 309                      Three Credits HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT II (EE)

PREEQUISITES: SWK 220; PSY 210; BIO 105 OR BIO 165; HED 100; SOC 101 or 110;

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 (EE)

PREREQUISITE: SWK 220

COREQUISITE: SWK 300

This course is the first of three required courses in the General Practice Sequence. This first course provides students the foundation knowledge, values and skills that form the holistic conceptual framework of generalist social work practice.

### 313                      Three Credits GENERALIST PRACTICE: INDIVIDUALS/FAMILIES (EE)

PREREQUISITE: SWK 312

This course is the second in the Generalist Practice Sequence. The course is designed to teach BSW students how to differentially apply the general method of social work practice with individuals and families from diverse populations.

### 314                      Three Credits NATURE AND MEANING OF CHILD WELFARE (EE)

PREREQUISITE: SWK 300

This course is designed to present a broad knowledge of the principle child welfare services, programs, and policies that are aimed at strengthening and preserving the institution of the family and fostering the development and well being of children.

### 315                      Three Credits SOCIAL WORK WITH FAMILIES (FO)

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 (EE)

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 (EE)

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 (SO)

PREREQUISITE: SWK 312

This course describes the process of aging from four areas of knowledge, biological, psychological, sociological, and economic, with emphasis on aging in America as it relates to social justice, and social problems.

### 324                      Three Credits HEALTH CARE AND SOCIAL SERVICES (FO)

PREREQUISITE: SWK 313

Overview of health care and its social services delivery system in America. Examination of the value orientation, sociocultural, race/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 (SS)

PREREQUISITE: SWK 312

This course presents an overview of the major theories of counseling and psychotherapy. It provides in-depth study of the basic theoretical assumptions and concepts of counseling individuals and families.

### 327                      Three Credits INTERVIEWING TECHNIQUES (EE)

PREQUISITE: Students should be at the junior and senior levels

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.

### 328                      Three Credits HIV/AIDS IN THE AFRICAN AMERICAN COMMUNITY (EE)

This course is designed as an upper-level elective course to provide students with knowledge of and an overview of the disease of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome. The course explains the scientific and epidemiological features of the disease, social ramifications of risk-behavior,

## Description of Courses (cont'd)

medications, testing, interventions, advocacy and policy issues.

### 387 Three Credits

#### TEACHING ENGLISH IN SECONDARY SCHOOLS (SI)

Study of materials and methods for teaching, integrating, and assessing English literature, language, grammar, and composition with attention to current research and theories that inform best practices in language arts instruction.

### 411 Three Credits

#### CONTEMPORARY SOCIAL POLICY ISSUES (SO)

PREREQUISITE: Open to senior Social Work majors

Contemporary Social Policy issues is an advanced elective policy course for the baccalaureate social work student who is trained as a generalist. This course, generally taken in the junior/senior year, builds on students liberal arts perspective, foundation policy classes, as well as the knowledge, values, and skills gained in the Generalist Practice, Human Behavior, and Research sequences.

### 416 Three Credits

#### GENERALIST PRACTICE: EVALUATION (EE)

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 One Credit Ea.

#### PRACTICUM SEMINAR I & II (EE)

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 (EE)

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 I & II (EE)

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 (FO)

PREREQUISITE: Open to senior Social Work majors

This course is an advanced level social policy course designed primarily for the baccalaureate student interested in exploring the interplay among macro social systems in selected western and non western societies as they relate to general social welfare.

### 498A/499B Zero Credits

#### BSW FIELD PRACTICUM ORIENTATION I AND II

PREREQUISITE: All previously required courses and concurrent enrollment in BSW Field Practicum

This is an orientation course designed to provide the undergraduate social work field practicum student with the knowledge, values and skills necessary to prepare and navigate a successful and advanced field education experience. The purpose of this course is to help students understand their role, function and responsibilities as practicum students. In addition, this course will outline the relationship of the practicum agency to the field experience and explore the

importance of ethical and professional behavior.

## SOCIOLOGY - SOC

### 101 Three Credits

#### INTRODUCTION TO THE SOCIAL SCIENCES (E)

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 behave. Emphasis on the United States and on a global context.

### 110 Three Credits

#### INTRODUCTION TO SOCIOLOGY (E)

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 everyday life.

### 137 Three Credits

#### SOCIAL PROBLEMS (FS)

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 (SS)

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.



## Description of Courses (cont'd)

**225                      Three Credits**  
**SOCIAL SCIENCE RESEARCH**  
**SKILLS (E)**

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**  
**(FS)**

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 (SO) (SS)**

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 (E)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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 (FS)**

Study of the relationship between businesses and society, which involves multicultural and international approaches 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 (FS)**

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

## Description of Courses (cont'd)

social science, emphasizing major theoretical ideas and research findings. Applications to everyday life are also considered.

### **338 Three Credits SOCIOLOGY OF FAMILIES (SO) (SS)**

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 (E)**

PREREQUISITE: SOC 225

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 (E)**

Introduction to the parametric and nonparametric 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 (SI)**

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 (E)**

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.

### **401 Three Credits DEMOGRAPHIC METHODS II (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

Study of the relationship between population growth and socioeconomic change, especially in 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 (SI)**

PREREQUISITE: Senior Standing and Consent of Instructor

Examination of trends and emerging issues in the field of urban/demography.

### **446 Three Credits SOCIOLOGICAL THEORY (FS)**

PREREQUISITE: Junior or Senior Standing



## Description of Courses (cont'd)

Survey and analysis of the main types of sociological theories and of the major theoretical concepts in Sociology. Special emphasis on outstanding theorists, past and present, and their works.

**458                      Three Credits**  
**SOCIAL STRATIFICATION (FO)**  
**(O)**

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 (SO)**  
**(SS)**

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 (SI)**

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 (SI)**

PREREQUISITE: Approval of the Faculty in Sociology

Intensive directed reading course for exceptionally able students.

**495                      Three Credits**  
**TOPICS IN SOCIOLOGY (SI)**

PREREQUISITE: Senior Standing and Consent of Instructor

Examination of trends and emerging issues in a dynamic social world.

**499                      Three Credits**  
**APPLIED SOCIOLOGY (FS)**

PREREQUISITE: Senior Standing; SOC 344 and 355

Empirical investigation of a research problem under direction of the chairman of the Department.

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### SPANISH - SPN

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**111                      Three Credits**  
**ELEMENTARY SPANISH I (E)**

Introduction to the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

**112                      Three Credits**  
**ELEMENTARY SPANISH II (E)**

PREREQUISITE: SPN 111 or Equivalent

Continuation of the fundamentals of pronunciation, grammar, structure, vocabulary, conversation, and reading.

**113                      Three Credits**  
**BASIC CONVERSATION I (SI)**

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 (SI)**

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 (EE)**

PREREQUISITE: SPN 112 or Equivalent

Review of grammar, reading of moderately difficult prose, oral practice, and written composition.

**212                      Three Credits**  
**INTERMEDIATE SPANISH II (EE)**

PREREQUISITE: SPN 211 or Equivalent

Intensive and extensive study and reading of modern prose, oral practice, and composition.

**214                      Three Credits**  
**ENTREPRENEURIAL SPANISH (SI)**

PREREQUISITE: SPN 112

Study of the concepts of Spanish business language and culture to prepare students to be competitive in an increasingly global marketplace.

**215                      Three Credits**  
**INTERMEDIATE CONVERSATION (SI)**

PREREQUISITE: SPN 212 or Equivalent

Study of oral practice in everyday situations. Special stress on idiomatic expressions and on fluency. Conducted largely in Spanish.

**216                      Three Credits**  
**EXPLICATION DE TEXTOS (SI)**

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 (SI)**

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 (SI)**

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.

## Description of Courses (cont'd)

**315 Three Credits**  
**ADVANCED CONVERSATION (SI)**

PREREQUISITE: SPN 215 or  
Permission of the Instructor

Intensive and extensive practices in the oral use of Spanish. Conducted in Spanish.

**320 Three Credits**  
**LATIN AMERICAN CIVILIZATION II (SI)**

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 (SI)**

PREREQUISITE: SPN 216 or  
Equivalent

Study of representative works of Spanish literature from the beginning to the end of the 17<sup>th</sup> century. Conducted in Spanish.

**322 Three Credits**  
**SURVEY OF SPANISH LITERATURE II (SI)**

PREREQUISITE: SPN 216 or  
Equivalent

Study of representative works of Spanish literature from the beginning of the 18<sup>th</sup> century to the middle of the 20<sup>th</sup> century.

All literature courses beyond this level are conducted in Spanish.

**324 Three Credits**  
**SPANISH AMERICAN LITERATURE (SI)**

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 (SI)**

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 19<sup>TH</sup> CENTURY (SI)**

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 20<sup>TH</sup> CENTURY (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

PREREQUISITE: SPN 315 or  
Permission of the Instructor. Intensive practice in the language of technical, vocational or professional area.

**450 Two Credits**  
**PHONETICS (SI)**

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 (SI)**

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 (SI)**

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 (SI)**

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.

## Description of Courses (cont'd)

### SPECIAL EDUCATION - SPE

#### 210 Three Credits

##### AMERICAN SCHOOLS AND THE TEACHING PROFESSION (E)

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 (E)

Development of test taking skills on standardized examinations of education majors. Emphasis on reading, writing, mathematics, and critical thinking skills.

#### 311 One Credit

##### PRINCIPLES AND PRACTICES IN MULTICULTURAL EDUCATION (SO)

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 (FO)

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 (FO)

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 Credits

##### UNDERSTANDING AND TEACHING LEARNERS WITH MENTAL RETARDATION (FO) (SO)

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 (SO)

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 (FO)

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 (SO)

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.

#### 440

#### Three Credits

##### COLLABORATION, INCLUSION, TRANSITION AND OTHER CURRICULAR ADJUSTMENTS (FO) (SO)

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 (SO)

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 (SO)

Introduction to American Sign Language (ASL) and its application within the deaf community. Emphasis on developing receptive and expressive skills for everyday interaction, or effective communication, with deaf/hard of hearing individuals and other nonverbal persons with severe disabilities.

## Description of Courses (cont'd)

### 490 Three Credits

#### ASSESSMENT OF EXCEPTIONAL STUDENTS (SO)

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 (FO) (SO)

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 (FO) (SO)

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 (FO) (SO)

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 (E)

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 (SI)

Study of methods to effectively promote 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 (FO)

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 (SI)

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 (EE)

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 (FO)

Overview of the models of communication based on perception theory, learning theory, sociopsychological 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 (SI)

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 (SI)

PREREQUISITE: SCM 285 or Graduate standing

Exploration of systematic strategies which increase 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.



## Description of Courses (cont'd)

### **411/COM 511      Three Credits** **INTERPERSONAL COMMUNICATION (SO)**

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 nonverbal communication. Development of skills in interpersonal communication.

### **420                      Three Credits** **HISTORY AND PHILOSOPHY OF SPEECH (SI)**

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 lecturers 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 (SI)**

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.

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## SWAHILI - SWA

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### **111                      Three Credits** **ELEMENTARY SWAHILI I (SI)**

Study of pronunciation, grammar, structure, vocabulary, and conversation in Swahili. Introduction

to Swahili culture and reading material.

### **112                      Three Credits** **ELEMENTARY SWAHILI II (SI)**

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 (SI)**

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 (SI)**

PREREQUISITE: SWA 211 or Equivalent.

Intensive and extensive study and reading of modern Swahili prose, oral practice, and composition.

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## THEATRE - DRM

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### **113                      Three Credits** **THEATRE MOVEMENT I (SI)**

Development of performer's physical conditioning and awareness of expressive artistic movement.

### **114                      Three Credits** **INTRODUCTION TO THEATRE (FO)**

Survey of theatrical forms, techniques, and practices. Reading of selected plays. Attendance at Norfolk State Players' productions required. Lab included.

### **120                      Three Credits** **STAGECRAFT I (FO)**

Study of practical and theoretical knowledge of scenery, lighting, and sound design for the Theatre. Lab included.

### **123                      Three Credits** **THEORY AND TECHNIQUES OF ACTING (SI)**

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                      Three Credits** **INTERMEDIATE ACTING**

PREREQUISITE: DRM 123

Study of the physical and vocal demands involved in the creation of a role for the stage.

### **211                      Three Credits** **COMMUNITY THEATRE**

Study of the history, organization, and production strategies for operating a community theatre.

### **212                      Three Credits** **IMPROVISATION FOR THE THEATRE (O)**

Development of the performer by encouraging spontaneity, including group ensemble work through improvisation.

### **213                      Three Credits** **THEATRE MOVEMENT II (SI)**

Study of the physical demands involved in various acting styles. Emphasis on movements for classical acting style.

### **219                      Three Credits** **AFRICAN-AMERICAN DRAMA (FO)**

Study of major African-American, African, and Caribbean playwrights and their plays.

### **220                      Three Credits** **STAGE CRAFT II (SI)**

PREREQUISITE: DRM 120

In-depth studies of technical direction, carpentry, lighting, properties, sound, welding, and special effects. Advanced study of technical theatre.

### **226/526              Three Credits** **CHILDREN'S THEATRE (SO)**

Study of theories and methods of children's theatre with concentration on educational goals. Survey of

## Description of Courses (cont'd)

literature and production techniques. Practical work in production of Children's Theatre.

**230 Three Credits  
CREATIVE DRAMATICS**

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 Three Credits  
STAGE MANAGEMENT (SO)**

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 Three Credits  
THEATRE MANAGEMENT (SO)**

Study of principles and techniques of organizing and managing theatre production programs in educational, community, and commercial settings.

**310 Three Credits  
STAGE MAKE-UP (FO)**

Study of stage make-up techniques/designs, practices and equipment. Demonstration of make-up design for an experimental production required.

**315/515 Three Credits  
HISTORY OF THEATRE I (FO)**

Study of history of the theatre from beginning to 1650.

**316/516 Three Credits  
HISTORY OF THEATRE II (FO)**

PREREQUISITE: DRM 315/515

Study of history of theatre in Europe and America 1650 to the present.

**320/520 Three Credits  
LIGHTING DESIGN (SO)**

Emphasis on sources and control of light, equipment, and light design.

**321/521 Three Credits  
SCENERY DESIGN (SO)**

PREREQUISITE: DRM 120

Experience with floor plans, elevations, models, and perspective

designs for theatrical events. Lab included.

**324/524 Three Credits  
ADVANCED ACTING THEORY (SI)**

PREREQUISITE: DRM 200

Focus on acting, theories, advanced techniques in acting, and styles of acting.

**328 Three Credits  
CONTEMPORARY DRAMA (SO)**

PREREQUISITE: DRM 219

Detailed study of the plays, playwrights, and dramatic movements of the post-World War II period.

**400/500 Three Credits  
COSTUME HISTORY (SI)**

Study of costume history of Egyptian to modern times. Emphasis on design and construction of costumes for shows. Lab included.

**410/510 Three Credits  
COSTUME DESIGN (SI)**

PREREQUISITE: DRM 400

Study of elements of design in relationship to the planning and constructing of production design concepts. Lab included.

**415 Three Credits  
THEATRE DESIGN WITH COMPUTER**

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 Three Credits  
INTERPRETERS THEATRE (SI)**

Emphasis on script analysis, voicing and staging characters, compiled scripts, and literature as theatre.

**425/525 Three Credits  
DIRECTION OF PLAYS (SI)**

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 Three Credits  
PLAY WRITING (SI)**

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 Three Credits  
ADVANCED TECHNICAL THEATRE**

PREREQUISITES: DRM 320/520, 321/521

Advanced design theory and stage practice. Design of stage lighting, scenery, and sound.

**436 Three Credits  
SOUND DESIGN**

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 Three Credits  
RESEARCH SEMINAR (SI)**

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 Three Credits  
DRAMATIC THEORY AND CRITICISM (SI)**

PREREQUISITE: DRM 324/524

Major critical theories from Aristotle to present.

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## TOURISM AND HOSPITALITY MANAGEMENT - HRM

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**100 Three Credits  
PROFESSIONAL DEVELOPMENT (FO)**

Study of career development, professional conduct, portfolio development, interviewing, etiquette and social development, customer service, and proper dress.



## Description of Courses (cont'd)

**115 Three Credits**

### **INTRODUCTION TO HOSPITALITY (FO)**

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 (SO)**

Study of sanitation standards for food and beverage establishments, food-handling practices, and microorganisms and their control.

**150 Three Credits**

### **TOURISM PRINCIPLES (O)**

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 (SI)**

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 (FO)**

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 (SI)**

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 (SI)**

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 (SO)**

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 (FO)**

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 (SO)**

Introduction to aspects of the hospitality industry and related

areas that are not available in regularly scheduled courses.

**330 Three Credits**

### **HOSPITALITY ACCOUNTING II (SI)**

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 (SO)**

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 (SI)**

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 (SI)**

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.

## Description of Courses (cont'd)

<p><b>359, 359L</b>                      <b>One /Two Credits</b></p> <p><b>COMMERCIAL FOOD PRODUCTION/LABORATORY (FO)</b></p> <p>PREREQUISITES: HRM 220, 220L</p>	<p><b>400</b>                              <b>Three Credits</b></p> <p><b>RESTAURANT MANAGEMENT (O)</b></p> <p>Theories and principles of organization and administration, the tools of managerial decision-making, and the management process, with particular reference to the hospitality industry.</p>	<p><b>448</b>                              <b>Three Credits</b></p> <p><b>CRUISE SHIP ADMINISTRATION</b></p> <p>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.</p>
<p>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.</p>	<p><b>401</b>                              <b>Three Credits</b></p> <p><b>CLUB AND RESORT MANAGEMENT</b></p> <p>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.</p>	<p><b>49</b>                                <b>Three Credits</b></p> <p><b>INTERNATIONAL TOURISM</b></p> <p>Study of international travel and tourism. Focus on the economic, social, political, and environmental considerations of international tourism management and development.</p>
<p><b>361</b>                              <b>Three Credits</b></p> <p><b>TRAINING FOR THE HOSPITALITY ORGANIZATION</b></p> <p>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.</p>	<p><b>402</b>                              <b>Three Credits</b></p> <p><b>MANAGEMENT BY MENU</b></p> <p>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.</p>	<p><b>462</b>                              <b>Three Credits</b></p> <p><b>HUMAN RESOURCE MANAGEMENT (SI)</b></p> <p>Study of the relationship between individual employees and the hospitality industry. Analysis of human behavior, attitudes, motivation strategies, stress management, employee wages, and productivity.</p>
<p><b>381</b>                              <b>Three Credits</b></p> <p><b>FACILITIES LAYOUT AND DESIGN (O)</b></p> <p>Study of hospitality facilities, layouts, and designs, exterior and interior; building systems; space allocations; equipment; and budgets.</p>	<p><b>440</b>                              <b>Three Credits</b></p> <p><b>HOSPITALITY SALES AND ADVERTISING (O)</b></p> <p>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.</p>	<p><b>466</b>                              <b>Three Credits</b></p> <p><b>MULTI-CULTURAL MANAGEMENT IN THE HOSPITALITY INDUSTRY</b></p> <p>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.</p>
<p><b>382</b>                              <b>Three Credits</b></p> <p><b>INCENTIVE TRAVEL</b></p> <p>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.</p>	<p><b>441</b>                              <b>Three Credits</b></p> <p><b>RESTAURANT ENTREPRENEURSHIP: HOW TO PLAN, OPEN AND RUN A SUCCESSFUL RESTAURANT</b></p> <p>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.</p>	<p><b>471</b>                              <b>Three Credits</b></p> <p><b>HOSPITALITY INDUSTRY LAW (SI)</b></p> <p>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.</p>
<p><b>387</b>                              <b>Three Credits</b></p> <p><b>FAIR AND AMUSEMENT PARK ADMINISTRATION</b></p> <p>Focus on the management and marketing of fairs and amusement parks, including crowd control, concessions, security and contract negotiations.</p> <p><b>391, 391L (FO)</b>              <b>Three Credits, One Credit</b></p> <p><b>MANAGEMENT INTERNSHIP/LABORATORY</b></p> <p>Supervised on-the-job management training at selected facilities. Minimum of 250 clock hours required.</p>		<p><b>481</b>                              <b>Three Credits</b></p> <p><b>HOSPITALITY PROPERTY MANAGEMENT</b></p> <p>Study of the problems of cost and operation of pest control, security, parking, general cleaning and upkeep, laundry, fire prevention,</p>

## Description of Courses (cont'd)

pools, tennis courts, and care of guest rooms and public space, with emphasis on equipment, personnel, and modern innovations.

### **490 Three Credits**

#### **SENIOR PROJECT (SO)**

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 Three Credits**

#### **HOSPITALITY FRANCHISING**

Emphasis on the unique difference between franchise and company-owned properties and the application of special techniques required to manage these differences.

## **URBAN PLANNING - URP**

### **192 Three Credits**

#### **INTRODUCTION TO URBAN PLANNING (SO)**

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/development of cities and cities' hinterlands.

### **201 Three Credits**

#### **PLANNING THEORY (SI)**

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 evolutionary process of urban phenomena.

### **285 Three Credits**

#### **URBAN LAND USE PLANNING (SI)**

Study of the 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 is placed 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 (FO)**

Survey of law cases, legislation, and terminology relevant to urban planning issues. Exploration of the social, economic, and environmental interrelationships of the real estate development industry, local government, and the public. Emphasis is placed on the dynamic role of law in planning processes and procedures.

### **301 Three Credits**

#### **REGIONAL PLANNING AND THE ENVIRONMENTS (SI)**

Study of an evolutionary perspective of regional planning on a metropolitan, national, and international level. Emphasis is placed on discussions relative to 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 (SI)**

Analysis of the role of transportation and transportation systems in the movement of people, goods, and services. Emphasis is placed on transportation as 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 (SI)**

Overview of the history and process of urban design. Focus is placed 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 in the urban design process.

### **355 Three Credits**

#### **URBAN ECONOMIC DEVELOPMENT PLANNING (SI)**

Study of the economic vitality of established central cities in conjunction with regions within metropolitan areas. Primary emphasis is placed on the internal structure of urban areas, including the dynamics of central city economics. There is an analysis of the dependence of residents upon unstable private capital decisions 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 (SI)**

Study of the multi-disciplinary nature of planning and the evaluation of human services, including such elements as social services, physical and mental health care, housing, substance abuse programs, ; informational services, etc. There is an evaluation of the effects of various human services programs on the quality of life of the public, in general, and on specific populations needing special services or resources.

### **380 Three Credits**

#### **HOUSING AND COMMUNITY DEVELOPMENT (SI)**

Introduction to both the rationale and techniques for providing assistance in the community development and city development process. There is an examination of the myriad of institutional and market forces, as well as socioeconomic and demographic factors which affect the supply and the demand for housing. Emphasis is placed on the concepts of citizen participation, self-direction, and self-help in real and simulated neighborhood revitalization efforts.

# ADMINISTRATORS

## EXECUTIVE ADMINISTRATION

**MEYERS, CAROLYN** (2006) President and Professor. Ph.D., M.S., Georgia Institute of Technology. B.S., Howard University. Certificate, Institute for Educational Management, Harvard University.

**SHAH, Y.T.** (2008) Provost, Sc.D., Ch.E., M.S.in Chemical Engineering, Massachusetts Institute of Technology, B.S. in Chemical Engineering, University of Michigan.

**ADAMS, PHILLIP** (2000) Interim Vice President of University Advancement. M.S., Golden Gate University. B.A., Saint Leo University.

**BOSTON, PAMELA** (2006) Legal Counsel and Special Assistant Attorney General. J.D., Marshall Wythe School of Law, College of William and Mary. B.A., Bennett College. State Licensure and Admission to Practice in Virginia since 1977.

**HOGGARD, SHARON** (2000) Interim Director of Communications and Marketing. M.A., Norfolk State University. B.A., Old Dominion University.

**HORSEY, EARLIE** (1977) Special Assistant to the President for Policy. B.S., Norfolk State University.

**JOHNSON, RALPH** (2005) Vice President for Finance and Business. M.B.A., Tulane University. B.S., Bradley University. Certified Public Accountant. Harvard University Institute Management Development Program. Commonwealth Management Institute.

**OLADIPUPO, ADEBISI** (2000) Vice President for Research and Technology and Professor. Sc.D., S.M. Massachusetts Institute of Technology. B.S., University of Ife, Nigeria. Certificate: Institute for Educational Management, Harvard University.

**SASS, TERRICITA** (1988) Associate Vice President for Enrollment Management. M.A., Norfolk State University. B.B.A., Francis Marion University.

## ASSOCIATE/ASSISTANT VICE PRESIDENTS

**COLEMAN, CLARENCE** (1971) Associate Vice President, Office of the Provost. D.Ed., Pennsylvania State University. M.S., B.S., Southern University. Further study: University of Notre Dame; Michigan State University. CFRM, Indiana University Center on Philanthropy.

**CUEVAS, NURIA** (2000) Associate Vice President, Office of the Provost and Director, Institutional Effectiveness and Assessment. Ph.D., Kent State University. M.S., University of Memphis. B.S., Southwestern Union College.

**FREEMAN, DWIGHT** (2002) Interim Associate Vice President for University Advancement, Corporations and Foundations. B.A., Western State College.

**KASHIRI, ANTON** (2004) Associate Vice President for Facilities Management. B.S.C., Morris Brown College. B.S., Tuskegee University.

**LOWE, SHARON** (1988) Interim Vice President for Student Affairs. Ed.S., The College of William and Mary. M.A., Columbia University; B.S., Fisk University.

**MASSEY, MARGARET** (2003) Associate Vice President for Technology. M.A., M.S., Florida International University. B.S., Auburn University.

**ROBINSON, JANNIE** (2001) Assistant Vice President for Student Affairs. Ed.D., The George Washington University. M.S., B.S., Virginia Commonwealth University.

## DEANS

**BRAXTON, JEAN** (1988) Dean, School of Education and Professor of Health, Physical Education and Exercise Science. Ed.D., University of North Carolina at Greensboro. M.A., Hampton Institute. B.S., Bennett College.

**BYRNE, WILLIAM** (1994) Acting Dean, School of Liberal Arts and Professor of History. Ph.D., M.A., B.A., Florida State University.

**DELOATCH, SANDRA** (1972) Dean, School of Science and Technology and Professor of Computer Science. Ph.D., Indiana University. M.S., University of Michigan. M.S., The College of William and Mary. B.S., Howard University.

**LAWS, PAGE** (1987) Dean, Honors College. Ph.D., M.Phil, Yale University. B.A., Wellesley College.

**WAITES, CARRIE** (1975) Interim Dean and Assistant Professor of Social Work. M.S.W., Virginia Commonwealth University. A.B., Virginia State College. Further study: Harvard University, L.C.S.W., Virginia

**WHALEY, GARY** (1984) Dean, School of Business and Professor of Management, Marketing and Entrepreneurship. Ph.D., State University of New York, Buffalo. M.B.A., B.S., Miami University, Ohio.

**WILSON, ROWENA** (1986) Dean, Graduate School and Professor of Social Work. D.S.W., M.S.W., Howard University. B.A., West Virginia State College.



## Administrators (cont'd)

### ASSOCIATE DEANS

**BELHADJALI, MONCEF** (1989) Associate Dean, School of Business and Associate Professor of Accountancy, Finance and Information Management. Ph.D., M.A., The Wharton School, University of Pennsylvania. B.S., University of Tunis.

**DABNEY, DONNA** (2003) Associate Dean, School of Education and Associate Professor of School of Secondary Education and School Leadership. Ph.D.,

Walden University. M.S., Prairie View A&M University. B.S., Texas Woman's University.

**MATTIX, LARRY** (1971) Associate Dean, School of Science and Technology and Professor of Physics. Ph.D., The College of William and Mary. M.S., University of Illinois. B.S., Clark College. Further study: American University.

## FACULTY

### PROGRAM DIRECTORS AND SPECIAL ASSISTANTS

**ADAMS, DANNY** (1993) Director, Center for E-Learning. Ed.D., M.S., Northern Illinois University. B.A., Marshall University.

**ATKINS, DEBRA** (1996) Acting Director, Community Outreach Services. M.S.W., B.A., Norfolk State University.

**BARRETT, KAREN** (1975) Director, Facilities Management. B.S., Norfolk State University. (1975) Director, Facilities Management. B.S., Norfolk State University.

**BENNETT, GLADYS** (1994) Acting Executive Director, Office of First Year Experience. Ph.D., M.A., University of New Mexico. B.S., Dunsus University.

**BOGGER, TOMMY** (1965) Director, Archives and Special Collections and Professor. Ph.D., University of Virginia. M.A., Carnegie-Mellon University. B.A., Norfolk State University.

**CANNION, ANTHONY** (2005) Director, Procurement Services. M.P.A., B.A., University of Central Florida, Certified Professional Property Administrator.

**COKER, JOYCE** (1987) General Manager, L. D. Wilder Performing Arts Center. B.A., Norfolk State University.

**DAVIS-TARIQ, ALISON** (1996) Director, Office of Information Technology, Enterprise Information Systems. M.B.A., Hampton University, B.S.B.A., Old Dominion University.

**ELLIS, ERNEST** (1982) Internal Auditor. 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).

**FAIRCLOTH, HARRY** (2004) Director, End User Services, Policy and Planning. B.S., University of Tampa.

**FITZGERALD, FAITH** (1996) Director, Residence Life and Housing. B.S., Benedict College. Further study: Norfolk State University and Clemson University.

**GARCIA, MICKEY ANN** (2006) Director, Library. M.L.S., Texas Women's University. B.A., University of Texas

**GREAVES, CURTIS** (2002) Director, Counseling Center. Ph.D., M.S., Virginia Polytechnic Institute and State University. B.S., The Pennsylvania State University.

**HARRIS, BEVERLY** (1992) Director, Disability Services. M.A., B.A., Norfolk State University. Further study: Regent University or College of William and Mary.

**HOLMES, VALERIE** (1973) Director, Student Support Services. M.S., Old Dominion University. B.S., Norfolk State University.

**LUGO, MARIA** (2001) Director, International Student and Scholar Services. M.Ed., Old Dominion University. B.S., Virginia Polytechnic Institute and State University.

**MARTIN, MICHELLE** (1997) University Controller. B.S., Norfolk State University. Certified Public Accountant.

**MONTGOMERY, DENNIS** (1999) Acting Director, Virginia Beach Higher Education Center. Juris Doctor (J.D.) University of Virginia. B. A., Political Science, Hampton University.

**MONTGOMERY, NASH** (2005) Director, Career Services. M.S., Troy State University. B.S., University of Maryland.

**MOORE, LAVERNE** (1987) Annual Giving Officer. B.S., Norfolk State University.

**PERRY, TANYA** (1995) Director, Upward Bound Program. M.Ed., Tuskegee University. B.S., Norfolk State University.

**RENCE, MARIS** (1997) Technical Director, Wilder Center. M.F.A., Tulane University. B.A., Cleveland State University.

**RICKS, VICTORIA** (2003) Development Officer. B.A., Hampton University.

**SHAW, PAULA** (1981) Director, Office of Sponsored Programs M.A., B.S., Norfolk State University.

## Faculty (cont'd)

**SMITH, PATRICE** (1989) Special Assistant to the Dean, School of Science and Technology and Instructor of Biology. M.S., University of Maryland. B.S., Hampton Institute.

**WILLIAMS, DAVIDA** (1994) Director, Auxiliary Enterprises. M.B.A., Troy State University. B.S., Virginia State University.

**WILLIAMSON-ASHE, SANDRA** (2001) Special Assistant to the Vice President for Student Affairs. M.S.W., Norfolk State University. B.S., University of North Carolina at Charlotte. Further Study: George Washington University.

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### PROFESSORS

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**ABATENA, HAILU** (1997) Professor of Social Work. Ph.D., M.A., Syracuse University. M.S.W., Tata Institute of Social Sciences.

**ABBASI, SAMI** (1992) Professor of Management, Marketing and Entrepreneurship. D.B.A., Mississippi State University. M.B.A., B.S., Middle Tennessee State University.

**ADAMS, DANNY** (1993) Professor of Interdisciplinary Studies. Ed.D., M.S., Northern Illinois University. B.A., Marshall University.

**AGYEI, WILLIAM** (1995) Professor of Sociology. Ph.D., University of Maryland. M.A., Loma Linda University, Johns Hopkins University. B.A., California State University.

**ALEXANDER, WILLIAM** (1987) Professor of History. Ph.D., M.A., Stanford University. B.A., Fisk University.

**BANETTE, JEAN-MARIE** (1983) Professor of Accountancy, Finance and Information Management. Ph.D., University of Missouri. M.S., University of Miami. B.A., Biscayne. Certified Public Accountant.

**BARNES, ELSIE** (1973) Professor of Political Science. D.A., Lehigh University. M.A.T., Indiana University, Bloomington. B.S., North Carolina A&T State University. Further Study: University of North Carolina at Chapel Hill.

**BLACK, SUELY** (1996) Professor of Chemistry. Ph.D., Columbia University. M.Ph., Columbia University. M.Sc., Rio de Janeiro Federal University. B.S., Rio de Janeiro Federal University Brazil.

**BONNER, CARL** (1995) Professor of Chemistry. Ph.D., University of Rochester. M.S., B.S., Howard University.

**BOWMAN, ARTHUR** (2004) Professor of Biology. Ph.D., North Carolina State University. M.A., B.S., Hampton Institute.

**BROWN, ERNEST** (1973) Professor of Music. D.M.A., University of Maryland. M.Mus., Peabody Conservatory of Music of Johns Hopkins University. B.A., University of Maryland.

**BRUMAGE, NORMA** (1997) Professor of Secondary Education and School Leadership. Ed.D., Ed.S., The George Washington University. M.A., Virginia Polytechnic Institute and State University. B.S., Winston-Salem State University.

**CHEN, JIM** (1984) Department Chair of Accountancy, Finance and Information Management and Professor of Accountancy, Finance and Information Management. Ph.D., North Texas State University. M.B.A., West Texas State. B.S., National Chungshing University.

**COOLEY, JOY** (1989) Professor of Psychology. Psy.D., The Virginia Consortium Program in Clinical Psychology. M.S., Virginia State University. B.A., University of Virginia.

**DAMTEW, DESTA** (1984) Professor of Accountancy, Finance and Information Management. D.B.A., University of Kentucky, Certified Fraud Examiner. M.B.A., University of Wisconsin. B.A., Haile Selassie I University.

**DANCY, JOSEPH** (1984) Professor of Social Work. Ph.D., University of Michigan. Th.M., Princeton Theological Seminary. B.A., Virginia Union University.

**DOGBE, SAMUEL KORSI** (1995) Professor of Interdisciplinary Studies. Ph.D., M.Sc., M.A., University of Southern California. B.A., University of Ghana.

**DORSEY, SAM** (1984) Professor of Music. Ph.D., The Catholic University of America. M.M., Virginia Commonwealth University. B.M., University of North Carolina, Greensboro.

**DUNCAN, HOWARD** (1984) Department Chair of Biology and Professor of Biology. Ph.D., University of North Carolina at Chapel Hill. M.A., A.B., Hampton Institute.

**EULE, EDWARD** (1992) Professor of Sociology. Ph.D., M.A., B.A., Howard University.

**FEIT, MARVIN** (2000) Professor of Social Work. Ph.D., M.Sci.Hyg., University of Pittsburgh. M.S., Columbia University. B.S., Brooklyn College.

**FORD, CHARLES** (1992) Department Chair of History and Professor of History. Ph.D., M.A., Vanderbilt University. B.A., University of Pittsburgh.

**FULLER, MILDRED** (1987) Department Chair of Allied Health and Professor of Medical Technology. Ph.D., Old Dominion University. M.Ed., Tuskegee University. B.S., North Carolina Central University; Certification in Medical Technology, Cambridge Hospital School of Medical Technology.

**GRIFFIN, VESTA** (1975) Professor of Music. Ph.D., New York University. M.A., Morgan State University. B.M., Peabody Conservatory, John Hopkins University. Further study: Johns Hopkins University.

**HARRIS, WELDON B.** (2004) Professor of Military Science. M.S., Central Michigan University. B.S., Howard University.

**HAYWOOD, CARL** (1975) Professor of Music. D.M.A., University of Southern California. M.M., M.S.M., Southern Methodist University. B.S., Norfolk State University.

**HICKS, KENNETH** (1994) Professor of Chemistry. Ph.D., Howard University. M.S., B.S., Miami University. Further study: University of California at San Diego.

**HARRISON, GEORGE** (1973) Department Chair of Computer Science and Professor of Computer Science. Ph.D., University of Virginia. M.S., Old Dominion University. B.A., Wilkes College.



## Faculty (cont'd)

**HOLMES, BERNADETTE** (2002) Professor of Sociology. Ph.D., M.A., The Ohio State University. B.A., Norfolk State University.

**HUBBARD, HAROLD** (1984) Department Chair of Political Science and Professor of Political Science. Ph.D., University of North Carolina at Chapel Hill. M.A., Virginia Commonwealth University. B.A., Hampton Institute.

**IBRAHIM, ADEM** (1997) Professor of Engineering. Ph.D., Old Dominion University. M.S., Royal Institute of Technology.

**JOHNSON, EMOGENE** (1973) Professor of Health, Physical Education and Exercise Science. Ph.D., University of Maryland. M.S., University of Tennessee. B.S., Norfolk State University.

**JOHNSON, MARJORIE** (1970) Professor of Music. Ph.D., M.Mus., The Catholic University of America. B.Mus., Howard University.

**JONES, DOROTHY** (1993) Professor of Business. Ph.D., M.A., The Ohio State University. B.S., Albany State College. Harvard University, Institute for Management and Leadership.

**JONES, RONALD** (1996) Professor of Allied Health. Ph.D., University of Cincinnati. M.A., B.S., Northern Illinois University.

**KANNARKAT, JOY** (1975) Professor of Psychology. Ph.D., M.A. Howard University. B.A., University of Kerala.

**KHAN, MUSHTAQ** (1987) Department Chair of Mathematics and Professor of Mathematics. Ph.D., Old Dominion University. M.S., University of Pakistan. M.S., University of Punjab.

**KHANDAKER, MUHBUB** (1995) Professor of Physics. Ph.D., M.S., University of Washington. B.A., Brandeis University.

**KIAH, ROSALIE** (1970) Professor of English and Foreign Languages. Ph.D., Michigan State University. M.Ed., Temple University. B.S., Virginia State University.

**KIMBLE, MARY** (1990) Professor of Secondary Education and School Leadership. Ed.D., University of Bridgeport. M.A., New York University. B.S., New York University.

**LANGLEY, CURTIS** (1965) Department Chair of Sociology and Professor of Sociology. Ph.D., University of Washington. M.A., Atlanta University. B.A., Morehouse College.

**LAWS, PAGE** (1987) Professor of English and Foreign Languages. Ph.D., M. Phil., Yale University. B.A., Wellesley College.

**LITTLETON, DENISE** (1981) Professor of Early Childhood/Elementary Education. Ed.D., The George Washington University. M.Ed., University of Pittsburgh. B.A., Carnegie Mellon University.

**MACLIN, ARLENE** (2003) Professor of Engineering. Ph.D., Howard University. M.S., University of Virginia. B.S., North Carolina A & T State University.

**MAJUMDAR, DEBABRATA** (1993) Professor of Biology. Ph.D., M.Sc., B.Sc. University of Calcutta India.

**MAPP, JOHNNIE** (1983) Professor of Accountancy, Finance and Information Management. Ph.D., University of Georgia. M.B.A., Jackson State University. B.S., University of Wyoming. Certified Fraud Examiner, Certified Government Financial Manager.

**MARSHALL, BENNIE** (2003) Department Chair of Nursing and Professor of Nursing. Ed.D., The George Washington University. M.S., Hampton University. B.S.N., Medical College of Virginia, Virginia Commonwealth University.

**MCGOWAN, CARL** (2005) Professor of Accountancy, Finance and Information Management. Ph.D., Michigan State University. MBA., Eastern Michigan University. B.A., Syracuse University.

**MCNEIL, PHILLIP** (1973) Professor of Mathematics. Ph.D., M.S., Pennsylvania State University. B.A., Ohio University.

**MCSWAIN, ARLETHA** (2001) Professor of Early Childhood/Elementary Education. Ph.D., University of Missouri. M.Ed., B.S., Lincoln University, Jefferson City.

**MEAD, PATRICIA** (2003) Professor of Engineering. Ph.D., University of Maryland. M.S., Virginia Polytechnic Institute and State University. B.S., Old Dominion University.

**MESHESHA, ABERRA** (1994) Professor of Political Science. Ph.D., New York University. M.P.A., Howard University. B.S., Boston State College.

**MILLER, SHELIA** (1977) Professor of Social Work. D.S.W., Howard University. M.S.W., University of Pennsylvania. B.S.W., Norfolk State University.

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